

THERMOID® INDUSTRIAL RUBBER PRODUCTS... 2013/2014



Power Transmission Belts



Budding Strips



Automotive Aftermarket Hose



Rubber Bands



Industrial Hose



Rubber Roll/Roll Coverings



Ducting



Conveyor Belting



Industrial Hose



HBD/Thermoid®, Inc.

SUBSIDIARY OF **HBD** INDUSTRIES, INC.

WARNING/SAFETY

WARNING

This catalog is intended to provide general guidance and to assist in making the proper hose selection for an application. While the information in this catalog is believed to be accurate, it is based on specific laboratory tests performed under controlled conditions, calculations and assumptions, and not actual field conditions or applications. As such, it does not represent a guarantee with respect to characteristics or performance of the product in any given application or use. Thermoid hose products are intended for selection and use by trained and skilled purchasers and users. The purchaser or user is obligated to determine the suitability of hose for the specific application or use, and to ascertain that intellectual property rights of third parties are not violated.

HBD/THERMOID MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EXCEPT AS IS EXPRESSLY SET IN ITS TERMS AND CONDITIONS OF SALE. HBD/THERMOID SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. See our terms and conditions of sale for further details.

This catalog contains important information regarding the Thermoid hose products, including information on the following topics:

- Welding Hose
- Chemical Hose and Chemical Resistance Chart
- Steam Hose
- Use of Hose in Explosive Atmospheres (Static Electricity)

Please read and understand these and other available guidance before selecting or recommending a hose for your application. Information in this catalog is subject to revision without notice. For the most current product information visit our website at www.hbdthermoid.com or contact your HBD/Thermoid Customer Service Representative.

SAFETY

Hose has a finite life, and is subject to fail without warning. Careful consideration is required when using hose instead of hard piping in any application where failure could cause bodily injury, property damage or other

loss. If hose is used, the user is responsible for determining the service life and implementing adequate safety measures including:

- **Regular Inspections and Replacement.** Hose assemblies used in such applications should be inspected at frequent intervals based on the seriousness of the risk. These inspections should include: tube and cover examinations for hardening, brittleness, abrasions, kinks, twisting, crushed areas, cracks, cuts, leaking, blisters, peeling or soft cover, braid exposure and other evidence of damage or deterioration; seepage, leaking, slipped or damaged couplings; and proof testing. Damaged or suspect hose and fittings should be immediately replaced. Hose assemblies should also be replaced at regular intervals, well in advance of the expected service life of the hose.
- **Personal Protective Equipment and Other Safeguards.** Always use proper protective equipment (for example, gloves, eye protection, protective suits, hardhats, etc.) that will protect the user in the event of hose failure or other accident. Systems should be designed so that if a failure does occur, damage and injury to persons or property will be avoided.
- **Operator Training.** All operators must be thoroughly trained in the proper care and use of hoses, the hazards of any material conveyed, and accidental release response measures.

Failure to exercise proper safety precautions could result in serious bodily injury, death, property damage or other loss from hazardous chemicals, elevated temperature materials, explosive or flammable materials, sparking or static electricity, contamination of material conveyed, impelled couplings, whipping hose, and high pressure or high velocity discharge of materials.

For further information, please refer to "General Hose Information" Pages 27 through 33 that detail various areas, including: RMA Oil Resistance Data, Minimum Hose Radius, Basic Safety Considerations & Warnings, Steam/Chemical and Static Electricity Warnings, Hose Care, Maintenance and Storage, Hose Testing, Hose Coupling Selection Guide as well as other specific product guidance information pages found throughout the Thermoid Industrial Rubber Products Catalog. You may also contact a HBD/Thermoid marketing or technical representative for assistance.

HOSE ENVIRONMENTAL/PHYSICAL PROPERTIES RESISTANCE REFERENCE

HBD/Thermoid®, Inc. has developed a quick reference system for determining general hose resistance characteristics to environmental conditions and physical properties that hose products come into contact with during everyday use. The chart at right outlines a number of specific physical properties and environmental conditions. Each environmental and/or physical property is defined by a specific marking symbol. These resistant marking symbols are shown next to Thermoid® brand hose products throughout this brochure. Resistant symbols are shown for a specific hose product that demonstrates an exceptional resistance when exposed to that particular environmental and/or physical property on a long-term basis. For complete information on hose resistance characteristics and service performance in specific applications and/or environments, please consult your area HBD/Thermoid, Inc., sales representative, review the product specification information listed on our Internet web site at www.hbdthermoid.com or contact our technical department at 800/543-8070.

HBD Industries, Inc.

HBD/Thermoid, Inc. is a subsidiary of HBD Industries, Inc. HBD manufactures quality, application-engineered, custom designed and standard industrial products serving many diverse industries and markets. Products manufactured by HBD Industries, Inc. include: AC/DC/BLDC electric motors, aerospace precision components, budding strips, cemented tungsten carbide parts, closed die forgings, near-net shape forgings and precision-machined components for aerospace, orthopedic and surgical instrument applications, coated rubber fabrics, conveyor belting, drives, ducting, gear reducers, hose (automotive, aviation, hand-built, industrial, marine and petroleum), material handling products (metal separators/detectors and electromagnetic lifting equipment), power transmission belts, rubber bands, rubber roll coverings and ventilation equipment (fans and blowers). For complete details on HBD Industries, Inc., log onto www.hbdindustries.com.

Environmental/ Physical Property	Hose Resistance Marking Symbol
Abrasions	
Aging	
Chemical/Acids	
Collapsing	
Coolant	
Diesel Aromatic Fuels	
Fats/Oily Edibles	
Gasoline	
Heat	
Kerosene	
Kinking	
Non-Conductive/Non-Static	
Oil	
Ozone	
Sunlight	
Vibrations	
Water	
Weathering	

INDUSTRIAL RUBBER PRODUCTS DELIVERED WHERE AND WHEN YOU NEED THEM!

With nationally recognized distributors, strategically located product warehouse facilities and manufacturing plants, HBD/Thermoid®, Inc. can deliver just about any rubber product you require.

HBD/Thermoid®, Inc.

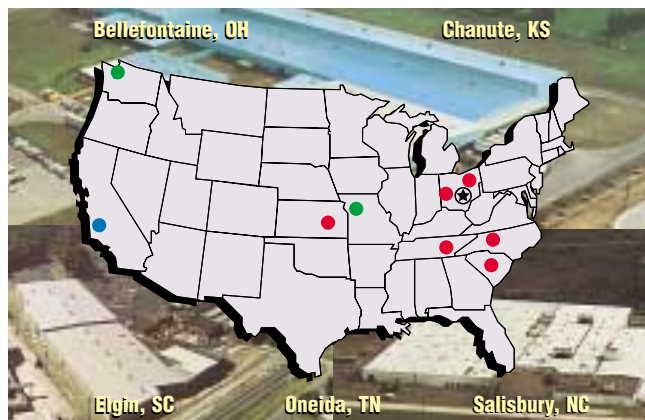
HBD/Thermoid, Inc. produces one of the widest lines of industrial rubber products available anywhere in the world. Our company can supply you or your customers with nearly every type of standard rubber product required. HBD/Thermoid can also create an almost unlimited number of application-engineered rubber products including

- Automotive Aftermarket Hose & Accessories
- Conveyor Belting
- Ducting
- Grafting/Nursery Rubber Budding Strips
- Hose Products (Automotive, Aviation, Bulk Transfer Chemical, Industrial, Marine, Petroleum and More)
- Power Transmission Belts (V-Belts and Timing Belts)
- Rubber Bands
- Rubber Rolls/Roll Coverings

Shown throughout this brochure are product photographs and information about the many rubber products manufactured by HBD/Thermoid, Inc., however these are just a few examples from the wide rubber product lines available. For complete information on all the products produced by HBD/Thermoid, Inc., log onto the company's website at www.hbdthermoid.com.

HBD/Thermoid, Inc.

Most **Thermoid®** brand products, some of which have a 130-year-old legacy of excellence behind them, are produced at one or more of HBD/Thermoid, Inc.'s five manufacturing plants: Bellefontaine, OH; Chanute, KS; Elgin, SC; Oneida, TN and Salisbury, NC. However, some of our products are manufactured by our overseas business licensees, using our guidelines for manufacturing, quality and product designs. **Thermoid®** brand products are used by thousands of industrial customers and consumers around the world. Agriculture, aviation, automotive, basic manufacturing, construction, graphics, food processing, mining, petroleum, railroads, robotics, steel production, transportation and textile manufacturing are just a few of the many markets our products serve. All of the comprehensive and competitively priced products manufactured by **HBD/Thermoid, Inc.** are produced in environmentally safe manufacturing facilities that operate under the guidance of **ISO 9001 Quality Systems**. Our expert design and application engineering staff is available to assist and consult with customers, product design engineers and OEMs on new products or product systems. All **Thermoid** brand products are thoroughly tested and application engineered to ensure long-term performance and worker safety.



- HBD/Thermoid, Inc. Manufacturing Plants/Product Warehouses
- HBD/Thermoid, Inc. Product Warehouse – All Products
- HBD/Thermoid, Inc. Product Warehouses – Power Transmission Belts
- ⊙ HBD Industries, Inc. Headquarters

HBD/Thermoid, Inc. operates a comprehensive industrial rubber product training facility within the Bellefontaine, OH manufacturing plant location. Throughout the year, the company's technical, sales and product engineering professionals schedule and conduct regular, in-depth industrial rubber product training and educational classes on conveyor belting, ducting, industrial hose, V-belt/timing belts and other rubber products. These training classes are available to our US and international distributors, OEM business partners, retail clients and other customers. For complete details on scheduling or attending a HBD/Thermoid product education/training class for your company's personnel, please contact your area Thermoid Sales Representative and/or our Corporate Sales and Marketing Department at **800/543-8070**.

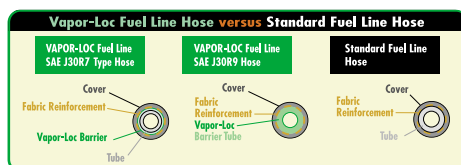
HBD/Thermoid, Inc. products are available world-wide through a select group of industrial distributors supplying the MRO requirements of customers serving the manufacturing, construction, agricultural, processing, mining, forestry, mineral exploration, transportation, repairs, recreation and consumer markets. Additionally, our product stocking warehouses are conveniently located to provide for timely delivery of any type of hose, belt, conveyor belting, ducting, rubber band or any other **HBD/Thermoid, Inc.** products that you or your customers may need.

VAPOR-LOC™ ...FUEL/BIO-FUELS HOSE BARRIER TECHNOLOGY

HBD/Thermoid's exclusive **VAPOR-LOC™** hose barrier system is just another innovative hose technology, one of many introduced by the company. With the application of the **VAPOR-LOC** system during the hose manufacturing production, a hose product is given an added internal barrier system that virtually traps and prevents nearly 99% of all hydrocarbon fuel and bio-fuels from permeating through the hose walls as happens in regular fuel transfer type hose products. As shown in the **VAPOR-LOC Fuel Line Hoses** versus standard fuel line hose graphic illustration below, you can clearly see the differences in the internal construction and barrier levels provided by our **VAPOR-LOC** System.



VAPOR-LOC Hose Barrier System is shown with vapor permeation barrier highlighted in green.



HBD/Thermoid's VAPOR-LOC Barrier System is currently available on fuel line hoses and bulk fuel /bio-fuel transfer hose products. The close-up photo of this Thermoid Transporter Bio-Fuel

bulk transfer hose shown below has our **VAPOR-LOC Barrier System** illustrated in bright green to demonstrate just how this hose barrier system is fully integrated into the internal structure and composition of the hose.



As more and more bio-diesel, bio-fuels and alternative fuel products are being made available to the marketplace, **HBD/Thermoid** will continue to expand our **VAPOR-LOC** hose product line to answer the needs of our customers for hose products that can resist the caustic effects of some bio-fuels. Our **VAPOR-LOC Barrier System** technology helps prevent the degradation of hose reinforcement and cover materials caused by the permeation of bio-fuels, other petro-fuels types in general and helps our hose products provide reliable, long-term service for the transfer of petro-fuels, bio-fuels, chemicals, oil, fats and more. With **HBD/Thermoid's VAPOR-LOC** Hose Products on the job, you can count on these products to dramatically reduce petroleum vapor emissions, reduce fuel loss through permeation, virtually eliminate smelly fuel odors and save you money. For complete details on **VAPOR-LOC** Hose products and how they can help your business, visit us on-line at www.hbdthermoid.com or talk to your area **HBD/Thermoid Distributor**.

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Product information is subject to change. For full details, visit our website or contact Customer Service.



ALPHABETICAL – By Hose Application

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GREEN GP/OXYGEN	41
HERCULES® II	45
HERCULES® 500 MULTIPURPOSE	46
HERCULES® 1000 MULTIPURPOSE	46
MAINLINER®	37
MAXECON™/GP	38
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RADIAL AIRE	41
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Coupled

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Petroleum

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COMMITMENT TO EXCELLENCE

HBD/Thermoid, Inc. has been the recognized industry leader in spiral hose technology and rubber production innovations for over 30 years. During this time, we developed our unique spiral hose technology, engineered the patented **CONCURE®** continuous manufacturing process, created the **VAPOR-LOC®** -hydrocarbon fuel vapor permeation barrier system and produced billions of feet of spiral reinforced hose products and other unique rubber products at our various manufacturing facilities.

However, it is not production capacity alone that has given **HBD/Thermoid, Inc.** its position of pre-eminence in the field of industrial, marine and automotive hose and other rubber products. Our strength is, in a great degree, the result of a firm commitment to excellence. This commitment extends to every member of the company...from executive staff to production line worker. It is a point of pride for all. Our personnel are proud of their product and they are proud of our reputation. Our production facilities are models for the industry. Our product research and development is constant, sophisticated and unmatched in expertise and depth of product production knowledge. Quality control is continuous and extends to every facet of our production, packaging and shipping.



AUTO AFTERMARKET



RUBBER ROLLS



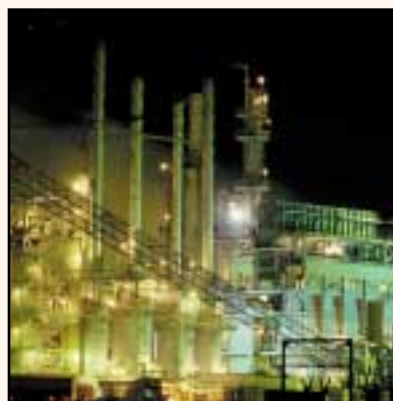
MARINE



RUBBER BANDS



FOOD INDUSTRY



CHEMICAL



MATERIAL HANDLING



PETROLEUM/LPG



SPECIAL APPLICATIONS



V-BELTS/TIMING BELTS



CONVEYOR BELTING



INDUSTRIAL DUCTING

Thermoid® Automotive Hosetrusted and selected by Automotive Service Professionals for Years!

For trouble free service, extra long performance and exceptional value, nothing compares to **Thermoid®** brand Automotive Aftermarket Hose Products and Accessories. HBD/Thermoid produces a wide variety of quality standard automotive aftermarket hose products, including air brake hose, heater hose (super silicone, 90° degree formed and other types/grades), fuel line/FI plus fuel injection, PVC/EPDM air hose, power steering return, transmission oil coolant, windshield washer/vacuum tubing and more.



Every Thermoid automotive aftermarket product is competitively priced, built to last and ready to go. Custom or special application automotive hose products can be designed and built to your specific requirements and any special packaging needs that you have can be supplied. HBD/Thermoid offers comprehensive products packaging from bulk to retail, in long length, money saving reels, spools or boxed coils. All products include UPC Coding and symbols. Quick order turns combined with stock availability and reliable fill rates make choosing Thermoid Automotive Aftermarket hose products easy. For complete details on sales and distribution of these automotive aftermarket products, contact us. Discover the benefits of choosing

Thermoid®... Number One in Automotive Aftermarket Hose Products and Accessories.



HBD/Thermoid, Inc®... is the Leader in Conveyor Belting Manufacturing

Our name is widely known and respected as a top-quality manufacturer of lightweight rubber conveyor belting products. For over 50 years, our lightweight conveyor belting has been specified and used with confidence by thousands of customers in diverse industries around the world.

HBD/Thermoid has been an innovator in lightweight belt technology for decades. Many improvements that have now become industry standards were pioneered in our research laboratories. We were the first to use 100% polyester and 50-50 polyester-cotton blends for greater strength and moisture resistance in our lightweight belting and the first to use a nitrile rubber to dramatically improve the oil resistance in our food belts. We pioneered the development of special adhesive treatments for synthetic carcasses that help keep plies from separating.



Lightweight Rubber
Conveyor Belting



For Assistance: 800/367-0420 or E-Mail: info@hbdthermoid.com

Thermoid Conveyor Belting Products

HBD/Thermoid has an extensive range of products covering a broad range of applications. From the highest quality food-grade products that meet the most rigorous standards of the FDA, to highly engineered belting for today's automated Package Handling systems, to the heavier duty products designed to last in General Industrial applications; each of our products is quality made and application-engineered to give top performance, long-term service, and exceptional value.

Food Handling



Food Handling Conveyor Belting

From field to factory, Thermoid offers a full range of food-grade belting to satisfy the most demanding requirements. We offer a wide choice of fabrics, specially designed compounds in a variety of colors, and a choice of food-grade cover impressions.

Thermoid food belting covers a wide range of operating environments including high and low temperatures (from -65° F to 300° F), or where hot, oily, acidic, or sticky conditions exist. Thermoid food belting meets the very latest sanitation standards including FDA and USDA standards for both direct contact and packaged products only (PPO).

From fruits to nuts to meat, fish, and poultry processing, Thermoid has a belt to meet the challenge.



Light Industrial

Light Industrial/Automation Conveyor Belting

Thermoid offers a broad product offering for the light industrial/automation segment of the market. From light-weight sheeting belts to Hot Stock and Water to Slide-A-Pack transmission belts, we have the belt for you. Each product is specifically engineered to meet the demanding requirements of common light industrial applications.

Thermoid also offers a wide range of products for the newer, highly automated, material handling systems where the belt must be a highly engineered component to a sophisticated conveying system.

Package Handling



Baggage/Package Handling Conveyor Belting

Moving packages or baggage up steep inclines and declines is no problem with Thermoid's V-Cleat, Ribflex and/or Diamond Incline Belts. Slider Bed Package Handling Systems work even more efficiently and faster after the installation of our Pack-EZ S/Weave or EZ Premium PH Series Belt products. Sliptop, Caripack and Slide-A-Pack are and continue to be some of the more popular belt products chosen by our customers for horizontal belt package handling applications.



Agriculture

Agricultural Conveyor Belting

Thermoid offers you a number of belting products specifically designed to efficiently convey a wide variety of agricultural products from the field through the entire food production process. For example, our Griptop belts can easily handle up to 35 degree inclines and declines. Ridgetop Belts are USDA & FDA Approved.

Product information is subject to change. For full details, visit our website or contact Customer Service.

HBD/Thermoid, Inc. produces one of the widest lines of industrial rubber products in the world:

Food Handling Conveyor Belting

- **MEATS & POULTRY – USDA & FDA Approved**
 - Saniwhite – Nitrile rubber (all fabrics)
 - Sani-Brite – NBR/PVC rubber (all fabrics)
 - Hot 'n Cold Butyl (Polyester fabrics)
 - Ridgetop Nitrile
- **FROZEN FOOD CONVEYOR BELTING**
 - Butyl – Hot 'n Cold
 - Rubber – Slide-A-Pack
 - Rubber – Griptop
- **HOT, OILY FOODS (FDA)**
 - Saniwhite – Nitrile rubber (all fabrics)
 - Sani-Brite – NBR/PVC rubber (all fabrics)
 - Hot 'n Cold Butyl
 - Teflon®
- **FRUIT/ VEGETABLE PROCESSING**
 - Saniwhite – Nitrile rubber (all fabrics)
 - Sani-Brite – NBR/PVC rubber (all fabrics)

Baggage/Package Handling

- **BELTS for INCLINES/DECLINES – When Oil is Present**
 - Griptop – Up to 35 degree inclines/declines
- **BELTS for STEEP INCLINES/DECLINES – Up to 45 Degrees**
 - Diamond Incline
 - V-Cleat
 - Ribflex
- **BELTS for PACKAGE SLIDER BED SYSTEMS**
 - Pack-EZ S/Weave
 - Pack-EZ Premium PH Series
- **BELTS for HORIZONTAL SERVICE**
 - Caripack
 - Slide-A-Pack
 - Sliptop
 - Sheeting Belt
 - Hot Stock & Water

Agriculture Belting

- **INCLINE SERVICE – FDA Approved**
 - Griptop for up to 35 degree inclines
 - Ridgetop - USDA & FDA Approved
- **POTATO HARVESTING/UTILITY SERVICE**
 - Potato (2-ply synthetic fabrics)

General Industrial Belting

- **BELTS – When Oil is Present**
 - Nitrile rubber (Polyester, PNT, SCP)
 - NBR/PVC rubber (Polyester, PNT, SCP and APT)
 - MOR Rubber
- **BELTS – For Oil-Free Service**
 - Hot Stock & Water
 - Caripack
 - Slide-A-Pack
 - Potato (Utility)

Special Applications Products

- Big Red (Silicone Covered) for Hot or Cold Tacky Material
- Plywood Processing – Tray
- Lumber Service – Lumber



For Assistance: 800/367-0420 or E-Mail: info@hbdthermoid.com

HBD/Thermoid Belt Descriptions and Nomenclature

Belt Width	Number of Plies and Fabric	Belt Style or Color	Color or Style	Top Cover	Bottom Cover
72"	2 ply APT-35	Sani-Brite	White Nitrile	3/64"	FS
72"	3 ply PCB-35	Tan SBR	Slide-A-Pack	FS	FS
72"	2 ply APT-75	Black SBR		Griptop	Bare
72"	2 ply APT-75	Black SBR	Potato Belt	1/32"	1/32"

HBD/Thermoid Lightweight Belting Common Components

Standard Fabrics - Tension Rating	Color(s)	Compound	Type
APT-35 RFL Treated Polyester rated at 35 lbs./inch/ply	Black	Nitrile Oil resistant NBR	Saniwhite Nitrile (NBR) Food Belting
PMT-50 RFL Treated Polyester/Nylon rated at 50 lbs./inch/ply	White	Sani-Brite High glass, oil resistant NBR/PVC blend	Sani-Brite High Gloss Food Belting NBR/PVC
SCP-14 Spun Cotton/Polyester rated at 14 lbs./inch/ply	Blue	Butyl High and Low Temperature Polymer	Caripack Transmission Belting
SCP-23 Spun Cotton/Polyester rated at 23 lbs./inch/ply	Ned/Brown	SBR General purpose Styrene Butadiene Rubber	Slide-A-Pack Transmission Belting
APT-75 RFL Treated Filament Polyester rated at 75 lbs./inch/ply	Red	NR Natural Rubber	HSW Hot, Stock, and Water
PMT-75 RFL Treated Polyester/Nylon rated at 75 lbs./inch/ply	Blue	Carbox. High abrasion resistant Carboxylated Nitrile	Gin Flushing Cotton Gin Flushing
PCB-35 Spun Cotton/Filament Polyester rated at 35 lbs./inch/ply	Orange	Pure-Gum Abrasion resistant Pure-Gum Rubber	Potato Belt Agriculture
PN-45 Spun Polyester/Nylon rated at 45 lbs./inch/ply	Beige	CR Neoprene	Sheeting Light duty package handling
APT-110 RFL Treated Filament Polyester rated at 110 lbs./inch/ply	Black	MOR Moderate Oil Resistant Rubber	Sliptop
33oz SHD 33 oz/yd 2 Silver Hard Duck rated at 35 lbs./inch/ply - All cotton	Natural		

Standard Fabrics - Tension Rating	Top Cover(s)	Bottom Cover(s)	Special
APT-35 RFL Treated Polyester rated at 35 lbs./inch/ply	Thickness Specified as a fraction of an inch or in metric	Thickness Specified as a fraction of an inch or in metric	FR Flame Retardant to ASTM D378
PMT-50 RFL Treated Polyester/Nylon rated at 50 lbs./inch/ply	Widgetop 1/4" integrally molded cleats on one inch centers	FS Friction surface	SE Self Extinguishing to ISO-340
SCP-14 Spun Cotton/Polyester rated at 14 lbs./inch/ply	Teflon® 0.002" Teflon film	TD Bare RFL fabric	AS Anti-Static to $\geq 10^9$ to $\leq 10^4$
SCP-23 Spun Cotton/Polyester rated at 23 lbs./inch/ply	FS Friction surface	Bare Bare fabric surface	SC Static Conductive to a maximum of 300 Mega Ohms (ML)
APT-75 RFL Treated Filament Polyester rated at 75 lbs./inch/ply	Gripper Molded light fabric impression		
PMT-75 RFL Treated Polyester/Nylon rated at 75 lbs./inch/ply	RT Molded fabric (Griptop)		
PCB-35 Spun Cotton/Filament Polyester rated at 35 lbs./inch/ply	TD Bare RFL fabric		
PN-45 Spun Polyester/Nylon rated at 45 lbs./inch/ply	SHD Bare heavy cotton cover		
APT-110 RFL Treated Filament Polyester rated at 110 lbs./inch/ply	Bare Bare fabric surface		
33oz SHD 33 oz/yd 2 Silver Hard Duck rated at 35 lbs./inch/ply - All cotton	V-cleat Molded "M" cleats on $x = 1/2$ " centers		
	Big Red Silicone Light coating of Red Silicone Rubber		
	Diamond Impression Molded diamond incline		

THERMOID® INDUSTRIAL DUCTING PRODUCTS

HBD/Thermoid, Inc., one of the premier suppliers of flexible industrial ducting, offers you a wide range of products which meet the highest requirements of quality and integrity in the industrial marketplace. For over a century, the **Thermoid®** brand has been synonymous with quality, dependability, efficiency and durability. Our ducting product line includes many well known and trusted products like **FlexKing®**, **Ultraflex®**, **Neoflex®**, **Silflex®**, **Tuftex®** and **Cyclone®**. The strength and reliability of the Thermoid Ducting products makes them suitable for a variety of applications including industrial air movement, dust collection, fume control and light bulk material handling. Many of these ducting products are outlined on the following pages, however for complete information on all of our industrial ducting products contact your area Thermoid brand distributor or contact us directly.

FlexKing®

An outstanding example of all around, all quality ducting. This line offers a broad range of base fabrics, plies, coatings and sizes. All have a wire helix completely enclosed for a smooth, reliable, flexible operation. Applications cover fume control, cool or warm ventilation, hot air; light materials handling – even projects where rot, mold and mildew are a problem. FlexKing is available in a variety of neoprene coated fabrics, soft cuffs and neoprene dip coatings.

FlexKing Type SC – Performs especially well in low pressure, light duty areas. It is best suited for air handling and fume control. It features a single ply of neoprene coated cotton/polyester blend fabric with a helical wire reinforcement.



FlexKing®

FlexKing Type DC – Exceptionally reliable and strong. Type DC is designed for air handling, fume control, dust collection, and light material handling applications. It features a double ply of neoprene coated cotton/polyester blend fabric with a helical wire reinforcement.

FlexKing Type DC-FR – Same construction as FlexKing DC, except it offers excellent flame resistant qualities that meet UL 94V-O requirements.



Type DC

Hose Inside Diameter (inches)	2	3	4	5	6	7	8	10	12
Weight (lbs./ft.)	.24	.41	.61	.64	.75	1.15	1.36	1.64	2.07
Inside Bend Radius (inches)	.625	.625	1	1	1.5	1.75	1.75	2.0	2.5
Length Required for 180° Bend (inches)	9.2	12.5	19.0	21.0	25.0	28	29	38	46
Minimum Burst Pressure (psig)	50	45	40	32	28	24	20	18	15
Internal Working Pressure (psig)	12.5	11	10	9	7	6	5	4.5	3.75
Crush Resistance (lbs./ft.)	490	280	550	360	800	700	600	500	400
Axial Tensile Strength (lbs.)	408	612	816	1000+	1000+	1000+	1000+	1000+	1000+
Retracted Length (in./ft.)	6.0	6.0	5.0	5.0	4.75	4.75	4.75	4.5	4.5
Neg. Pressure Req. to Collapse (hg.in.)	18	17	16	15	14	13	12	11	10
Operating Temperature Range	-40°F to +250°F								

* FlexKing Type DC is normally available in 25 foot lengths, however this product can be ordered in a range of diameter sizes and lengths.

FlexKing Type DE – The most rugged of the two-ply FlexKing. It has an unequalled reliability record for performance under the most severe conditions. It resists rupture and flex-fatigue and is mildew and rot proof. It features a double-ply of neoprene coated polyester fabric and a helical wire reinforcement. It is also available in single ply construction – FlexKing SE.

Thermoid® Custom Ducting Products

HBD/Thermoid has the production expertise and manufacturing capability to design and produce custom ducting products to meet your unique industrial air movement, dust/dirt collection, fume control, light and/or heavy bulk material handling application requirements.

HBD/Thermoid's technical and manufacturing personnel can assist you develop, design and then build a quality Thermoid® Custom Ducting Product that will exceed your needs for solid performance and long-term service in virtually any type of rough working conditions, extreme temperatures and environmental conditions. For over 100 years, HBD/Thermoid has been producing quality ducting, conveyor belting, hose and other industrial rubber products for customers in a diverse number of industries around the world. **If you have a problem and need custom ducting just contact us and we will help you find the solution.**



Ultraflex®

The Ultraflex ducting line delivers high performance service to a wide range of applications. The variety of thermoplastic materials makes this line exceptionally versatile. Flexibility and compressibility also make it ideal for many difficult, hard to handle applications. Its toughness, weatherability and resistance to chemicals and abrasion allow it to take on the most demanding jobs.

Ultraflex TPR – Type TPR features a helical wire reinforced thermoplastic rubber suitable for a wide variety of air handling, fume control, and dust collection applications. It offers good abrasion resistance, superior chemical resistance, excellent ozone and weathering resistance, as well as good resistance to flex fatigue.

Type TPR

Inside Diameter (inches)	2	4	6	8	10
Weight (lbs./ft.)	.22	.75	.94	1.62	1.86
Inside Bend Radius	1/2 of I.D.				
Burst (psig)	50	32	27	25	22
Working Pressure (psig)	17	11	9	8	7
Compressibility	65%				
Temperature Range	-60°F to +275°F, +300°F Intermittent				
Max. Negative Pressure (in. hg.)	24	24	9	8	6

Footnote: All pressure and vacuum data based on 72°F temperature.



Ultraflex TPC – Type TPC consists of a thermoplastic polyvinyl chloride (PVC) material reinforced with a spring steel wire helix. It is an excellent economical choice for industrial applications that require fume removal, ventilation, dust collection, etc.

Type TPC

Inside Diameter (inches)	2	4	6	8	10
Weight (lbs./ft.)	.17	.40	.59	.85	1.03
Inside Bend Radius	1/2 of I.D.				
Burst (psig)	27	18	17	15	10
Working Pressure (psig)	9	6	5.5	5	3
Compressibility	75%				
Temperature Range	-20°F to +180°F				
Max. Negative Pressure (in. hg.)	20	14	8	6	5

Footnote: All pressure and vacuum data based on 72°F temperature.



- Standard Colors:** Black
- Sizes:** 2" I.D. through 18" I.D.
- Standard Length:** 25 ft. (other lengths up to 50 ft. available upon request)
- Temp. Range:** -60°F to +275°F Continuous.
+300°F Intermittent
- Features:** Excellent flexibility and compressibility characteristics; can be used in both positive and negative applications.
- Applications:** Venting systems for chemical fumes; dust collection; exhausting gases; air movement.



- Standard Colors:** Blue
- Sizes:** 2" I.D. through 18" I.D.
- Standard Length:** 25 ft. (other lengths up to 50 ft. available upon request)
- Temp. Range:** -20°F to +180°F
- Features:** Excellent flexibility, good abrasion resistance, good chemical resistance, good weathering characteristics.
- Applications:** Fume removal, ventilation, dust collection, light material handling internal cooling and venting of computers.

Ultraflex®

Ultraflex TPU – Type TPU is constructed of a helical wire reinforced thermoplastic urethane that offers excellent abrasion resistance for material handling applications. It's a tough, versatile, lightweight, flexible hose/ducting that can be used in a wide variety of applications, and is offered in black or clear transparent urethane that allows the user to monitor the flow of material.



Type TPU

Inside Diameter (inches)	2	4	6	8	10
Weight (lbs./ft.)	.24	.56	.94	1.08	1.36
Inside Bend Radius	1/2 of I.D.				
Burst (psig)	50	25	22	15	10
Working Pressure (psig)	17	8	7	5	3
Compressibility	65%				
Temperature Range	-65°F to +200°F				
Max. Negative Pressure (in. hg.)	24	23	9	8	6

Footnote: All pressure and vacuum data based on 72°F temperature.

Standard Colors: Black or Clear

Sizes: 2" I.D. through 18" I.D.

Standard Length: 25 ft. (other lengths up to 50 ft. available upon request)

Temp. Range: -65°F to +200°F

Features: Superior abrasion resistance, excellent low temperature flexibility, high tear strength, excellent ozone resistance, and good oil resistance.

Applications: Lawn and garden applications include chip handling, leaf and grass loading, straw blowing; industrial vacuum systems; transfer of plastic pellets; dry bulk material handling systems; agricultural product material handling; woodworking applications include transfer of sawdust and wood chips.

Cyclone® Utility Blower and Utility Blower Insulated

The Cyclone line of ducting provides excellent service in applications requiring the conveying of large volumes of air and fume control. It's excellent for portable blower applications, temporary ship construction ventilation, welding fume removal, utility manhole ventilation, portable heaters, and mobile vehicle air conditioning and heating units.

Cyclone Type UB – This flexible ducting with its exceptional compressibility (approx. 8 to 1) permits ease of storage and handling. It maintains a smooth bore when operating at working pressure. To protect the ducting when being dragged over rough surfaces, a scuff strip is included for added durability.

Type UB Construction:

- A. Galvanized spring steel wire helix, fully enclosed.
- B. Single ply vinyl flame retardant, coated polyester fabric.
- C. Thermoplastic scuff strip.
- D. Nylon thread stitching.

Type UB Technical Data:

Inside Diameter (inches): 5 to 30
Larger diameters available upon request.

Operating Temp Range: -40°F to +250°F

Standard Lengths: 10, 15 and 25 ft.
Longer lengths available.

Color: Yellow with black helical wear strip.



For Assistance: 800/835-0682 or E-Mail: info@hbdthermoid.com

Cyclone Type UBI – This preinsulated ducting is designed to move large volumes of hot or cold conditioned air with negligible heat loss or gain. Its exterior scuff strip provides abrasion resistance. Both flexible and lightweight, it provides a compressibility ratio of approximately 5 to 1.

Type UBI Construction:

- A. Galvanized spring steel wire helix, fully enclosed.
- B. Two ply flame retardant, vinyl coated polyester fabric.
- C. Insulation blanket encased between material plies.
- D. Thermoplastic scuff strip.
- E. Nylon thread stitching.

Type UBI Technical Data:

Inside Diameter (inches):	5 to 30 Larger diameters available upon request.
Operating Temp. Range:	-40°F to +250°F
Standard Lengths:	10, 15 and 25 ft. Longer lengths available.
Color:	Yellow with black helical wear strip.



Neoflex®

Neoflex ducting is designed for conveying hot or cold temperature air and fume control applications ranging from -40°F to +300°F. It is not recommended for applications involving the movement of liquids or abrasive materials, or for negative pressure applications. Its excellent flexibility allows for easy installation around obstructions and sharp bends. Typical applications include portable generator cooling, heater ducts and electronic equipment cooling.

Neoflex Type SNF – This extremely lightweight, highly flexible, low pressure ducting is suitable for conveying fumes and air. Short lengths can be easily attached together to form a continuous length. It features a single ply of neoprene coated fiberglass fabric with an internally exposed helical wire reinforcement.

Neoflex Type DNF – It features a double ply of neoprene coated fiberglass fabric with the helical wire reinforcement encased between two plies of fabric. Higher pressure rating, improved air flow and less air friction loss are the benefits of the 2-ply construction.



Type DNF

Inside Diameter (inches)	2	3	4	5	6	7	8	10	12
Weight (lbs./ft.)	.22	.35	.47	.58	.69	.81	.92	1.15	1.35
Inside Bend Radius (inches)	.75	1.10	1.25	1.50	1.75	2.00	2.25	3.00	4.00
Length Required for 180° Bend (inches)	10	14	19	24	28	32	38	50	60
Minimum Burst Pressure (psig)	185	160	144	84	76	48	43	38	22
Internal Working Pressure (psig)	46	40	36	21	19	12	9.5	6.5	5.5
Maximum Leakage (cfm/ft. at working pressure)	.020	.030	.040	.050	.060	.070	.080	.100	.120
Crush Resistance (lbs./ft.)	400	320	290	240	200	190	145	105	60
Axial Tensile Strength (lbs.)	550	720	900+	900+	900+	900+	900+	900+	900+
Compressed Length (inches per foot)	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.0
Operating Temperature Range	-40°F to +300°F								

* Neoflex Type DNF is normally available in 10 foot lengths, however this product can be ordered in a range of diameter sizes and lengths.

Silflex®

Silflex ducting products are designed to handle extreme high and low temperature air handling applications ranging from -80°F to +550°F.

They are not recommended for applications involving the movement of liquids or abrasive materials, or for negative pressure applications. This ducting is extremely flexible and can be easily installed around obstructions and sharp bends.

Typical applications include electronic equipment cooling, paper processing equipment, engine compartment air handling, and fume removal from aluminum and glass manufacturing.

Silflex Type SSF – Lightweight and extremely flexible, this ducting minimizes waste since short sections can be joined together to form a continuous length. It features a single ply of silicone coated fiberglass fabric with an internally exposed helical wire reinforcement.

Silflex Type DSF – This ducting features a double ply of silicone coated fiberglass fabric with the helical wire reinforcement encased between two plies of fabric. The liner allows for improved air flow and less air friction loss. Plus, it also provides a higher pressure rating than the Silflex SSF.



Type DSF

Inside Diameter (inches)	2	3	4	5	6
Weight (lbs./ft.)	.20	.33	.44	.55	.66
Inside Bend Radius (inches)	.75	1.0	1.25	1.50	1.75
Length Required for 180° Bend (inches)	10	14	19	24	28
Minimum Burst Pressure (psig)	165	142	125	76	68
Internal Working Pressure (psig)	42	35	31	19	17
Maximum Leakage (cfm/ft. at working pressure)	.016	.024	.032	.040	.048
Crush Resistance (lbs./ft.)	400	320	290	240	200
Axial Tensile Strength (lbs.)	525	680	860	900+	900+
Compressed Length (inches per foot)	4.5	4.5	4	3.5	3.5
Operating Temperature Range	-80°F to +550°F				

* Silflex Type DSF is normally available in 11 foot lengths, however this product can be ordered in a range of diameter sizes and lengths.

For Assistance: 800/835-0682 or E-Mail: info@hbdthermoid.com

GET TOUGH WITH ROUGH JOBS, USE TUFTEX® DUCTING!



Tuflex®

The Tuflex line of ducting is one of a kind in the industry that borders on a general purpose industrial hose. The line provides an integrally vulcanized rubber liner and cover with external corrugation that enhances its flexibility while maintaining a smooth bore (Tuflex LSH-CB has a corrugated liner and cover for maximum flexibility). This line is designed for gravity or positive and negative pressure applications in bulk material handling applications.

Tuflex Type CD – This flexible, long service hose is designed to handle lightweight abrasive materials. It can be used for the transmission of liquids, grindings and contaminated air. Its construction consists of a single ply neoprene coated fabric cover, a .032" abrasion resistant rubber liner, and a spring steel wire helix.



Type CD

Hose Inside Diameter (inches)	2	3	4	5	6	7	8	10	12
Weight (lbs./ft.)	.15	.30	.42	.80	1.0	1.25	1.4	1.8	2.5
Inside Bend Radius (inches)	1.25	1.50	1.50	1.75	2.0	2.5	4.0	6.0	9.0
Minimum Burst Pressure (psig)	30	28	26	23	20	18	16	14	12
Negative Pressure Req. to Collapse (in. hg.)	27	27	23	22	20	18	14	9	2
Operating Temperature Range	-40°F to +250°F								

* Tuflex Type CD is normally available in 20 foot lengths, however this product can be ordered in a range of diameter sizes and lengths.

SEWER CLEANING SOLUTIONS



Tuflex®

Tuflex MH1; MH2; and MH3 – This material handling hose is designed for gravity or positive and negative pressure applications in bulk material handling. All types are constructed with excellent abrasive resistant materials. Three types of MH hose are available which lets you select the one that best fits your application.



For Assistance: 800/835-0682 or E-Mail: info@hbdthermoid.com

Construction Type MH (Material Handling)**MH Type 1**

- A. Spring steel wire helix support.
- B. Single-ply synthetic fabric reinforcement.
- C. Abrasive-resistant rubber tube .062 inch thick.
- D. Abrasive-resistant rubber cover.

MH Type 2

- A. Spring steel wire helix support.
- B. Single-ply synthetic fabric reinforcement.
- C. Abrasive-resistant rubber tube .125 inch thick.
- D. Thick abrasive-resistant rubber cover.

MH Type 3

- A. Spring steel wire helix support.
- B. Double-ply synthetic fabric reinforcement.
- C. Abrasive-resistant rubber tube .250 inch thick.
- D. Thick abrasive-resistant rubber cover.

TUFTEX MH-2

Inside Diameter (inches)	4	6	8	10
Approx. Weight (lbs./ft.)	2.5	3.5	4.5	6
Length Required for 90° Bend (inches)	7	11	13	16
Minimum Burst Pressure (Psig)	90	65	45	40
Negative Pressure to Collapse (inches hg.)	28+	28+	28+	28+
Temperature Range	-40°F/40°C to +250°F/168°C			

Sewer cleaning needs vary, but **TUFTEX** handles the toughest jobs. **TUFTEX** comes in a variety of lengths and of ID Sizes. Shown below are just some of the many standard /common sizes:

8" X 60" X 4" 8" X 66" X 4" 8" X 68" X 4" 8" X 72" X 4" 8" X 120" X 4" 8" X 20' X 4"
 8" X 62" X 4" 8" X 100" X 4" 8" X 102" X 4" 8" X 127" X 4"


LEAF REMOVAL MADE EASY
SWEEP IT CLEAN

Tuftex Type LSH-CB (Leaf Suction Hose) – This corrugated bore hose is produced using weather resistant and excellent abrasive resistant rubber compounds which provide unequaled flexibility, ease of handling and long trouble-free service life for a material handling hose.

Construction:

- A. Abrasive resistant rubber liner.
- B. Double-ply synthetic fabric reinforcement.
- C. Abrasive resistant rubber cover.
- D. Spring steel wire helix support.



Inside Diameter (inches)	6	8	10	12	14	16
Approx. Weight (lbs./ft.)	3.6	4.2	6	8	10	12
Length Required for 90° Bend (inches)	16	18	22	27	31	39
Temperature Range	-40°F to +250°F					
Negative Pressure to Collapse (inches hg.)	27	27	27	27	20	17

* **Tuflex Type LSH-CB** is normally available in 20 foot lengths, however this product can be ordered in a range of diameter sizes and lengths.

TUFTEX Type LSH-CB Leaf suction hose gets the job done. It is weather and abrasion resistant and built to get the job done. It comes in a variety of I.D. Sizes (6"- 18") and lengths to suit your application needs, including:

12" X 100" X 6" 16" X 100" X 4" 12" X 10' X 6" 16" X 10' X 4"
 16" X 4' X 4" 16" X 12' X 4" 16" X 5' X 4" **AND MORE!**

For Assistance: 800/835-0682 or E-Mail: info@hbdthermoid.com



Thermoid®... Industrial Rubber Bands for Material Handling Applications!

BIG JOB® INDUSTRIAL RUBBER BANDS

BIG JOB Rubber Bands can help you reduce the time and labor involved in difficult material handling operations. Using these exceptional strong and innovative products, you can: **STACK OR RACK, PICK AND PACK, BRACE, BUNDLE, TRUNDLE, SHIP AND STORE WITH EASE!**

Our BIG JOB Bands can often replace costly, unwieldy films, potentially damaging steel straps and sticky adhesive tapes. Easy to use, one person can apply BIG JOB Industrial Bands. Their mighty holding power keep things in place indefinitely; yet they snap on and off with remarkable ease. Big JOB Bands can be used alone or in conjunction with automated equipment to streamline material operations and save labor costs. Their initial cost is low and because they



can be used again and again, your savings keep adding up. After trying them once, you'll soon find use after use for them.

BIG JOB BANDS come in jumbo sizes: 3, 4 and 5 feet long, from 24 inches to 113 inches in circumference. If you need a special size not included in our wide selection of standard products, we can create a custom size cut widths ranging from 1" up to 2". Minimum order for custom sizes is 200 lbs. Stock items are readily available and with credit approval are shipped within 24-48 hours of order receipt.

BIG JOB® PALLET BANDS

Designed to secure tricky plies of parts and cartons, our Big JOB Pallet bands protect against transit spills during warehousing and/or material handling operations. Easily applied and quickly remove; one person can apply the bands, saving on labor costs.

You can use them vertically or horizontally for temporary unitizing, or until pallets are received at shipping designations. Strong and versatile, these pallet bands have been designed to stretch 100- 150% of their relaxed length. Need more than that? When the situation calls for greater tension, these pallet bands can stretch up to 300%! Under normal usage conditions, these bands can be reused

many times before replacement is required due to cuts or tears that would affect their performance.



USE THIS CHART TO SELECT THE RIGHT SIZE PALLET BAND

PALLET SIZE	PALLET OUTSIDE CIRCUM.	BAND SIZE INSIDE CIRCUM.
24" x 32"	112"	56"
32" x 40"	144"	72"
36" x 36"	144"	72"
36" x 42"	156"	84"
36" x 48"	168"	84"
40" x 48"	176"	92"
48" x 48"	192"	92"
48" x 60"	216"	112"
48" x 72"	240"	128"

BIG JOB PALLET BANDS STOCK SIZES FOR IMMEDIATE DELIVERY.

BAND WIDTH	BAND THICKNESS	NOMINAL LENGTH
1/2"	1/16"	72" I.C.
1/2"	1/16"	92" I.C.
3/4"	1/16"	56" I.C.
3/4"	1/16"	72" I.C.
3/4"	1/16"	84" I.C.
3/4"	1/16"	92" I.C.
3/4"	1/16"	112" I.C.
1-1/2"	3/32"	113" I.C.



Thermoid®... Industrial Rubber Bands for Material Handling Applications!

BIG JOB® FURNITURE BANDS

Save time and money, protect your quality furniture shipments and reduce repair work effort by using our furniture rubber band products. These bands are designed to fit chairs, king size sofas, and everything in between.

They're easy to work with in a variety of applications, including securing padding over finished wooden parts, holding glued parts or upholstery in place while fastening and holding flounces during manufacture or shipping.



BIG JOB® FLOUNCE SAVER BANDS AND SPRING LINK BANDS

Flounce saver bands are exceptionally easy and convenient to apply or move. They'll hold flounces up while holding plastic bags on to protect the entire piece and save application time, too. Big Job Flounce savers keep your professional job looking professional during manufacture and shipping.

SPRING LINK BANDS replace metal clips in serpentine spring construction. They silence serpentine springs and keep them in perfect alignment, maintaining the quality you build into your furniture.



Thermoid® EPDM Bands

Longlife EPDM Bands have the same qualities as natural rubber bands, however they have the added benefits of longer life and broader usage. These EPDM rubber bands have numerous applications including holding assemblies together during cleaning, moving or storage in manufacturing areas, spring link bands for serpentine spring construction, holding ski boot racks and more. Designed to resist the effects of extreme weather, most chemicals, humidity and severe temperatures (use effectively in temperatures ranging from -60°F to +300°F), you can rely on these rubber bands to hold and keep holding.



Thermoid® NURSERY/GRAFTING BUDDING STRIPS

Tree grafting is now a lot easier with our budding strips and you can reduce your normal grafting time by half. Just graft, wrap, tie and you're done.

Our budding strips provide easy application, just wrap, twist and finish. They hold the bud union gently and firmly in place while preventing air moisture seepage. Budding strips are 100% natural rubber so using them creates no environmental concerns. An even bigger plus to their use is removal is not required. The strips disintegrate after the graft is secure. The strips can be sized to your grafting needs and they are available in various widths, thicknesses and lengths: 4 to 8 inches.



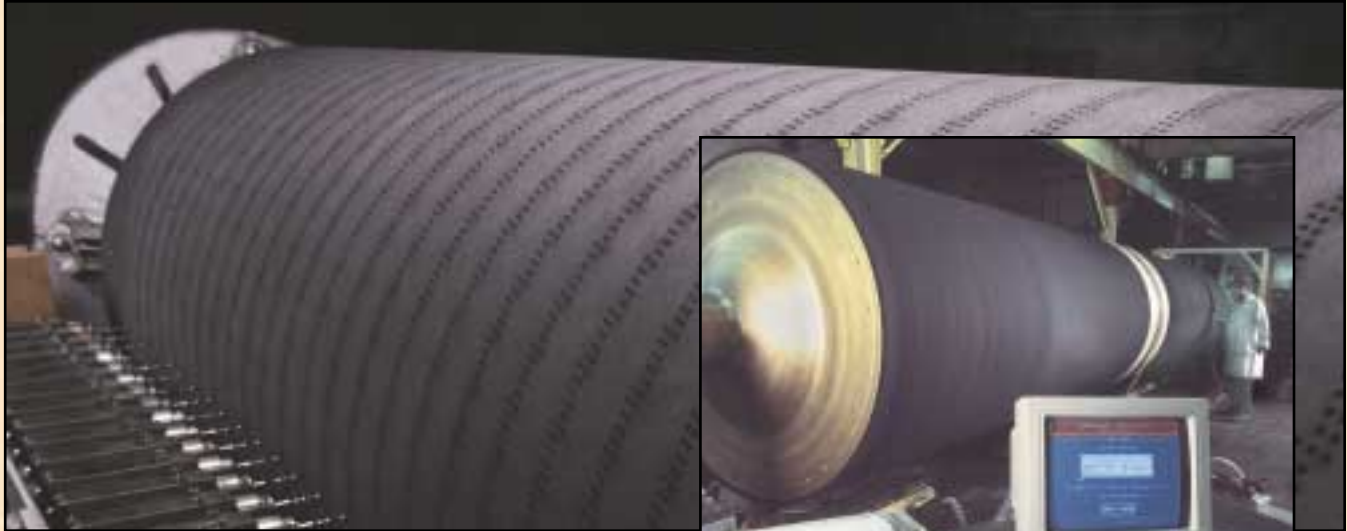
HBD/Thermoid, Inc. manufactures a wide variety of industrial rubber band products. Each of these rubber band products can be used in many different types of industrial shipping, storage or manufacturing applications. However, each Thermoid® rubber band product has three common features: strong holding power for tough jobs, long service life and great value.

For complete details on how BIG JOB® Bands (see front cover image of this brochure below) or any of the other Thermoid industrial rubber band products can assist your business, check out the BIG JOB Bands Brochure on our internet website at www.hbdthermoid.com, contact your area HBD/Thermoid rubber product distributor and/or call us directly at 800/438-2312.



Carolina Rubber Rolls™

Carolina Rubber Rolls™ ... Manufacturer of Quality Industrial Rubber, Silicone and Urethane Rolls



Carolina Rubber Rolls produces a wide variety of rubber, silicone and urethane rolls, gaskets and components. Our technical staff can design virtually any type of roll product from small specialty rolls to massive, critical application rolls. We have sophisticated production equipment that can produce, repair and restore to its original condition just about any type or size of roll.

For over 80 years, Carolina Rubber Rolls has manufactured and served the industrial roll application requirements of textile, paper processing/converting, film, industrial and manufacturing industries. Carolina can produce custom-design rolls: feeder, slasher, delivery, paper applications, straight and bowed spreader rolls, and adjustable pad swimming rolls for textile dyes or chemical pad finishing.



Carolina Rubber Rolls™

Carolina Rubber Rolls™... Manufacturer of Quality Industrial Rubber, Silicone and Urethane Rolls

Carolina has developed hundreds of roll covering formulas for our customers that meet and exceed their roll requirements. Many of these roll covering compounds and their formulas were developed to be resistant to specific harsh chemicals and/or working conditions. Our standard industrial roll covering compounds are outlined on the chart to the right. However, if you have a special requirements



not covered by these, Carolina Rubber Rolls can design a special or custom roll covering for your unique requirement.

Carolina Rubber Rolls can repair or service rolls from **2 inches to 30 inches O. D.** We provide roll face service

and journal repair from **1 inch to 240 inches** and our technicians can build or repair roll cores from

30 inches in diameter to **240 inches** in length. Also our equipment allows us the capability to provide precision grinding and crowning tolerances to **.001 inches**.



STANDARD INDUSTRIAL ROLL COVERING TECHNICAL INFORMATION

COMPOUND CODE	RESISTANT TO	ATTACKED BY
Carotex 1 - Nitrile Rubber	Many Hydrocarbons, Fats, Oils, Greases, Hydraulic Fluids and Chemicals	Ozone, Ketones, Esters Aldehydes, Chlorinated and Nitro Hydrocarbons
Carotex 1A - "Whaleskin"	Many Hydrocarbons, Fats, Oils, Greases, Hydraulic Fluids and Chemicals	Ozone, Ketones, Esters Aldehydes, Chlorinated and Nitro Hydrocarbons
Carotex 2 - Natural Rubber	Moderate Chemicals (wet or dry), Organic Acids, Alcohols, Ketones and Aldehydes	Ozone, Strong Acids, Fats, Oils and Greases and Most Hydrocarbons
Carotex 3 - Viton	Most Hydrocarbons, Mineral Acids, Esters and Ethers	Ketones, Low Molecular Weight Esters, Skydrol 500 and Amides
Carotex 4 - SBR	Moderate Chemicals (wet or dry), Organic Acids, Alcohols, Ketones and Aldehydes	Ozone, Strong Acids, Fats, Oils, Greases and Most Hydrocarbons
Carotex 5 - Neoprene	Moderate Chemicals, Acids, Ozone, Oils, Fats, Greases, Many Oils and Solvents	Strong Oxidizing Acids, Esters, Ketones, Chlorinated Hydrocarbons
Carotex 6 - Hypalon	Similar to Neoprene with Improved Acid Resistance	Concentrated Oxidizing Acids, Esters, Ketones, Chlorinated, Aromatic and Nitro Hydrocarbons
Carotex 7 - EPDM	Ozone, Ketones, Esters and Alcohols	Strong Acids, Fats, Oils, Greases, and Most Hydrocarbons
Carotex 9 - Urethane	Some Solvents, Grease, Oil, Gasoline, Kerosene, and Some Aromatic Solvents	Nitric Acid, Butyl Alcohol, Epichlorohydrin, Methyl Acrylate
Carotex 11 - Nitrile With Flock	Same as Nitrile Rubber	Same as Nitrile Rubber
Carotex 12 - Vinyl/Nitrile	Similar to Nitrile Rubber	Similar to Nitrile Rubber
Carotex 13 - Silicone	Moderate or Oxidizing Chemicals, Ozone, Concentrated Sodium Hydroxide	Many Solvents, Oils, Dilute Sodium Hydroxide

NOTE: The above chemical chart is furnished as a guide. For specific applications or chemical combinations, please consult your Carolina Rubber Rolls Product Engineer.



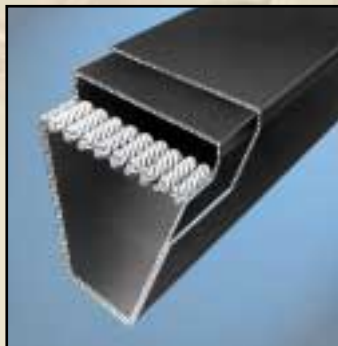
For all your roll or roll repair needs, rely on Carolina Rubber Rolls. For assistance on any technical roll coverings application, roll repair or roll needs, contact us toll-free at 800/428-2312 or by e-mail.

For Assistance: 800/438-2312 or E-Mail: custserv@carolinarubberrolls.com

Thermoid®...Helping Industry Work With Quality Power Transmission Belt Products!

HBD/Thermoid, Inc. manufactures a diverse range of power transmission belt products. Our belts can power virtually any type of drive application. Our V-belt product line offers customers a variety of configurations and constructions, including Kevlar®, polyester and fiberglass reinforcement as well as synchronous timing belts. From standard belts products to custom-designed belts, HBD/Thermoid can offer you and your customers a wide selection of popular belt types and sizes. With our long-term manufacturing expertise and superior production capabilities, we are also able to manufacture new, special and/or custom designed belt sizes with relatively short lead times. Many of our belt products are used as original equipment on various power landscaping, garden and ground tilling equipment produced by various OEMs.

Thermoid® V-Belts



® Registered trademark of DuPont.



These four pages contain information about some of our more popular belt products, however to view all of our available Thermoid belt products, please visit our Internet website or contact your area HBD/Thermoid distributor or sales representative for complete information.

PRIME MOVER™

Prime Mover is a premium-rated, heavy duty industrial V-belt. It is available in A, B, C, D and E cross-sections. This one versatile belt can power nearly every drive in your plant. Prime Mover Belts are oil and heat resistant and static conducting. Multicord construction is standard for D and E sections; special order for C section belts when less than 300" is required. B-section Belts 120" through 200" and C-Section belts 120" through 200" are branded Unicord®. They are produced to much tighter Sure-Set tolerances, ensuring excellent match-ability. The center distance variations have been reduced on Unicord belts, producing smoother-running belts.

MAXIPOWER™

This wedge-type, multiple drive belt with its deep-V design enables a smaller belt to carry a bigger load. It can operate at higher speeds up to 6,500 feet-per-minute. The belt width and groove spacing are narrower and that reduces sheave face width 30% to 50% compared with classical belt drives. Decreased sheave width means less shaft overhang, which places a lighter load on bearings and increases bearing life. Maxipower belts are oil and heat resistant and static conducting. As belt drive systems are designed or redesigned, consider Maxipower belts. Belts that will do the job more economically and use less space. Maxipower belts are available in 3V, 5V and 8V sizes and these belts are also available in a special order Kevlar® construction for difficult drives requiring extra strength. Contact us for more details.

For Assistance: 800/433-8208 or E-Mail: hdbelts@hbdelgin.com

Thermoid® V-Belts

PRIME MOVER™ COGGED

These belts have a precision coggled profile base which is designed for uniform stress distribution, superior heat dissipation and greater flexibility. They provide higher horsepower capacity for exceptional performance on small diameter sheaves using A, B, and C Section V-belts. Prime Mover Cogged Belts are available in AX, BX and CX size dimensions and come in a wide variety of lengths.



MAXIPOWER™ COGGED

The extra duty wedge construction of Maxipower Cogged Belts are specifically designed to fit the sheave grooves exactly, which allows maximum wedging action. These belts are built with tough polyester tensile members, bonded cord and neoprene rubber to prevent separation, improve cord stability and resist fatigue and shock loads. Maxipower belts are also oil and heat resistant and static conducting.*



Thermoid® Banded Belts

POWERPLUS MAXIBAND

PowerPlus Maxiband belts are designed for high horsepower, high tension and severe shock load applications such as dredge pumps, hammer mills, pile drivers and steel billet grinders. This belt delivers as much as 50% more horsepower than ordinary belt setups. Super tough Kevlar® cords with maximum internal adhesion have far more heat resistance and far less stretch than other cords. The cover is rugged, woven 2-ply, specially processed for maximum adhesion, and to protect the carcass from abrasion, heat, and oil, and to prevent static buildup. A premium chloroprene rubber cushion section resists compression, heat, oil and fatigue. This keeps the belt flexing smoothly and easily as it passes over the sheaves. An oil resistant compression section transfers the belt load to the Kevlar® cords.



Thermoid® Banded Belts

PRIME MOVER BANDED

This banded belt is a unitized set of premium construction belts. A vulcanized band is utilized to form a belt set in which the individual V's are spaced to permit operation in MPTA standard groove belt sheaves. This design prevents belt whip and turnover under pulsating and shock loads. B and C cross sections up to 200" I.C. are single cord construction which offers flexibility for operating over small diameter pulleys and short distances between pulleys at higher speeds. All D cross sections, B and C sizes over 200" I.C. are multi-cord construction, suited for operation at longer distances. They are available in B, C and D cross-sections that are oil and heat resistant and static conducting.*



MAXIPOWER BANDED

Maxipower Banded V-belts are molded with a vulcanized band into a unitized belt set. The individual V's are spaced to permit operation in MPTA standard groove 3V, 5V and 8V sheaves. They have been engineered for difficult applications where lateral vibration and heavy shocks often cause individual belts to whip or turnover. Maxipower Banded belts are oil and heat resistant and static conducting.*



MAXIPOWER COGGED BANDED

Maxipower Cogged Banded V-belts are cut from a vulcanized sleeve into a unitized belt set. The individual V's are spaced to permit operation in MPTA standard groove 3V and 5V sheaves. They have been engineered for difficult applications where small sheaves, lateral vibration and heavy shocks often cause individual belts to whip or turnover. You can use sheaves as small as 2.2" in diameter. The unique notched construction distributes bending stress uniformly — and also provides superior heat dissipation. These belts are oil, ozone, and heat resistant and static conducting.*



Thermoid® V-Belts

POWERPLUS™ REPLACEMENT BELTS

PowerPlus replacement belts are specifically designed and produced to withstand the rigors of tough, frequent usage in lawn and garden equipment, home workshop equipment, and hobby center tools, as well as in severe industrial drives. PowerPlus belts, offered in 3H, 4H, and 5H cross-sections with Kevlar® cord, transmit a minimum of 35% more horsepower than standard belts. They can withstand severe shock loads and generally provide longer service life than standard duty belts. They are oil and heat resistant.



Thermoid® Select™ V-Belts Are A Perfect Fit!

S...Select Better Quality-Made Belts
E...Excellent Performance from Every Belt Style
L...Longer Service Than Comparable Imports
E...Easy To Order
C...Competitive Prices
T...Timely Delivery...Where and When You Need Them

When you chose any Thermoid Select™ belt, you've made a smart choice. All of our Select belt products have been

designed and built to provide solid, long-term performance under most service conditions.

With a wide range of Thermoid Select belt products to choose from, you can be sure there's a belt size to meet your specific need. Thermoid Select offers four of the most popular belt styles including: Classical, Classical Cogged, Wedge and Wedge Cogged. Every belt in each profile has been designed and built to provide you outstanding performance and long-term service. Competitively priced, Thermoid Select belts are built tough to withstand shock and reduce fatigue.



HBD/Thermoid, Inc. has a long and established history of producing quality belt products. Using our years of belt manufacturing, technical and design know-how, along with our production expertise, HBD/Thermoid, Inc. has teamed up with an over-seas manufacturing licensee to produce the Thermoid Select belt line. Thermoid Select belts are quality-made, built to meet our specifications and give excellent service. At the same time, Thermoid Select belts are available to you and your customers at a very competitive price when compared to other imported belts. With Thermoid Select, you can have excellent, quality-made belts that provide solid performance at a price that you will like.

SELECT CLASSICAL

Select™ Classical is a heavy duty industrial V-belt. It is available in A, B, C and D cross sections. This one versatile belt can power virtually every drive in your plant. Thermoid Select Classical belts are resistant to oil and heat and are static conductive.* These belts are manufactured and produced to tight tolerances, ensuring match-ability.



SELECT CLASSICAL COGGED

Select Classical Cogged belts – AX, BX and CX – have a precision cogged profile designed for uniform stress distribution and excellent heat dissipation. Their construction permits greater flexibility and a higher horsepower capacity for exceptional performance on small diameter sheaves using A, B and C section drives. The aggressive construction is specially designed to fit the sheave grooves exactly, which allows maximum wedging action. These belts are built with tough polyester tensile members to resist fatigue and shock loads. The cord and neoprene rubber are bonded to prevent separation, and reinforcement layers on both sides of the tensile member improve cord stability. All belts are resistant to oil and heat resistant and are static conductive.*



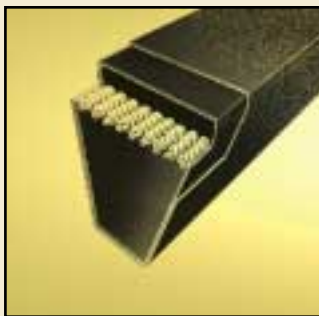
* For an explanation of static conductivity and conditions, refer to Thermoid's Installation and Maintenance Catalog.

For Assistance: 800/433-8208 or E-Mail: hdbelts@hbdelgin.com

Thermoid® Select™ V-Belts Are A Perfect Fit!

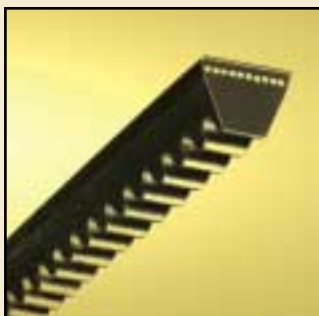
SELECT WEDGE

Thermoid has gone beyond the ordinary to provide you with an economical belt. The deep V-design of the Select™ Wedge belt enables a smaller belt to carry a bigger load. It can operate at higher speeds of up to 6,500 feet per minute. Belt width and groove spacing are narrower and that reduces sheave face width 30% to 50% compared with classical belt drives. Decreased sheave width means less shaft overhang, which in turn places a lighter load on bearings and increases bearing life. As belt drive systems are designed or redesigned, consider Select Wedge belts – belts that will do the job more economically and require less space. Thermoid Select Wedge belts are resistant to oil and heat and are static conductive.*



SELECT WEDGE COGGED

Select Wedge Cogged belts are ideal for situations where weight or sheave size is restricted. In applications where increased horsepower is required, Select Wedge Cogged belts – used with sheaves as small as 2.2" in diameter, provide higher horsepower in a given space when compared to classical belts. This lets you utilize high speed motors, which, according to the National Electrical Manufacturers Association, can mean a 10% increase in energy efficiency. The unique notched construction distributes bending stress uniformly as well as providing superior heat dissipation. In most installations, smaller diameter sheaves can be used, permitting shorter center distances. Select Wedge Cogged belts are raw edge construction and are cut to the precise dimensions to fit the sheave groove. The result is maximum wedging action and a reduced chance of slippage. Tensile members are engineered to resist fatigue and shock loads. Cord and rubber are specially bonded to prevent separation. Reinforcement layers on both sides of the tensile member help improve cord stability. Select Wedge Cogged belts have excellent resistance to heat, oil and ozone, and are static conductive.*



Shown below is a quick reference outline about some the belt products on the previous pages as well as a number of our other popular belts. However, to see all of our available Thermoid belt products, please visit our Internet website or contact your area HBD/Thermoid distributor for complete information.

THERMOID® POWER TRANSMISSION BELT PRODUCTS

Prime Mover Classical (A, B, C, D, E)
 Prime Mover Banded (B, C, D)
 Maxipower™ (3V, 5V, 8V)
 Maxipower™ Cogged (3VX, 5VX)
 Maxipower™ Cogged Banded (3VX, 5VX)
 Maxipower™ Banded (3V, 5V, 8V)
 Double V (AA, BB, CC)
 FHP (3L, 4L, 5L)
 Metriflex™ (XPZ, XPA, XPB, SPC)
 Multiribbed (H, J, K, L, M)
 Novex (3M, 5M, 7M, 11 M)
 Open Ended Prime Mover (A, B, C)
 PowerPlus™ (3H, 4H, 5H)
 PowerPlus™ Maxiband (5VK, 8VK)
 Variable Speed
 V-Link Nu-T-Link (A, B)
 Timing Trapezoidal (XL, L, H, XH, XXH)
 HTD (3M, 5M, 8M, 14M) and STD (8M)
 HTD Dual (8M, 14M) and STD Dual (5M)
 HTD Heavy Duty (8M, 14M)
 SELECT™ Classical (A, B, C, D)
 SELECT™ Classical Cogged (AX, BX, CX)
 SELECT™ Wedge (3V, 5V, 8V)
 SELECT™ Wedge Banded (3V, 5V, 8V)
 SELECT™ Wedge Cogged (3VX, 5VX)
 SELECT™ Wedge Cogged Banded (3VX, 5VX)
 SELECT™ Timing Trapezoidal (XL, L, H, XH, XXH)
 SELECT™ H Tooth (3M, 5M, 8M, 14M)
 SELECT™ R Tooth (3M, 5M, 8M, 14M)
 SELECT™ S Tooth (8M)
 SELECT™ Metric (XPZ, XPA, XPB, SPC)
 PU Endless (T5, T10, AT5, AT10)
 PU Open Ended HTD (3M, 5M, 8M, 14M),
 PU Open Ended STD (5M, 8M)
 PU Open Ended (T5, T10, AT5, AT10),
 PU Trapezoidal (XL, L, H)
 Rubber Open Ended HTD (5M, 8M), STD (8M)

* For an explanation of static conductivity and conditions, refer to Thermoid's Installation and Maintenance Catalog.

GENERAL HOSE INFORMATION

The Thermoid® Brand Advantage!

HBD/Thermoid® produces durable, top-quality hose products with lots of value-added features. The CONCURE® continuous manufacturing process was invented, developed and patented by HBD Industries, Inc. and helps us produce the finest hose products possible. Our CONCURE process assures dimensional stability from end to end, provides a contamination-free and smooth hose tube in long, unbroken lengths. This process and our continuous product quality monitoring give us improved dimensional control and allow for closer tolerance control of the I.D. and O.D. of the hose from the tube extruder to the finished reel on all our Flex Strength® hose products. This attention to manufacturing saves our customers time and money. Here are just a few of the benefits you receive by selecting Flex Strength hose products:

- **Long Length Reels** — Over 90% of our reels contain one length of hose, absolutely no three-piece reels, giving you a 15-20% savings due to less scrap.
- **Product Flexibility/Kink Resistance** — Our spiral hose construction offers improved hose flexibility, easy handling on the job and provides increased resistance to kinking.
- **Uncontaminated Tube** — Flex Strength hose is cured with an air mandrel assuring a clean, smooth tube. No dirt or other contaminants to clog nozzles or damage air tools.
- **Brighter Colors/Pin-Pricked Covers** — The CONCURE process provides for more vivid colors for increased visibility and easier identification. Usually present only on critical applications, most Flex Strength hose products have a pin-pricked cover.
- **Wider Working Pressure Range/More Hose Grades** — Flex Strength hose is available with pressure ratings from 150 to 300 psi working pressure, assuring you have the right hose for the job. Our wide variety of products allows you to find the correct hose for every application.
- **Convenience Branding** — Our industrial hose products are branded with size, working pressure, type, Made In USA. Optional branding information is available for private branding as well.

HBD/Thermoid®, Inc. — Leadership through Technology

HBD/Thermoid, Inc. has been and continues to be a leader in developing innovative hose product designs and manufacturing production techniques. This long-term commitment to hose manufacturing benefits all of our customers. Our production expertise provides customers with hose products that they can rely on to stand up to the roughest types of industrial and/or working environments. Outlined below are a few examples of the many hose products, design types and unique manufacturing techniques that assist customers with their daily hose product needs:

Handbuilt

With over 100 years of design experience, **HBD/Thermoid, Inc.** is the leader in handcrafted hose. The line is built by an experienced design team, using a computer-aided system that has received worldwide product approvals. This hose line is not your everyday water hose; it's one that encompasses products like submarine, rotary and the patented Hy-Flex™ dock hose.

Spiral

HBD/Thermoid's LX-200 production lines now produce a selection of Thermoid's most popular hoses in continuous lengths to 200 feet. The most notable example is the **Transporter®** line, which encompasses a wide variety of markets such as petroleum, material handling, chemical and food service.

Thermocure

With this process, **HBD/Thermoid** has become a potent force in the PED, Fuel Oil Delivery and LP Gas markets with such product lines like the Hi-Vac™ and Superlite® vapor recovery hoses, the Thermoid FOD hose and the Type 75 LP Gas hose, just to name a few. The Thermocure process gives these first class products, a showroom quality look.

RMA OIL RESISTANCE DATA

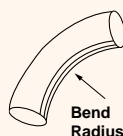
The effects of oil on rubber depend on a number of factors that include the type of rubber compound, the composition of the oil, the temperature and the length of exposure. The RMA (Rubber Manufacturers Association) has developed a classification of hose performance based on sample immersions in ASTM No. 3 oil (High Swell) at 212°F for 70 hours. Oil resistance classifications for rubber stocks are shown in the table below.

Hose Physical Properties After Exposure to Oil		
Classification	Volume Change Maximum	Tensile Strength Retained
Class A (High Oil Resistance)	+25%	80%
Class B (Medium-High Oil Resistance)	+65%	50%
Class C (Medium Oil Resistance)	+100%	40%

RMA IP-8 (2002) Specification for Oil Suction and Discharge Hose definitions from section 8.3 for "ED" and "EC" hose as follows; Electrically Discontinuous (ED) hose assembly has a maximum allowable resistance of 100 ohms as ascertained by using a 9 volt ohmmeter. Electrically Continuous (EC) hose assembly has a minimum allowable resistance of 25,000 ohms as ascertained by using a 500 volt megger.

* Reprinted with permission from the Rubber Manufacturers Association (RMA) Hose Handbook, RMA/IP-2/2003.

MINIMUM HOSE BEND RADIUS DATA (MBR)



The Bend Radius is the radius of the bent section of a hose measured to the innermost surface of the curved portion. It is important because the minimum bend radius is the maximum amount a hose can be bent without being kinked or damaged.

General formula to determine bend length:

$$\frac{\text{Angle of Bend}}{360^\circ} \times 2\pi r = \text{minimum length of hose to make bend}$$

r = given bend radius of hose

Example: to make a 90° bend with a hose with a 2" I.D.

$$\text{Given } r = 4.5 \text{ inches} \quad \frac{90^\circ}{360^\circ} [2 \times 3.14 \times 4.5]$$

$$.25 \times 2 \times 3.14 \times 4.5 = 7" \text{ (inches)}$$

7 inches is the minimum length the hose can be bent without damaging it. Remember that the bend should take place over the entire minimum length and not a portion of it. In addition, the formula does not mean that 7 inches will be long enough to meet application needs. It only means that if the 90° bend takes place in less than 7 inches, the hose could be damaged.

S.T.A.M.P.E.D.

S stands for **SIZE**; I.D., O.D. and length.

T stands for **TEMPERATURE** of the material conveyed and environmental.

A stands for the **APPLICATION**, the conditions of use.

M stands for the **MATERIAL** being conveyed, type and concentration.

P stands for the **PRESSURE** to which the assembly will be exposed.

E stands for **ENDS**; style, type, orientation, attachment methods, etc.

D stands for **DELIVERY**; testing, quality, packaging, and delivery requirements.

BASIC SAFETY CONSIDERATIONS & WARNINGS

The user is responsible for ensuring that the correct hose and couplings are selected to meet the requirements of the application and that all safety precautions are followed. Failure to exercise proper safety precautions may result in serious bodily injury, death, property damage or other loss from **hazardous chemicals, elevated temperature materials, explosive or flammable materials, sparking or static electricity, contamination of material conveyed, impelled couplings, whipping hose, and high pressure or high velocity discharge of materials.**

Users should review information provided by HBD/Thermoid in its product catalogs and on the HBD/Thermoid website (www.hbdthermoid.com) and contact a HBD/Thermoid marketing or technical representative if further information is needed.

1. All hose has a limited life for a given application and is subject to fail without warning – This is true even if the proper hose has been selected for the application; it is used within rated pressures, temperatures and environmental conditions; and it is properly inspected and maintained. This is because the elastomers and reinforcement used to construct the hose will break down over time and with use. This process is accelerated if the hose is used in severe applications or is subject to abuse. The user should conduct testing and other analysis to determine the service life of the hose assembly in a given application. Keep in mind, however, that even with extensive testing and analysis, it is not always possible to accurately determine the service life of a hose due to the number of variables involved in any given application. Regularly inspect and replace hose assemblies.

2. Critical Applications – Careful consideration is required when using hose instead of hard piping in any application where failure could cause bodily injury, property damage or other loss. If hose is used, the user is responsible for determining the service life and implementing adequate safety measures including:

- **Regular Inspections and Replacement.** Hose assemblies used in such applications should be inspected at frequent intervals based on the seriousness of the risk. These inspections should include: tube and cover examinations for hardening, brittleness, abrasions, kinks, twisting, crushed areas, cracks, cuts, leaking, blisters, peeling or soft cover, braid exposure and other evidence of damage or deterioration; seepage, leaking, slipped or damaged couplings; and proof testing. Damaged or suspect hose and fittings should be immediately replaced. Hose assemblies should also be replaced at regular intervals, well in advance of the expected service life of the hose.
- **Personal Protective Equipment and Other Safeguards.** Always use proper protective equipment (for example, gloves, eye protection, protective suits, hardhats, etc.) that will protect the user in the event of hose failure or other accident. Systems should be designed, hose lines should be routed and safeguards put in place so that if a failure does occur, damage and injury persons or property will be avoided.
- **Operator Training.** All operators must be thoroughly trained in the proper care and use of hoses, the hazards of any material conveyed, and accidental release response measures.

3. External Abuse – Kinking, bending, high end pull, crushing, abrasion, exceeding the recommended minimum bend radius, exceeding the rated working pressure, exposure to chemicals, exposure to temperature extremes, and other abuse or damage will reduce the service life and performance of the hose. This may be the case even though the hose may appear to be undamaged from exterior appearance. Hoses should not be stretched, run over by equipment, or used to hoist, carry or pull objects. Hoses should not be bent beyond recommended minimum bend radius. This could result in kinks which could increase pressure and cause damage that could reduce pressure resistance. Larger or more heavily loaded hoses may require additional support to reduce stretching, kinking and external abuse.

4. System Pressures – Never use hose at pressures that exceed its working pressure ratings. A system (or device or application) can have varied pressures caused by source, operator action or mechanical components. It is the responsibility of the user

to accurately determine the maximum system pressure and to eliminate any system pressures that exceed the lowest rated working pressure of any of the system components. Steady state pressure can be measured readily by gauges. Surge and hammer effect pressures are often momentary and may require the use of electronic pressure sensing devices to detect and measure. A "hammer effect" is a pressure spike that results from a sudden blockage or stoppage of the system. Hammer effects can damage or even cause catastrophic failure of the hose or system.

Note: The burst value is NOT the maximum working pressure for a hose. Burst values are used as one factor in the establishment of a reasonable and safe maximum working pressure. **MAXIMUM WORKING PRESSURE IS ONE OF THE ESSENTIAL OPERATING CHARACTERISTICS THAT A HOSE USER MUST KNOW AND RESPECT TO ASSURE SAFE SERVICE AND OPTIMUM LIFE.** Do not exceed maximum rated working pressure even if the burst value is higher.

5. Suction Applications – Not all hose is suitable for suction applications as vacuum pressures may cause the hose to collapse. Be sure to select a hose that is rated for suction or vacuum applications.

6. Temperatures – Never use hose at temperatures that exceed or are below its ratings. **High temperatures can degrade a hose very quickly**, resulting in shortened service life. For example, radiant heat from hot manifolds, heat shields and molten materials can bake rubber hose making it brittle. Low temperatures cause the hose to crack or break. The allowable temperature ranges are shown on the product catalog pages. These are for **internal product temperatures** and assume external or ambient temperatures are within the same temperature ranges. If external temperatures are higher or lower than these ranges, contact your HBD/Thermoid Customer Service Representative for recommendations. **Fluid and environmental temperatures that are high or low, but within working temperature of hose, will still shorten hose life.**

7. Misapplication – HBD/Thermoid designs and supplies a variety of hoses. Select the correct hose for the application. Be sure the hose cover, tube, reinforcement and fittings are compatible with the material conveyed and the conditions to which the hose assembly will be exposed.

- **Chemical Compatibility Chart.** Consult the HBD/Thermoid Chemical Resistance Chart for information on the suitability of various tube and cover compounds for use conveying or when exposed to various chemicals and substances.
- **Temperature Compatibility.** Consult the hose product pages for information on the temperature ranges for various hose types.
- **Other.** Other compatibility factors discussed below and elsewhere, may affect hose life and performance. Certain conveyed materials or substances – for example abrasive, high velocity, concentrated, unstable or extreme temperature materials – may present unique compatibility issues. Exposure to environmental conditions such as extreme temperatures, sunlight, ozone, UV radiation, atomic radiation, oil, moisture, salt water and other chemicals must also be considered.

8. Internal Abrasion – Applications involving abrasive or high velocity media can result in premature degradation of the tube and reduced service life, particularly where the hose makes one or more bends.

9. Flexing and Vibration – Flexing, twisting, vibration or other movement of the hose may shorten service life.

10. Modifications to the Hose – Repairing the hose, improperly coupling or re-coupling of the hose, or use of inappropriate fittings and other modifications to the hose will shorten service life and possibly cause immediate failure.

11. Improper Installation – Installing hose assemblies in a manner where the hose is subjected to a **torqued condition (twisted lay line)**; will reduce the life of the hose significantly.

12. Permeation – The molecular structure of rubber hose is permeable, allowing small amounts of the internally conveyed media to migrate through the tube and into and through the cover of the hose. This is a particular concern when hazardous or explosive gases are being conveyed. Likewise, external gases, moisture or liquids, if not abated, may penetrate the cover of the hose and progress into the tube. When permeation is present (in either direction), special precautions may be needed.

Additional warnings and information follow.

STEAM HOSE WARNING

Steam heat is hotter than boiling water (212°F, 100°C) and increases in temperature as pressure increases. The danger from steam in industrial applications is due to the great heat and pressures involved. Water changes to steam at higher temperatures when under pressure. If the steam escapes, massive quantities of heat are released. This, combined with high pressures, can prove to be dangerous for the operator.

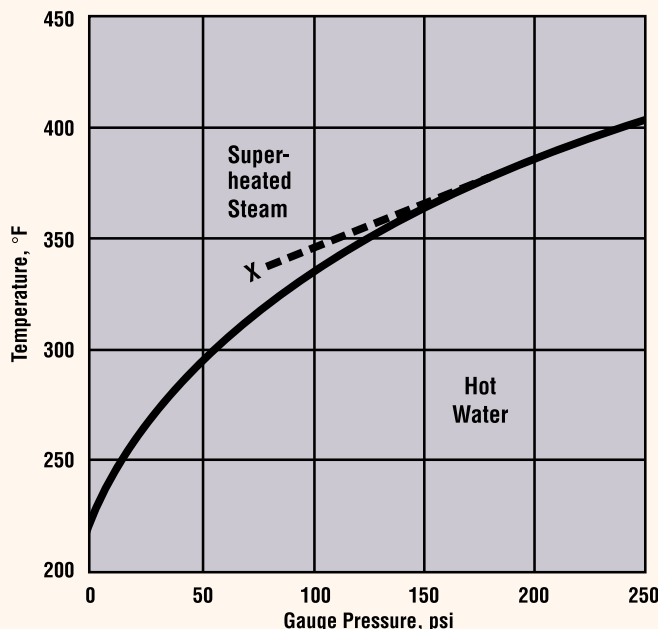
Use only steam hoses designed for these applications.

A steam hose should never be used to carry pressures or temperatures higher than it is rated to handle, in spite of any safety factor.

When making a selection for this type of application, keep safety in mind. Be sure to **select a hose identified as steam hose**. There should be a permanent form of branding on the hose and not just on the package. The manufacturer's name, hose type and operating pressure should be readable. If not, don't use the hose. Also, be sure to identify the type of service the steam hose will be required to accomplish. What will the temperature of the steam be? Will the steam be superheated (dry) or saturated (wet)? What environment will this hose be used in? Be sure that you can recognize that spillage or accumulations of corrosive materials can have a detrimental effect on the hose cover.

Make sure the hose is installed properly by using hose couplings designed for steam service. Check the tightness with each use. Installing and using a shut-off valve between the steam source and the hose will maximize service life and operator safety.

STEAM CHART



The dotted line shows the process of saturated steam being transformed into superheated steam. If a steam line is at a pressure of 150 psi, and a temperature of 366°F, it contains saturated steam. If the pressure is substantially reduced by the expansion of the steam (such as the sudden opening of a valve or the steam passing into a larger pipe or hose), the condition of the steam follows the dotted line to some point X in the superheated steam area. This condition may not last very long, but the superheated steam tends to deteriorate the tube stock in ordinary steam hose intended for use with saturated steam. This usually results in hose failure.

Properties of Saturated Steam

(Abridged from Handbook of Chemistry and Physics – 39th Edition.)

Gauge Pressure (psi)	*Temperature of Saturated Steam (°F)	Gauge Pressure (psi)	*Temperature of Saturated Steam (°F)
10	239	155	368
25	267	160	371
30	274	165	373
35	281	170	375
40	287	175	377
45	292	180	380
50	298	185	382
55	303	190	384
60	307	195	386
65	312	200	388
70	316	205	390
75	320	210	392
80	324	215	394
85	328	220	395
90	331	225	397
95	335	230	399
100	338	235	401
105	341	240	403
110	344	245	404
115	347	250	406
120	350	255	408
125	353	260	409
130	356	265	411
135	358	270	413
140	361	275	414
145	363		
150	366		

* Based on an atmosphere pressure of 14.7 psi.

Provide operators with adequate clothing which would include rubber boots, gloves, eye protection and full length protective clothing. **Do not** allow the hose to remain under pressure when not in service. Failure to depressurize and drain the hose when not in service can reduce the usable life of the hose. Continue to monitor hose to ensure it has not deteriorated to the point to where it can no longer provide safe service. Most, if not all steam hoses are date-coded by the manufacturer. It is recommended that assemblies be tagged with a date that it went into service. This information will be helpful in identifying those hoses that should be replaced due to age.

Couplings: Hose couplings are extremely important when steam is being handled. High temperatures and pressures inside steam hose act like a pressure cooker and cause the inside and outside diameters to shrink during use. Couplings must be specifically designed to combat this effect. **Only couplings designed for steam hose should be used.**

CHEMICAL HOSE WARNING

Do not use chemical hose at pressures or temperatures above those recommended by HBD/Thermoid.

All operators must be thoroughly trained in the care and use of these hoses, and must, at all times, wear protective clothing and other appropriate safety equipment. A hose or system failure could cause the release of corrosive, flammable or poisonous material. Never allow chemicals to drip on the exterior of the hose or allow the hose to lie in a pool of chemicals since the hose cover may not have the same chemical resistance as the inner tube. If kinking or crushing occurs, immediately subject the assembly to the Hydrostatic Pressure Test and Examination. If the Hydrostatic Test is not an option, immediately replace the assembly. If the reduction of the I.D. is greater than 20%, replace the assembly.

Extreme care must be taken when flushing out a chemical hose with water or removing clogs. Some chemicals, such as concentrated acids may react with the water. Spattering may occur which could result in serious injury to the eyes or other areas of the body. When flushing the hose, care must be taken so that all chemicals or flushing fluids are disposed of according to EPA recommended guidelines.

STATIC ELECTRICITY WARNING

Serious bodily injury, death, property damage or other loss can result from the use of hose in hazardous or explosive atmospheres due to the buildup of static electricity from the movement of conveyed materials through the hose as well as movement or vibration of the hose against the other surfaces. Hose, as well as the entire system or application, used in such atmospheres must be properly grounded or bonded.

Static electricity, as a source of ignition for flammable vapors, gases and dusts, is a hazard common to a wide variety of industries. A static spark can occur when an electrical charge accumulates on the surfaces of two materials that have been brought together and then separated (between two solids, between a solid and a liquid, or between two immiscible liquids, i.e., incapable of mixing). One surface becomes charged positively and the other surface becomes charged negatively. If the materials are not bonded or grounded, they will eventually accumulate a sufficient electrical charge capable of producing a static spark that could ignite flammable vapors, gases and dusts. Some common processes capable of producing a static ignition are as follows:

- The flow of liquids (for example, petroleum or mixtures of petroleum and water as well as any flammable fluids) through hose, pipes or fine filters.
- The settling of a solid or an immiscible liquid through a liquid (e.g. rust or water through petroleum).
- The ejection of particles or droplets from a nozzle (e.g. water washing operations or the initial stages of filling a tank with oil).
- The vigorous rubbing together and subsequent separation of certain synthetic polymers (e.g. the sliding of a Polypropylene rope through PVC gloved hands).

Preventing and/or dissipating static electricity as an ignition source can be accomplished through bonding, grounding or possibly selecting a different non-static conducting material. Bonding is the process of connecting two or more conductive objects together by means of a conductor. Grounding, or earthing, is the process of connecting one or more conductive objects to the ground. **

Certain Thermoid hose incorporates a static wire, which if properly coupled can be used to ground the hose assembly. Other parts of the application or equipment may have to be grounded as well. Hose that does not contain a ground wire will nevertheless have to be grounded if used in an explosive or hazardous atmosphere. In all applications, it is the user's responsibility to ensure the hose assembly and equipment it is used on, is properly grounded to earth.

** Excerpts from Process Safety Handling Hazardous Chemicals, 1/97: Standards & Guidelines – Occupational Safety and Health Administration.

CARE, MAINTENANCE AND STORAGE

Hose has a limited life and the user must be alert to signs of impending failure, particularly when the conditions of service include high working pressures and/or the conveyance or containment of hazardous materials. The periodic inspection and testing procedures described here provide a schedule of specific measures which constitute a minimum level of user action to detect signs indicating hose deterioration or loss of performance before conditions leading to malfunction or failure is reached.

SAFETY WARNING: Failure to properly follow the manufacturer's recommended procedures for the care, maintenance and storage of a particular hose might result in its failure to perform in the manner intended and might result in possible damage to property and serious bodily injury.

General instructions are also described for the proper storage of hose to minimize deterioration from exposure to elements or environments which are known to be deleterious to rubber products. Proper storage conditions can enhance and extend substantially the ultimate life of hose products. Hose should be stored to facilitate first-in and first-out usage based on the hose date of manufacture.

GENERAL CARE AND MAINTENANCE OF HOSE

Hose should not be subjected to any form of abuse in service. It should be handled with reasonable care. Hose should not be dragged over sharp or abrasive surfaces unless specifically designed for such service. Care should be taken to protect hose from severe end loads for which the hose or hose assembly were not designed. Hose should be used at or below its rated working pressure; any changes in pressure should be made gradually so as to not subject the hose to excessive surge pressures. Hose should not be kinked or be run over by equipment. In handling large size hose, dollies should be used whenever possible; slings or handling rigs, properly placed, should be used to support heavy hose used in oil suction and discharge service.

GENERAL TEST AND INSPECTION PROCEDURES FOR HOSE

An inspection and hydrostatic test should be made at periodic intervals to determine if a hose is suitable for continued service.

A visual inspection of the hose should be made for loose covers, kinks, bulges, or soft spots which might indicate broken or displaced reinforcement.

The couplings or fittings should be closely examined and, if there is any sign of movement of the hose from the couplings, the hose should be removed from service.

The periodic inspection should include a hydrostatic test for one minute at 150% of the recommended working pressure of the hose. An exception to this would be woven jacketed fire hose.* During the hydrostatic test, the hose should be straight, not coiled or in a kinked position.

Water is the usual test medium and, following the test, the hose may be flushed with alcohol to remove traces of moisture. A regular schedule for testing should be followed and inspection records maintained.

SAFETY WARNING: Before conducting any pressure tests on hose, provision must be made to ensure the safety of the personnel performing the tests and to prevent any possible damage to property. Only trained personnel using proper tools and procedures should conduct any pressure tests.

1. **Air or any other compressible gas must never be used as the test media because of the explosive action of the gas should a failure occur. Such a failure might result in possible damage to property and serious bodily injury.**
2. **Air should be removed from the hose by bleeding it through an outlet valve while the hose is being filled with the test medium.**
3. **Hose to be pressure tested must be restrained by placing steel rods or straps close to each end and at approximate 10 foot (3 m) intervals along its length to keep the hose from "whipping" if failure occurs; the steel rods or straps are to be anchored firmly to the test structure but in such a manner that they do not contact the hose which must be free to move.**
4. **The outlet end of hose is to be bulwarked so that a blown out fitting will be stopped.**
5. **Provisions must be made to protect testing personnel from the forces of the pressure media if a failure occurs.**
6. **Testing personnel must never stand in front of or in back of the ends of a hose being pressure tested.**
7. **If liquids such as gasoline, oil, solvent, or other hazardous fluids are used as the test fluid, precautions must be taken to protect against fire or other damage should a hose assembly fail and the test liquid are sprayed over the surrounding area.**

STORAGE

Rubber hose products in storage can be affected adversely by temperature, humidity, ozone, sunlight, oils, solvents, corrosive liquids and fumes, insects, rodents and radioactive materials.

Product information is subject to change. For full details, visit our website or contact Customer Service.

The appropriate method for storing hose depends to a great extent on its size (diameter and length), the quantity to be stored, and the way in which it is packaged. Hose should not be piled or stacked to such an extent that the weight of the stack creates distortions on the lengths stored at the bottom.

Since hose products vary considerably in size, weight, and length, it is not practical to establish definite recommendations on this point. Hose having a very light wall will not support as much load as could a hose having a heavier wall or hose having a wire reinforcement. Hose which is shipped in coils or bales should be stored so that the coils are in a horizontal plane.

Whenever feasible, rubber hose products should be stored in their original shipping containers, especially when such containers are wooden crates or cardboard cartons which provide some protection against the deteriorating effects of oils, solvents, and corrosive liquids; shipping containers also afford some protection against ozone and sunlight.

Certain rodents and insects will damage rubber hose products, and adequate protection from them should be provided.

Cotton jacketed hose should be protected against fungal growths if the hose is to be stored for prolonged periods in humidity conditions in excess of 70%.

The ideal temperature for the storage of rubber products ranges from 50° to 70°F (10-21°C) with a maximum limit of 100°F (38°C). If stored below 32°F (0°C), some rubber products become stiff and would require warming before being placed in service. Rubber products should not be stored near sources of heat, such as radiators, base heaters, etc., nor should they be stored under conditions of high or low humidity.

To avoid the adverse effects of high ozone concentration, rubber hose products should not be stored near electrical equipment that may generate ozone or be stored for any lengthy period in geographical areas of known high ozone concentration.

Hose should not be stored in locations where the ozone level exceeds the National Institute of Occupational Safety and Health's upper limit of 0.10 ppm. Exposure to direct or reflected sunlight – even through windows – should also be avoided. Uncovered hose should not be stored under fluorescent or mercury lamps which generate light waves harmful to rubber.

Storage areas should be relatively cool and dark, and free of dampness and mildew. Items should be stored on a first-in, first-out basis, since even under the best of conditions; an unusually long shelf life could deteriorate certain rubber products.

**Woven jacket fire hose should be tested in accordance with the service test provisions contained in the current edition of National Fire Protection Association Bulletin No. 1962 – Standard for the Care, Use and Service Testing of Fire Hose.*

* Reprinted with permission from the Rubber Manufacturers Association (RMA) Hose Handbook, RMA/IP-2/2003.

HOSE TESTING

SAFETY WARNING: Testing can be dangerous and should be done only by trained personnel using proper tools and procedures. Failure to follow such procedures might result in damage to property and/or serious bodily injury.

The Rubber Manufacturers Association (RMA) recognizes, accepts and recommends the testing methods of the American Society for Testing and Materials (ASTM).

Unless otherwise specified, all hose tests are to be conducted in accordance with ASTM Method No. D-380 (latest version). Where an ASTM D-380 test is not available, another test method should be selected and described in detail.

RMA participates with ASTM under the auspices of the American National Standards Institute (ANSI) in Technical Committee 45 (TC45) of The International Organization for Standardization (ISO) in developing both hose product and hose test method standards. Many of the hose test method standards published by ISO duplicate or closely parallel those shown in ASTM D-380. Many are unique and, in those cases, the RMA may be able to provide the necessary test standard references which may be purchased from the American National Standards Institute (ANSI).

HYDROSTATIC PRESSURE TESTS

Hydrostatic pressure tests are classified as follows:

1. DESTRUCTIVE TYPE
 - a. Burst test
 - b. Hold test
2. NON-DESTRUCTIVE TYPE
 - a. Proof pressure test
 - b. Change in length test (elongation or contraction)
 - c. Change in outside diameter or circumference test
 - d. Warp test
 - e. Rise test
 - f. Twist test
 - g. Kink test
 - h. Volumetric expansion test

Destructive Tests

Destructive tests are conducted on short specimens of hose, normally 18 inches (460 mm) to 36 inches (915 mm) in length and, as the name implies, the hose is destroyed in the performance of the test.

- a. Burst pressure is recorded as the pressure at which actual rupture of a hose occurs.
- b. A hold test, when required, is a means of determining whether weakness will develop under a given pressure for a specified period of time.

Non-Destructive Tests

Non-destructive tests are conducted on a full length of a hose or hose assembly. These tests are for the purpose of eliminating hose with defects which cannot be seen by visual examination or in order to determine certain characteristics of the hose while it is under internal pressure.

- a. A proof pressure test is normally applied to hose for a specified period of time. On new hose, the proof pressure is usually 50% of the minimum specified burst except for woven jacket fire hose where the proof pressure is twice the service test pressure marked on the hose (67% of specified minimum burst). Hydrostatic tests performed on fire hose in service should be no higher than the service test pressure referred to above. The regulation of these pressures is extremely important so that no deteriorating stresses will be applied, thus weakening a normal hose.
- b. With some type of hose, it is useful to know how a hose will act under pressure. All change in length tests, except when performed on wire braid or wire spiraled hose, are made with original length measurements taken under a pressure of 10 psi (0.069 MPa). The specified pressure, which is normally the proof pressure, is applied and immediate measurement of the characteristics desired are taken and recorded.

Percent length change (elongation or contraction) is the difference between the length at 10 psi (0.069 MPa) (except wire braided or wire spiraled) and that at the proof pressure times 100 divided by the length at 10 psi (0.069 MPa). Elongation occurs if the length of the hose under the proof pressure is greater than at a pressure of 10 psi (0.069 MPa). Contraction occurs if the length at the proof pressure is less than at 10 psi (0.069 MPa). In testing wire braided or spiraled hose, the proof pressure is applied and the length recorded. The pressure is then released and, at the end of 30 seconds, the length is measured; the measurement obtained is termed the "original length."

- c. Percent change in outside diameter or circumference is the difference between the outside diameter or circumference at 10 psi (0.069 MPa) and that obtained under the proof pressure times 100 divided by the outside diameter or circumference at 10 psi (0.069 MPa). Expansion occurs if the measurement at the proof pressure is greater than at 10 psi (0.069 MPa). Contraction occurs if the measurement at the proof pressure is less than at 10 psi (0.069 MPa).
- d. Warp is the deviation from a straight line drawn from fitting to fitting; the maximum deviation from this line is warp. First, a measurement is taken at 10 psi (0.069 MPa) and then again at the proof pressure. The difference between the two, in inches, is the warp. Normally, this is a feature measured on woven jacket fire hose only.
- e. Rise is a measure of the height a hose rises from the surface of the test table while under pressure. The difference between the rise at 10 psi (0.069 MPa) and at the proof pressure is reported to the nearest 0.25 inch (6.4 mm). Normally, this is a feature measured on woven jacket fire hose only.
- f. Twist is a rotation of the free end of the hose while under pressure. A first reading is taken at 10 psi (0.069 MPa) and a second reading at proof pressure. The difference, in degrees, between the 10 psi (0.069 MPa) base and that at the proof pressure is the twist. Twist is reported as right twist (to tighten couplings) or left twist. Standing at the pressure inlet and looking toward the free end of a hose, a clockwise turning is right twist and counterclockwise is left twist.
- g. Kink test is a measure of the ability of woven jacket hose to withstand a momentary pressure while the hose is bent back sharply on itself at a point approximately 18 inches (457 mm) from one end. Test is made at pressures ranging from 62% of the proof pressure on sizes 3 inches (76 mm) and 3.5 inches (89 mm) to 87% on sizes under 3 inches (76 mm). This is a test applied to woven jacket fire hose only.
- h. Volumetric expansion test is applicable only to specific types of hose, such as hydraulic or power steering hose, and is a measure of its volumetric expansion under ranges of internal pressure.

It should be noted that design ratios are dependent on more than the minimum burst. The hose technologist must anticipate natural decay in strength of reinforcing materials, and the accelerated decay induced by the anticipated environments in which the hose will be used and the dynamic situations that a hose might likely encounter in service.

Including all considerations, the following recommended design ratios are given for newly manufactured hose:

1. Water Hose up to 150 psi WP: 3:1
2. Hose for all other liquids, solid materials suspended in liquids or air, and water hose over 150 psi WP: 4:1
3. Hose for compressed air and other gases: 4:1
4. Hose for liquid media that immediately changes into gas under standard atmospheric conditions: 5:1
5. Steam Hose: 10:1

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HOSE SELECTION GUIDE

GENERAL

A number of hose specifications have been developed for general application in various industrial, agricultural, automotive or other services. These specifications are based on generally successful performance of the hose in the field as reported by consumers, manufacturers and governmental agencies. The RMA has published a number of hose specifications which are recommended for use.

Often, additional or new requirements may be imposed on hose because of the severity of service conditions, a change in service conditions, a change in the materials handled or in the method of handling, or the development of new uses or procedures. Hose specifications must then be prepared based on the expected service conditions.

HBD/Thermoid does not warrant the suitability or fitness of its hose for any specific application or particular purpose, and the user is responsible for selecting a hose with specifications to meet the service conditions under which it is to be used. Before deciding on size, type, and quality of hose, the user should gather and analyze complete information on the actual service conditions and requirements.

SERVICE CONSIDERATIONS FOR HOSE IN CRITICAL APPLICATIONS

Hose is often used in locations and/or to convey materials where property damage or human injury could occur if the hose and/or associate fittings failed while in service.

The user must insure that the service conditions are known to himself and to the hose supplier. The improper use of hose or the use of a hose for service applications for which it was not designed may result in serious consequences.

INFORMATION NEEDED

Hose Dimensions

- (a) I.D.
- (b) O.D.
- (c) Length (state whether overall length or length excluding couplings)
- (d) Tolerance limitations (if normal RMA tolerances cannot be used)

Types of Service

- (a) Material to be conveyed through hose
 1. Chemical name
 2. Concentration
 3. Temperature extremes (low and high)
 4. Solids, description and size
- (b) Working pressure (including surge)
- (c) Suction or vacuum requirements
- (d) Velocity
- (e) Flow Rate

Operating Conditions

- (a) Intermittent or continuous service
- (b) Indoor and outdoor use
- (c) Movement and geometry of use
- (d) Flexibility – Minimum bend radius
- (e) External conditions
 1. Abrasion
 2. Oil (Specify type)
 3. Solvents (Specify type)
 4. Acid (Specify type and concentration)
 5. Temperature Range
 - Normal
 - Highest
 - Lowest
 6. Ozone

Product information is subject to change. For full details, visit our website or contact Customer Service.

Uncoupled Hose

- (a) Bulk or cut to length
- (b) Ends
 - 1. Straight or enlarged
 - 2. Capped or raw (uncapped)
 - 3. Soft ends or wire to end

Coupled Hose, Fittings

- (a) Factory applied
- (b) Field applied
- (c) Type of Fitting
 - 1. Type of thread
 - 2. Male or female
 - 3. Reusable/field attachable
 - 4. Non-reusable
- (d) Material for Fittings
 - 1. ANSI (or SAE or ASTM) metal composition specifications

Hose with Built-in Fittings

- (a) Ends
 - 1. Threaded (type of thread)
 - 2. Grooved
 - 3. Beveled for welding
 - 4. Integral flange
- (b) Flanges
 - 1. Type (threaded, slip-on, welding neck, lap joint)
 - 2. Pressure rating
 - 3. Drilling
- (c) Materials and Dimensions
 - 1. ANSI (or SAE or ASTM) composition and specifications
 - 2. Treatment for specific services

Hose Now in Use

- (a) Type of hose
- (b) Service life being obtained and description of failure
- (c) Service life desired

Special Requirements or Properties

- (a) Electrical and static conductive
- (b) Flame resistant
- (c) Sub-zero exposure
- (d) Non-contaminating to material

ORGANIZATIONS HAVING REGULATIONS OR SPECIFICATIONS FOR HOSE

U.S. Government Agencies

DOD	Department of Defense
DOT	Department of Transportation
FDA	Food and Drug Administration
MSHA	Mine Safety and Health Administration
NHTSA	National Highway Traffic Safety Administration
OSHA	Occupational Safety and Health Administration
PHA	Public Health Administration
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture

Canadian Agencies and Organizations

CGA	Canadian Gas Association
CGSB	Canadian Government Specifications Board
RAC	Rubber Association of Canada

Other Organizations

ABS	American Bureau of Shipping
ANSI	American National Standards Institute
API	American Petroleum Institute
ASTM	American Society for Testing and Materials
BIA	Boating Industry Association
BSI	British Standards Institute
CGA	Compressed Gas Association
DIN	Deutsches Institut for Normung – German Standards
DNV	Det Norske Veritas
EN	European Norms
FM	Factory Mutual Research
FPS	Fluid Power Society
ISO	International Organization for Standardization
JIC	Joint Industrial Council (defunct)
JIS	Japanese Industrial Standards
NAHAD	National Association of Hose and Accessories Distributors
NFPA	National Fire Protection Association
	National Fluid Power Association
RMA	Rubber Manufacturers Association
SAE	Society of Automotive Engineers
TFI	The Fertilizer Institute
UL	Underwriters Laboratories

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COMMONLY USED RUBBER COMPOUNDS

ASTM Designation D1418	Common Name	Composition
CM	CPE	Chlorinated Polyethylene
CR	Neoprene**	Chloroprene
CSM	Hypalon	Chloro-sulfonyl-polyethylene
ECO	Hydrin	Ethylene oxide and Chloromethyl oxirane
EPDM	Ethylene Propylene Rubber	Ethylene-propylene-diene-terpolymer
FKM	Fluoroelastomer Viton	Hexafluoropropylene vinylidene fluoride
IIR	Butyl	Isobutylene-isoprene
IR	Polyisoprene	Isoprene, synthetic
NBR	Buna N, Nitrile	Nitrile-butadiene
NR	Natural Rubber	Isoprene, natural
SBR	SBR	Styrene-butadiene
UHMWPE	Ultra-High Molecular Weight Polyethylene	Polyethylene
XLPE	Cross-Linked Polyethylene	Polyethylene and cross-linking agent

** Trademark of DuPont.

VALUFLEX®/GS – RED

Valuflex/GS is one of the finest multipurpose air and water hose available, anywhere. Red Valuflex provides job/color coding possibilities for safety and other considerations. Valuflex is a very economical general service air and water hose. It can be used in numerous industrial, agricultural and construction applications where oil is **not** a factor. Valuflex is not only lightweight, but also very flexible and easy to handle due to multiple plies of rubber and spiral reinforced polyester fiber. Available in a wide variety of sizes, Valuflex provides constant working pressures of 150, 200, 250, or 300 psi. It has an EPDM tube and cover that resists abrasion, heat and ozone. **This hose is not for use as a steam hose.**

**Resistance:****Branding:**

Thermoid Valuflex/GS Size PSI WP
Made In USA Month/Day/Year-DOM

Cover Color:	Red
Oil Resistance:	Limited
Construction:	
Tube:	EPDM
Cover:	EPDM
Reinforcement:	Spiral polyester yarn
Temperature Range:	-40°F to +212°F -40°C to +100°C
Packaging:	Reels or †50 ft. length – 1 per carton

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00114503200▲	3/16 4.76	0.44 11.11	2	200 1.38	N/A N/A	0.08 0.12
00114504100▲	1/4 6.35	0.49 12.45	2	150 1.03	1.50 38.10	0.08 0.12
00114504200	1/4 6.35	0.49 12.45	2	200 1.38	1.50 38.10	0.08 0.12
00114504300	1/4 6.35	0.50 12.45	2	250 1.72	1.50 38.10	0.08 0.12
00114504400	1/4 6.35	0.50 12.45	2	300 2.07	1.50 38.10	0.08 0.12
00114505200	5/16 7.94	0.58 14.73	2	200 1.38	2.00 50.80	0.09 0.13
00114505400	5/16 7.94	0.58 14.73	2	300 2.07	2.00 50.80	0.09 0.13
00114506100▲	3/8 9.53	0.69 17.53	2	150 1.03	2.25 57.15	0.15 0.22
00114506200	3/8 9.53	0.69 17.53	2	200 1.38	2.25 57.15	0.15 0.22
00114506251†	3/8 9.53	0.69 17.53	2	200 1.38	2.25 57.15	0.15 0.22
00114506300	3/8 9.53	0.69 17.53	2	250 1.72	2.25 57.15	0.15 0.22
00114506400	3/8 9.53	0.69 17.53	2	300 2.07	2.25 57.15	0.15 0.22
00114506451†	3/8 9.53	0.69 17.53	2	300 2.07	2.25 57.15	0.15 0.22
00114508100	1/2 12.70	0.81 20.64	2	150 1.03	3.00 76.20	0.20 0.30
00114508200	1/2 12.70	0.81 20.64	4	200 1.38	3.00 76.20	0.25 0.37
00114508300	1/2 12.70	0.84 21.43	4	250 1.72	3.00 76.20	0.25 0.37
00114508400	1/2 12.70	0.84 21.43	4	300 2.07	3.00 76.20	0.25 0.37
00114510100	5/8 15.88	0.93 23.62	2	150 1.03	3.75 95.25	0.24 0.36
00114510200	5/8 15.88	0.93 23.62	4	200 1.38	3.75 95.25	0.30 0.45
00114510300	5/8 15.88	1.00 25.40	4	250 1.72	3.75 95.25	0.30 0.45
00114510400	5/8 15.88	1.00 25.40	4	300 2.07	3.75 95.25	0.30 0.45
00114512100	3/4 19.05	1.12 28.45	4	150 1.03	4.50 114.30	0.34 0.51
00114512151†▲	3/4 19.05	1.12 28.45	4	150 1.03	4.50 114.30	0.34 0.51
00114512200	3/4 19.05	1.15 29.21	4	200 1.38	4.50 114.30	0.38 0.57
00114512251†	3/4 19.05	1.15 29.21	4	200 1.38	4.50 114.30	0.38 0.57
00114512500	3/4 19.05	1.15 29.21	4	250 1.72	4.50 114.30	0.38 0.57
00114512550†	3/4 19.05	1.15 29.21	4	250 1.72	4.50 114.30	0.38 0.57
00114512400	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.41 0.61
00114512451†	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.41 0.61
00114516200	1 25.40	1.37 34.80	4	150 1.03	7.00 177.80	0.43 0.64
00114516300	1 25.40	1.37 34.80	4	200 1.38	7.00 177.80	0.51 0.76
00114516400	1 25.40	1.37 34.80	4	300 1.38	7.00 177.80	0.51 0.76
00114520200	1-1/4 31.75	1.75 44.45	4	200 1.38	8.75 222.25	0.81 1.21
00114524200	1-1/2 38.10	2.00 50.80	4	200 1.38	10.50 266.70	0.95 1.41
00114532200	2 50.80	2.55 64.77	4	200 1.38	14.00 355.60	1.13 1.68

▲ = Make To Order (MTO)

† = 50 ft. length – 1 per carton



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

VALUFLEX®/GS – BLACK

Valuflex/GS is one of the finest multipurpose air and water hose available, anywhere. Black Valuflex provides job/color coding possibilities for safety and other considerations. Valuflex is a very economical general service air and water hose. It can be used in numerous industrial, agricultural and construction applications where oil is **not** a factor. Valuflex is not only lightweight, but also very flexible and easy to handle due to multiple plies of rubber and spiral reinforced polyester fiber. Available in a wide variety of sizes, Valuflex provides constant working pressures of 150, 200, 250 or 300 psi. It has an EPDM tube and cover that resists abrasion, heat and ozone. **This hose is not for use as a steam hose.**



Resistance:



Branding:

Thermoid Valuflex/GS Size PSI WP
Made In USA Month/Day/Year-DOM

Cover Color:	Black
Oil Resistance:	Limited
Construction:	
Tube:	EPDM
Cover:	EPDM
Reinforcement:	Spiral polyester yarn
Temperature Range:	-40°F to +212°F -40°C to +100°C
Packaging:	Reels or †50 ft. length – 1 per carton

Product Number	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00114603200▲	3/16	4.76	0.44	11.11	2	200	1.38	N/A	N/A	0.07	0.11
00114604100▲	1/4	6.35	0.49	12.45	2	150	1.03	1.50	38.10	0.08	0.12
00114604200	1/4	6.35	0.49	12.45	2	200	1.38	1.50	38.10	0.08	0.12
00114604300▲	1/4	6.35	0.50	14.22	2	250	1.72	1.50	38.10	0.08	0.12
00114604400	1/4	6.35	0.50	15.75	2	300	2.07	1.50	38.10	0.08	0.12
00114605200	5/16	7.94	0.58	14.73	2	200	1.38	2.00	50.80	0.09	0.13
00114605400	5/16	7.94	0.58	15.75	2	300	2.07	2.00	50.80	0.09	0.13
00114606100▲	3/8	9.53	0.69	17.53	2	150	1.03	2.25	57.15	0.15	0.22
00114606200	3/8	9.53	0.69	17.53	2	200	1.38	2.25	57.15	0.15	0.22
00114606300▲	3/8	9.53	0.69	17.53	2	250	1.72	2.25	57.15	0.15	0.22
00114606400	3/8	9.53	0.69	17.53	2	300	2.07	2.25	57.15	0.15	0.22
00114608100	1/2	12.70	0.81	20.64	2	150	1.03	3.00	76.20	0.19	0.28
00114608200	1/2	12.70	0.81	20.64	4	200	1.38	3.00	76.20	0.24	0.36
00114608300▲	1/2	12.70	0.84	21.43	4	250	1.72	3.00	76.20	0.24	0.36
00114608400	1/2	12.70	0.84	21.43	4	300	2.07	3.00	76.20	0.24	0.36
00114610100	5/8	15.88	0.93	23.62	2	150	1.03	3.75	95.25	0.23	0.34
00114610200	5/8	15.88	0.93	23.62	4	200	1.38	3.75	95.25	0.29	0.43
00114610400	5/8	15.88	1.00	25.40	4	300	2.07	3.75	95.25	0.29	0.43
00114612100	3/4	19.05	1.12	28.45	4	150	1.03	4.50	114.30	0.33	0.49
00114612151†▲	3/4	19.05	1.12	28.45	4	150	1.03	4.50	114.30	0.33	0.49
00114612200	3/4	19.05	1.15	29.21	4	200	1.38	4.50	114.30	0.36	0.54
00114612251†▲	3/4	19.05	1.15	29.21	4	200	1.38	4.50	114.30	0.36	0.54
00114612300▲	3/4	19.05	1.15	29.21	4	250	1.72	4.50	114.30	0.36	0.54
00114612400	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.40	0.60
00114612454†▲	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.40	0.60
00114616100	1	25.40	1.37	34.80	4	150	1.03	7.00	177.80	0.41	0.61
00114616200	1	25.40	1.37	34.80	4	200	1.38	7.00	177.80	0.49	0.73
00114616400	1	25.40	1.43	36.32	4	300	2.07	7.00	177.80	0.49	0.73
00114620200	1-1/4	31.75	1.75	44.45	4	200	1.03	8.75	222.25	0.79	1.18
00114624200	1-1/2	38.10	2.00	50.80	4	200	1.03	10.50	266.70	0.90	1.34
00114632200	2	50.80	2.55	64.77	4	200	1.03	14.00	355.60	1.08	1.61

▲ = Make To Order (MTO)

† = 50 ft. length – 1 per carton

VALUFLEX®/GS – GREEN, YELLOW, BLUE

Valuflex/GS is one of the finest multi-purpose air and water hose available, anywhere. Valuflex provides job/color coding possibilities for safety and other considerations. Valuflex is a very economical general service air and water hose. It can be used in numerous industrial, agricultural and construction applications where oil is **not** a factor. Valuflex is easy to handle and very flexible due to its multi-spiral layers of durable reinforcing polyester yarn. Available in a wide variety of sizes, Valuflex provides constant working pressures of 150, 200, 250 or 300 psi. It has an EPDM tube and cover that resists abrasion, heat and ozone. This hose is **not** for use as a steam hose.



Resistance:



Branding:

Thermoid Valuflex/GS Size PSI WP
Made In USA

Cover Color: Green, Yellow or Blue

Oil Resistance: Limited

Construction:

Tube: EPDM

Cover: EPDM

Reinforcement: Spiral polyester yarn

Temperature Range: -40°F to +200°F

-40°C to +93°C

Packaging: Reels or †50 ft. length – 1 per carton

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
Green											
00114806300	3/8	9.53	0.69	17.53	2	250	1.73	2.25	57.15	0.18	0.27
00114808300	1/2	12.70	0.84	21.34	4	250	1.73	3.00	76.20	0.25	0.37
00114808400▲	1/2	12.70	0.84	21.34	4	300	2.07	3.00	76.20	0.25	0.37
00114812500	3/4	19.05	1.15	29.21	4	250	1.73	4.50	114.30	0.37	0.55
00114812400	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.41	0.61
00114812551†	3/4	19.05	1.15	29.21	4	250	1.73	4.50	114.30	0.37	0.55
00114812455†▲	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.41	0.61
00114816300▲	1	25.40	1.43	36.20	4	250	1.73	7.00	177.80	0.54	0.80
00114816400	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.54	0.80
Yellow											
00114912356▲	3/4	19.05	1.15	29.21	4	250	1.73	4.50	114.30	0.37	0.55
00114912351†▲	3/4	19.05	1.15	29.21	4	250	1.73	4.50	114.30	0.37	0.55
Blue											
00115008300▲	1/2	12.70	0.84	21.43	4	250	1.73	3.00	76.20	0.25	0.37
00115012300	3/4	19.05	1.15	29.21	4	250	1.73	4.50	114.30	0.37	0.55
00115012355†	3/4	19.05	1.15	29.21	4	250	1.73	4.50	114.30	0.37	0.55
00115016300▲	1	25.40	1.43	36.20	4	250	1.73	7.00	177.80	0.54	0.80

▲ = Make To Order (MTO)

† = 50 ft. length – 1 per carton

MAINLINER®

Mainliner is designed to handle the oily mists used to lubricate pneumatic tools. This hose is an excellent choice for use with pneumatic tools throughout the industry. It features a medium oil-resistant tube with multi-spiral polyester reinforcement that keeps it flexible even in extreme temperatures. The durable cover resists abrasion, cracking, weathering and ozone. Mainliner offers constant working pressures of 200, 250 and 300 psi. Mainliner is the quality value choice for a general service hose for oily, pneumatic equipment lubrication.

Note: Not recommended for handling fuels.

**Resistance:****Branding:**

Thermoid Mainliner Size PSI WP
Made In USA

Cover Color:	Red
Oil Resistance:	Medium
Construction:	
Tube:	EPDM, RMA Class C
Cover:	EPDM - Limited
Reinforcement:	Spiral polyester yarn
Temperature Range:	-40°F to +200°F -40°C to +93°C
Packaging:	Reels or †50 ft. length – 1 per carton

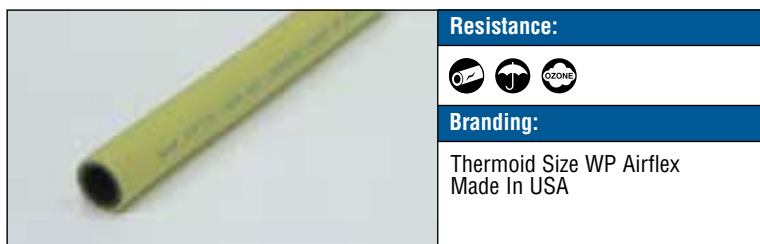
Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00225504200▲	1/4 6.35	0.49 12.45	2	200 1.38	1.50 38.10	0.09 0.13
00225504400	1/4 6.35	0.62 15.75	4	300 2.07	1.50 38.10	0.15 0.22
00225505400	5/16 7.94	0.62 15.75	4	300 2.07	2.00 50.80	0.14 0.21
00225506200▲	3/8 9.53	0.69 17.53	2	200 1.38	2.25 57.15	0.15 0.22
00225506400	3/8 9.53	0.69 17.53	2	300 2.07	2.25 57.15	0.18 0.27
00225508200▲	1/2 12.70	0.81 20.64	2	200 1.38	3.00 76.20	0.19 0.28
00225508400	1/2 12.70	0.84 21.34	4	300 2.07	3.00 76.20	0.25 0.37
00225510400	5/8 15.88	1.00 25.40	4	300 2.07	3.75 95.25	0.30 0.45
00225512300	3/4 19.05	1.15 29.21	4	250 1.72	4.50 114.30	0.37 0.55
00225512351†▲	3/4 19.05	1.15 29.21	4	250 1.72	4.50 114.30	0.37 0.55
00225512400	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.37 0.55
00225512451†	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.37 0.55
00225516200▲	1 25.40	1.37 34.80	4	200 1.38	7.00 177.80	0.42 0.62
00225516400	1 25.40	1.43 36.20	4	300 2.07	7.00 177.80	0.50 0.74
00225520200	1-1/4 31.75	1.75 44.45	4	200 1.38	8.75 222.25	0.81 1.21
00225524200	1-1/2 38.10	2.00 50.80	4	200 1.38	10.50 266.70	0.94 1.40
00225532200	2 50.80	2.55 64.77	4	200 1.38	14.00 355.60	1.12 1.67

▲ = Make To Order (MTO)

† = 50 ft. length – 1 per carton

AIRFLEX™

Airflex hose is the quality choice for any application where a medium oil resistant tube is needed to lubricate air tools. Airflex has a working pressure to 300 psi in a full range of sizes from 1/4" I.D. to 3/4" I.D. It has a highly visible yellow cover that is weather, ozone and abrasion resistant. Airflex has a durable 4-spiral construction to handle abuse oriented applications and a yellow cover for coding applications. Stock the quality choice, the right choice, the highly visible, Airflex hose.

**Resistance:****Branding:**

Thermoid Size WP Airflex
Made In USA

Cover Color:	Yellow
Oil Resistance:	Medium
Construction:	
Tube:	EPDM, RMA Class C
Cover:	EPDM - Limited
Reinforcement:	Spiral polyester yarn
Temperature Range:	-40°F to +200°F -40°C to +93°C
Packaging:	Reels or †50 ft. length – 1 per carton

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00235504400▲	1/4 6.35	0.62 15.75	4	300 2.07	1.50 38.10	0.15 0.22
00235506400	3/8 9.53	0.69 17.53	4	300 2.07	2.25 57.15	0.18 0.27
00235508400	1/2 12.70	0.84 21.34	4	300 2.07	3.00 76.20	0.25 0.37
00235512400	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.37 0.55
00235512451†	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.37 0.55

▲ = Make To Order (MTO)

† = 50 ft. length – 1 per carton

DURA-RED™

Dura-Red is the premium non-conductive multipurpose hose that handles oil mist, air, water and mild chemicals. Not recommended for fuels. Meets electrical resistance portion of the Alcoa Potroom air and water specs (30.4.2). Dura-Red has 4-spiral, 300 psi construction to handle abuse oriented applications.



Cover Color: Red
Oil Resistance: Medium
Construction: Non-conductive
Tube: EPDM, RMA Class C
Cover: EPDM Class C
Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +200°F
 -40°C to +93°C
Packaging: Reels or †50 ft. length – 1 per carton (3/4" I.D. only)

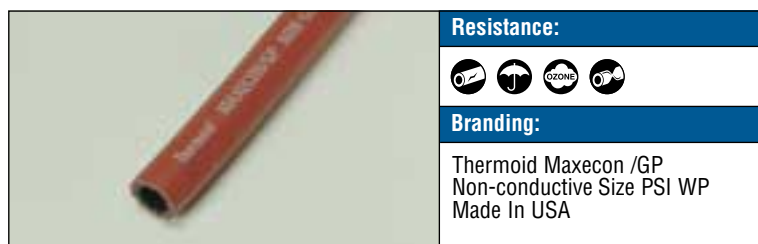
Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00275504400▲	1/4 6.35	0.62 15.75	4	300 2.07	1.50 38.10	0.16 0.24
00275506400	3/8 9.53	0.71 18.03	4	300 2.07	2.25 57.15	0.18 0.27
00275508400	1/2 12.70	0.84 21.34	4	300 2.07	3.00 76.20	0.25 0.37
00275512400	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.38 0.57
00275512451†▲	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.38 0.57
00275516400	1 25.40	1.43 36.20	4	300 2.07	7.00 177.80	0.51 0.76
00275520300▲	1-1/4 31.75	1.75 44.45	4	300 2.07	8.75 222.25	0.72 1.07

▲ = Make To Order (MTO)

† = 50 ft. length – 1 per carton

MAXECON™/GP

Maxecon is an excellent general purpose air and water service hose that can be used by all industries. It is non-conductive and offers a medium-high oil resistance. Maxecon offers dependable and solid performance with two working pressures: 250 or 300 psi in varying sizes up to 1-1/2" I.D. Its durable cover resists abrasion, weathering and ozone. Maxecon's multi-spiral polyester yarn reinforcement makes this hose durable, flexible and helps eliminate kinks. Maxecon is the ideal hose for use in mining, steel or petroleum applications.

Note: Not recommended for fuel applications.

Cover Color: Red
Oil Resistance: Cover (Medium) – Tube (High)
Construction: Non-conductive
Tube: Nitrile blend, RMA Class A
Cover: Nitrile blend, RMA Class B
Reinforcement: Spiral polyester yarn
Temperature Range: -20°F to +160°F or 180°F (intermittent)
 -29°C to +71°C or 82°C (intermittent)
Packaging: Reels or †50 ft. length – 1 per carton (3/4" I.D. only)

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00336504300	1/4 6.35	0.50 12.70	2	250 1.72	1.50 38.10	0.08 0.12
00336504400	1/4 6.35	0.62 15.75	4	300 2.07	1.50 38.10	0.13 0.19
00336505300	5/16 7.94	0.63 15.88	2	250 1.72	2.00 50.80	0.14 0.21
00336506300	3/8 9.53	0.69 17.53	4	250 1.72	2.25 57.15	0.17 0.25
00336506400	3/8 9.53	0.69 17.53	4	300 2.07	2.25 57.15	0.17 0.25
00336508300	1/2 12.70	0.84 21.34	4	250 1.72	3.00 76.20	0.24 0.36
00336508400	1/2 12.70	0.84 21.34	4	300 2.07	3.00 76.20	0.24 0.36
00336510400	5/8 15.88	1.00 25.40	4	300 2.07	3.75 95.25	0.28 0.42
00336512300	3/4 19.05	1.15 29.21	4	250 1.72	4.50 114.30	0.36 0.54
00336512400	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.40 0.60
00336512454†	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.40 0.60
00336516300	1 25.40	1.43 36.20	4	250 1.72	7.00 177.80	0.49 0.73
00336516400	1 25.40	1.43 36.20	4	300 2.07	7.00 177.80	0.58 0.86
00336520300	1-1/4 31.75	1.78 45.24	4	250 1.72	8.75 222.25	0.78 1.16
00336524300	1-1/2 38.10	2.03 51.59	4	250 1.72	10.50 266.70	0.90 1.34

† = 50 ft. length – 1 per carton

VERSICON®

Versicon is a premium, non-conductive hose designed to stand up to the tough working conditions found in shipyards, steel processing automotive plants and construction industries. The NBR tube can convey oil, diesel, kerosene, fuel oil and other petroleum based products. Its 4-spiral polyester reinforcing cords provide strength and flexibility even in extreme temperatures. The synthetic cover resists oil and solvents and also cracking, abrasion and ozone. Versicon meets the standard for conductivity which makes it ideal for the aluminum reduction industry as well as other applications where a high degree of electrical non-conductivity is required. Versicon provides smooth, easy handling and offers a constant pressure of either 250 or 300 psi 1/4" through the 1-1/2" sizes. Versicon is kink resistant, crush proof and is the ideal choice for harsh, demanding applications.

Note: Not recommended for a variety of unleaded gasoline.

	Resistance:
	  
	Branding:
	Thermoid Versicon Non-conductive Size WP Made In USA

Cover Color: Red
Oil Resistance: High
Construction: Non-conductive
Tube: NBR, RMA Class A
Cover: Nitrile/PVC Class A
Reinforcement: Spiral polyester yarn
Temperature Range: -20°F to +180°F
 -29°C to +82°C
Packaging: Reels

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00447504400	1/4 6.35	0.62 15.75	4	300 2.07	1.50 38.10	0.16 0.24
00447506400	3/8 9.53	0.69 17.53	4	300 2.07	2.25 57.15	0.18 0.27
00447508400	1/2 12.70	0.84 21.34	4	300 2.07	3.00 76.20	0.25 0.37
00447512400	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.42 0.62
00447516400	1 25.40	1.43 36.20	4	300 2.07	7.00 177.80	0.63 0.94
00447520300	1-1/4 31.75	1.78 45.24	4	250 1.72	8.75 222.25	0.81 1.21
00447524300	1-1/2 38.10	2.03 51.59	4	250 1.72	10.50 266.70	0.95 1.41

MAXECON™ PLUS

Maxecon Plus is a premium, quality non-conductive hose. It is rated high in oil resistance and can be used to convey oil, fuel oil, diesel, kerosene and other petroleum derived products. Maxecon Plus provides dependable and solid performance with a working pressure of 300 psi to 1" I.D. Its durable oil and solvent resistant brown cover also stands up to abrasion, weathering and ozone. Maxecon's multi-spiral polyester yarn reinforcement makes this hose strong, flexible and helps eliminate kinks. Maxecon Plus is the ideal hose for use in mining, steel or petroleum industrial applications.

Note: Not recommended for a variety of unleaded gasoline.

	Resistance:
	  
	Branding:
	Thermoid Versicon/Maxecon Plus Non-conductive Size WP Made In USA

Cover Color: Brown
Oil Resistance: High
Construction: Non-conductive
Tube: NBR, RMA Class A
Cover: NBR/PVC RMA Class A
Reinforcement: Spiral polyester yarn
Temperature Range: -20°F to +180°F
 -29°C to +82°C
Packaging: Reels

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00447404400	1/4 6.35	0.62 15.75	4	300 2.07	1.50 38.10	0.16 0.24
00447406400	3/8 9.53	0.71 18.03	4	300 2.07	2.25 57.15	0.18 0.27
00447408400	1/2 12.70	0.84 21.34	4	300 2.07	3.00 76.20	0.25 0.37
00447412400	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.42 0.62
00447416400	1 25.40	1.43 36.20	4	300 2.07	7.00 177.80	0.61 0.91



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
 For Made to Order Hose, Customer Order Form, see catalog page 137.

BLACK MAX® M.R.O.

This premium quality, non-conductive hose is high in oil resistance throughout. Its fuel line quality will convey oil, fuel oil, diesel, kerosene and other petroleum derived products. Its tough, black cover resists oils and solvents as well as weathering, ozone and abrasion. Hose is tested to have a minimum of 1,000,000 ohms per inch resistance when tested with a 1,000 volt D.C. meggar.

Note: Not recommended for a variety of unleaded gasoline.

**Resistance:****Branding:**

Thermoid Versicon/Black Max
MRO Non-conductive Size WP
Made In USA

Cover Color: Black
Oil Resistance: High
Construction: Non-conductive
Tube: NBR, RMA Class A
Cover: NBR/PVC RMA Class A
Reinforcement: Spiral polyester yarn
Temperature Range: -20°F to +180°F
 -29°C to +82°C
Packaging: Reels

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00447604400▲	1/4	6.35	0.62	15.75	4	300	2.07	1.50	38.10	0.16	0.24
00447606400▲	3/8	9.53	0.71	18.03	4	300	2.07	2.25	57.15	0.18	0.27
00447608400▲	1/2	12.70	0.84	21.34	4	300	2.07	3.00	76.20	0.25	0.37
00447612400▲	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.42	0.62
00447616400▲	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.60	0.89

▲ = Make To Order (MTO)

GOLDENAIR®

Goldenair is an excellent general purpose hose for air, petroleum products and nitrogen service. Designed for the harsh conditions found in steel mills, shipyards, foundries, auto plants and construction sites, Goldenair resists weathering, ozone and abrasion. Goldenair provides a constant working pressure to 350 psi in 3/4" size and is kink resistant. This premium quality hose is non-conductive. It has a tough, durable cover that resists oils and other solvents. Its 4-spiral polyester yarn reinforcement provides added strength and flexibility even in the most extreme conditions.

Note: Not recommended for a variety of unleaded gasoline.

**Resistance:****Branding:**

Thermoid Versicon/Goldenair
Non-conductive Size PSI WP
Made In USA (For Nitrogen Use)

Cover Color: Yellow
Oil Resistance: High
Construction: Non-conductive
Tube: NBR, RMA Class A
Cover: NBR/PVC RMA Class A
Reinforcement: Spiral polyester yarn
Temperature Range: -20°F to +180°F
 -29°C to +82°C
Packaging: Reels

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00447312600	3/4	19.05	1.15	29.21	4	350	2.41	4.50	114.30	0.38	0.57
00447316400	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.61	0.91

GREEN GP/OXYGEN

Green GP/Oxygen hose is designed to handle the harsh, abusive conditions found in steel producing and oil refinery environments. The green cover is commonly color coded for oxygen in mills. It features a medium-high oil resistant NBR blend tube with a 4-spiral polyester yarn reinforcement. The high oil resistant cover and a constant working pressure of 300 psi make this tough, heavy-duty hose the ideal choice for industrial use.

Note: This hose is not recommended for fuel or air breathing applications.



Resistance:



Branding:

Size: WP-GP/Oxygen
Made In USA

Cover Color: Green
Oil Resistance: Medium-High
Construction:
 Tube: NBR blend, RMA Class B
 Cover: NBR/PVC, RMA Class B
 Reinforcement: Spiral polyester yarn
Temperature Range: -20°F to +180°F
 -29°C to +82°C
Packaging: Reels

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00336606400	.385	9.53	0.710	22.23	4	300	2.07	2.25	57.15	0.29	0.43
00336608400	1/2	12.70	0.940	23.81	4	300	2.07	3.00	76.20	0.29	0.43
00336612400	3/4	19.05	1.160	29.37	4	300	2.07	4.50	114.30	0.39	0.58

RADIAL AIRE

Radial Aire is a premium, multipurpose PVC air hose used across industry. Radial Aire is a medium-high resistant hose and offers an operating temperature range between -10°F and +150°F. Radial Aire provides smooth, solid performance and offers constant working pressure of 250 or 300 psi. It features a durable PVC cover and tube with a 2-spiral polyester reinforcing cords that help keep the hose kink resistant and flexible.



Resistance:



Branding:

Thermoid Radial Aire Size WP
Made In Canada

Cover Color: Blue or Red
Oil Resistance: Medium-High
Construction:
 Tube: PVC, RMA Class B
 Cover: PVC, RMA Class B
 Reinforcement: Spiral polyester yarn
Temperature Range: -10°F to +150°F
 -23°C to +66°C
Packaging: Reels or coupled lengths

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
Red											
00134504400	1/4	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.09	0.13
00134505400▲	5/16	7.94	0.56	14.29	2	300	2.07	2.00	50.80	0.11	0.16
00134506400	3/8	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.14	0.21
00134508400	1/2	12.70	0.78	19.84	2	300	2.07	3.00	76.20	0.18	0.27
00134510500▲	5/8	15.88	0.91	23.02	2	250	1.72	3.75	95.25	0.22	0.33
00134512500	3/4	19.05	1.03	26.19	2	250	1.72	4.50	114.30	0.25	0.37
Blue											
00135004400	1/4	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.09	0.13
00135005400▲	5/16	7.94	0.56	14.29	2	300	2.07	2.00	50.80	0.11	0.16
00135006400	3/8	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.14	0.21
00135008400	1/2	12.70	0.78	19.84	2	300	2.07	3.00	76.20	0.18	0.27
00135010500▲	5/8	15.88	0.91	23.02	2	250	1.72	3.75	95.25	0.22	0.33
00135012500	3/4	19.05	1.03	26.19	2	250	1.72	4.50	114.30	0.25	0.37

▲ = Make To Order (MTO)

AIR POWER™ JACKHAMMER

Thermoid Air Power Jackhammer Hose is a hose as tough as its name. A rugged 4 -spiral construction available in 200, 250 or 300 psi, Air Power can tackle the job that only a jackhammer can dish out. The EPDM tube and cover handles heat, ozone and weather cracking better than other compounds. The OEM factory assemblies have domestic or foreign manufactured crimped steel fittings. Durability is built-in and this hose is ready for hard work.

**Resistance:****Branding:**

Thermoid Air Power 3/4"
Made In USA

Cover Color: Red (also available in yellow)
Oil Resistance: Limited
Construction:
 Tube: EPDM
 Cover: EPDM
 Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +200°F
 -40°C to +93°C
Packaging: 50 ft. lengths – 5 per carton

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00114562258	3/4 19.05	1.15 29.21	4	200 1.38	4.50 114.30	0.38 0.57
00114562558	3/4 19.05	1.15 29.21	4	250 1.38	4.50 114.30	0.38 0.57
00114562458	3/4 19.05	1.15 29.21	4	300 2.07	4.50 114.30	0.41 0.61

RED AIR TOOL COUPLED

This tough, versatile factory coupled air hose is specifically designed to stand up to the harsh working conditions found on most project construction sites and industrial environments. Available in either 200 or 300 psi working pressures, this air hose features an EPDM tube and cover with a 4-spiral polyester reinforcement that provides excellent flexibility. This hose will resist kinking, abrasions, heat and ozone. This hose is cut to lengths and is coupled with Male x Male fittings with 1/4" or 3/8" threads per customer requirements.

**Resistance:****Branding:**

Thermoid Air Power Size WP 4 SP
Made In USA

Cover Color: Red
Oil Resistance: Limited
Construction:
 Tube: EPDM
 Cover: EPDM
 Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +200°F
 -40°C to +93°C
Packaging: See Chart

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Lengths (feet) (meters)
00114586454▲	1/4 6.35	0.49 12.45	4	200 1.38	50 15.25
00114587454▲	1/4 6.35	0.62 15.75	4	300 2.07	50 15.25
00114586624▲	3/8 9.53	0.68 17.27	4	200 1.38	25 7.62
00114587624▲	3/8 9.53	0.71 18.03	4	300 2.07	25 7.62
00114587628▲	3/8 9.53	0.71 18.03	4	300 2.07	25 7.62
00114586654▲	3/8 9.53	0.68 17.27	4	200 1.38	50 15.25
00114586658▲	3/8 9.53	0.68 17.27	4	200 1.38	50 15.25
00114587654	3/8 9.53	0.71 18.03	4	300 2.07	50 15.25
00114587658▲	3/8 9.53	0.71 18.03	4	300 2.07	50 15.25

▲ = Make To Order (MTO)

Product information is subject to change. For full details, visit our website or contact Customer Service.

FLEX-LOC™ PUSH-ON

Flex-Loc is the state-of-the-art in push-on hose. It allows push-on fittings to be inserted into place easily and quickly. No special crimping tools are required. Flex-Loc has exceptional coupling retention. The superior holding ability is created by a unique spiral angle design and polyester reinforcement that grips the fitting from the inside. Fittings on the Flex-Loc will not give even under full working pressure. Flex-Loc is available with a 250 psi working pressure. Flex-Loc provides smooth, safe performance in the most demanding, harsh working conditions. Flex-Loc is a high oil resistant, push-on hose. Its tube and cover make this a very effective, working hose for industrial, warehouse and other applications where a convenient push-on hose fitting could be used and value is essential.

Note: Not recommended for a variety of unleaded gasoline.



Resistance:



Branding:

Size WP – Flex-Loc – Made In USA

Cover Color: Black, Blue, Gray, Red, Green or Yellow
Oil Resistance: High
Construction:
Tube: Nitrile, RMA Class A
Cover: Nitrile/PVC RMA Class A
Reinforcement: Spiral polyester
Temperature Range: -20°F to +180°F
 -29°C to +82°C
Packaging: Reels – 700 ft. or 250 ft.

Product Number 700 ft. Reels	Product Number 250 ft. Reels	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
Black	Black						
00338404300	00338404398	1/4 6.35	0.50 12.70	2	250 1.72	1.50 38.10	0.09 0.13
00338406300	00338406398	3/8 9.53	0.63 15.88	2	250 1.72	2.25 57.15	0.12 0.18
00338408300	00338408398	1/2 12.70	0.75 19.05	2	250 1.72	3.00 76.20	0.16 0.24
00338410300	00338410398	5/8 15.88	0.91 23.02	2	250 1.72	3.75 95.25	0.22 0.33
00338412300	00338412398	3/4 19.05	1.03 26.19	2	250 1.72	4.50 114.30	0.25 0.37
Blue	Blue						
00338504300	00338504398▲	1/4 6.35	0.50 12.70	2	250 1.72	1.50 38.10	0.09 0.13
00338506300	00338506398	3/8 9.53	0.63 15.88	2	250 1.72	2.25 57.15	0.12 0.18
00338508300	00338508398▲	1/2 12.70	0.75 19.05	2	250 1.72	3.00 76.20	0.16 0.24
Gray	Gray						
00338604300	00338604398▲	1/4 6.35	0.50 12.70	2	250 1.72	1.50 38.10	0.09 0.13
00338606300	00338606398▲	3/8 9.53	0.63 15.88	2	250 1.72	2.25 57.15	0.12 0.18
00338608300	00338608398▲	1/2 12.70	0.75 19.05	2	250 1.72	3.00 76.20	0.16 0.24
Red	Red						
00338704300	00338704398▲	1/4 6.35	0.50 12.70	2	250 1.72	1.50 38.10	0.09 0.13
00338706300	00338706398▲	3/8 9.53	0.63 15.88	2	250 1.72	2.25 57.15	0.12 0.18
00338708300	00338708398▲	1/2 12.70	0.75 19.05	2	250 1.72	3.00 76.20	0.16 0.24
Green	Green						
00338804300▲	00338804398▲	1/4 6.35	0.50 12.70	2	250 1.72	1.50 38.10	0.09 0.13
00338806300	00338806398▲	3/8 9.53	0.63 15.88	2	250 1.72	2.25 57.15	0.12 0.18
00338808300▲	00338808398▲	1/2 12.70	0.75 19.05	2	250 1.72	3.00 76.20	0.16 0.24
Yellow	Yellow						
00338904300▲	00338904398▲	1/4 6.35	0.50 12.70	2	250 1.72	1.50 38.10	0.09 0.13
00338906300▲	00338906398▲	3/8 9.53	0.63 15.88	2	250 1.72	2.25 57.15	0.12 0.18
00338908300▲	00338908398▲	1/2 12.70	0.75 19.05	2	250 1.72	3.00 76.20	0.16 0.24

▲ = Make To Order (MTO)

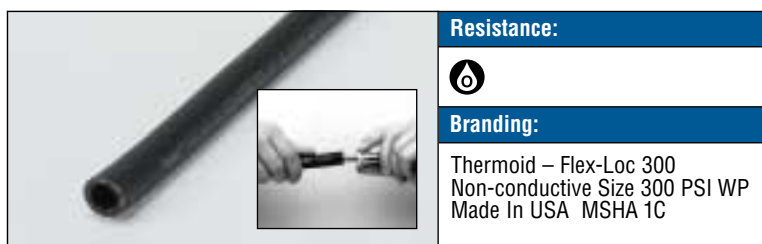


For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
 For Made to Order Hose, Customer Order Form, see catalog page 137.

FLEX-LOC™ 300 PUSH-ON

Flex-Loc 300 is the state-of-the-art in push-on hose. Flex-Loc 300 was designed specifically for use with robotic welders and for use in any other industrial applications requiring MSHA approved flame resistant cover. Flex-Loc 300 allows push-on fittings to be inserted into place quickly and easily. No special crimping tools are needed. Flex-Loc has excellent coupling retention. The superior holding ability is created by a unique spiral angle design and polyester reinforcement that firmly grips the fitting from the inside. Fittings will not give even under full working pressure. Flex-Loc 300 is a premium 300 psi high oil resistant, non-conductive push-on hose that will provide smooth, safe performance in oily and harsh conditions.

Note: Not recommended for unleaded gasoline.

**Resistance:****Branding:**

Thermoid – Flex-Loc 300
Non-conductive Size 300 PSI WP
Made In USA MSHA 1C

Cover Color: Black, Blue, Gray, Red, Green or Yellow

Oil Resistance: High

Construction: Non-conductive

Tube: Nitrile, RMA Class A

Cover: Nitrile/PVC RMA Class A

Reinforcement: Spiral polyester

Temperature Range: -30°F to +180°F

-34°C to +82°C

Packaging: Reels – 700 ft.

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
Black											
00318404400	1/4	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318406400	3/8	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318408400	1/2	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
00318410400	5/8	15.88	0.91	23.02	2	300	2.07	3.75	95.25	0.23	0.34
00318412400	3/4	19.05	1.03	26.19	2	300	2.07	4.50	114.30	0.26	0.39
Blue											
00318504400▲	1/4	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318506400▲	3/8	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318508400▲	1/2	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
Gray											
00318604400▲	1/4	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318606400▲	3/8	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318608400▲	1/2	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
Red											
00318704400▲	1/4	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318706400▲	3/8	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318708400▲	1/2	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
Green											
00318804400▲	1/4	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318806400▲	3/8	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318808400▲	1/2	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
Yellow											
00318904400▲	1/4	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318906400▲	3/8	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318908400▲	1/2	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24

▲ = Make To Order (MTO)

EXCALIBUR™ MULTIPURPOSE

Excalibur is a highly versatile multipurpose hose designed for high pressure, extreme temperatures and working environments. Excalibur is ideal for use in air, water or petroleum applications in heavy construction, mining or quarry operations. It also provides superior service for washer operations in meat and poultry plants or agricultural sprays. Excalibur is **non-conductive**, flame resistant and is MSHA approved with a Class A RMA rating. Excalibur has a spiral polyester yarn construction that maximizes flexibility and strength while providing a constant 500 psi working pressure. A highly visible yellow, NBR/PVC blend cover provides excellent resistance to fats, oils, kerosene and gasoline. Excalibur provides smooth, constant performance in temperatures ranging from -40°F to +212°F. The cover is not as abrasion resistant as our Hercules hose, but provides economical value in high pressure applications.

**Resistance:****Branding:**

Thermoid Excalibur Multipurpose
Hose Size I.D. 500 PSI WP MSHA
1C-114/1 Made In USA Electrically
Non-conductive

Cover Color:	Yellow
Oil Resistance:	High
Construction:	
Tube:	NBR/PVC, RMA Class A
Cover:	NBR/PVC, RMA Class A, MSHA Approved
Reinforcement:	Spiral polyester yarn
Temperature Range:	-40°F to +212°F -40°C to +100°C
Packaging:	Reels

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
22574168662▲	1/4 6.35	0.63 15.88	4	500 3.45	1.50 38.10	0.16 0.24
22574248662	3/8 9.53	0.75 19.05	4	500 3.45	2.25 57.15	0.22 0.33
22574328662	1/2 12.70	0.91 23.02	4	500 3.45	3.00 76.20	0.24 0.36
22574488662	3/4 19.05	1.19 30.16	4	500 3.45	4.50 114.30	0.37 0.55
22574648662	1 25.40	1.50 38.10	4	500 3.45	7.00 177.80	0.51 0.76

▲ = Make To Order (MTO)

HERCULES® II

Hercules II... the latest addition to our high working pressure multipurpose hoses is a cost effective alternative to our very successful and popular Hercules® 500 Multipurpose Hose. Hercules II was value-engineered to offer customers superior performance in harsh work sites like factories, foundries, manufacturing plants, mines, quarries and numerous other industrial applications.

Non-conductive and MSHA approved with a Class A RMA rating, Hercules II has a 4-spiral yarn reinforcement. This construction provides 500 psi working pressure in sizes 1/4" through 1-1/2" and 400 psi working pressure in the 2" size; all with a 4:1 burst safety factor. Hercules II's yellow, XNBR cover provides exceptional resistance to abrasion, oils and other petroleum based products. Hercules II is the best value and a great selection for any OEM or MRO application requiring long life and exceptional performance in material transfer situations.

**Resistance:****Branding:**

Thermoid Hercules II Multipurpose
Hose Size I.D. 500 PSI WP
MSHA 1C-209/7 Non-conductive
Made In USA

Cover Color:	Yellow
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	XNBR, RMA Class A
Reinforcement:	4-spiral yarn
Temperature Range:	-40°F to +212°F -40°C to +100°C
Packaging:	Reels

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
45454168662	1/4 6.35	0.63 15.88	4	500 3.45	1.50 38.10	0.14 0.21
45454248662	3/8 9.53	0.75 19.05	4	500 3.45	2.25 57.15	0.21 0.31
45454328662	1/2 12.70	0.91 23.02	4	500 3.45	3.00 76.20	0.24 0.36
45454488662	3/4 19.05	1.19 30.16	4	500 3.45	4.50 114.30	0.36 0.54
45454648662	1 25.40	1.50 38.10	4	500 3.45	7.00 177.80	0.51 0.76
00454520500	1-1/4 31.75	1.75 44.45	4	500 3.45	8.75 222.25	0.66 0.98
00454524500	1-1/2 38.10	2.09 53.09	4	500 3.45	10.50 266.70	0.70 1.04
00454532400	2 50.80	2.64 67.06	4	400 2.76	16.00 406.40	1.45 2.16

HERCULES® 500 MULTIPURPOSE

Hercules 500 is a multipurpose hose that is durable enough to stand up to the toughest construction job. Engineered to withstand harsh conditions, Hercules 500 is an extremely abrasion resistant hose that is ideal for use in agriculture, factory, foundry, mining, quarry and many other industrial applications. Hercules 500 is non-conductive and MSHA approved with a Class A RMA rating. Hercules 500 has a spiral polyester yarn construction that maximizes flexibility and strength while providing a constant 500 psi working pressure and a 4:1 burst safety factor. A highly visible, fluorescent yellow, XNBR cover provides superior resistance to abrasion, oils and other petroleum based products. These features make Hercules 500 ideal for extra heavy duty pneumatic use or for the transfer of many liquids, including oils, fats, kerosene, gasoline and solvents in temperatures ranging from -40°F to +212°F.

	Resistance:
	    
	Branding:
	Thermoid Hercules Multipurpose Hose Size I.D. 500 PSI WP MSHA 1C-114/1 Made In USA Non-conductive

Cover Color:	Yellow
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	XNBR, RMA Class A
Reinforcement:	4-spiral polyester yarn - 1/4", 3/8", 1/2" sizes
Temperature Range:	-40°F to +212°F -40°C to +100°C
Packaging:	Reels

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
22454168662	1/4 6.35	0.63 15.88	4	500 3.45	1.50 38.10	0.14 0.21
22454248662	3/8 9.53	0.75 19.05	4	500 3.45	2.25 57.15	0.21 0.31
22454328662	1/2 12.70	0.91 23.02	4	500 3.45	3.00 76.20	0.24 0.36
22454488662	3/4 19.05	1.19 30.16	4	500 3.45	4.50 114.30	0.36 0.54
22454648662	1 25.40	1.50 38.10	4	500 3.45	7.00 177.80	0.51 0.76
22454808662	1-1/4 31.75	1.75 44.45	4	500 3.45	8.75 222.25	0.66 0.98
22454968662	1-1/2 38.10	2.09 53.18	4	500 3.45	10.50 266.70	0.70 1.04

HERCULES® 1000 MULTIPURPOSE

Hercules 1000 is a highly versatile, multipurpose hose designed for super high pressure, extreme temperatures and working environments. Hercules 1000 is ideal for use in rock drilling, air hammer and water jetting applications in heavy construction, mining or quarry operations. It also provides superior service for washer operations in meat and poultry plants or agricultural sprays as well as for use in the transfer of petroleum or other solvent solutions. Hercules 1000 is non-conductive and is MSHA approved with a Class A RMA rating. Hercules 1000 has spiral polyester wrap construction that maximizes flexibility and strength while providing a constant 1000 psi working pressure. Hercules 1000 has a minimum 4:1 burst safety factor. A highly visible, fluorescent yellow, XNBR cover provides superior resistance to abrasion, oils, fats, kerosene, and gasoline. Hercules 1000 provides smooth, constant performance in temperatures ranging from -40°F to +212°F.

	Resistance:
	    
	Branding:
	Thermoid Hercules 1000 Multipurpose Hose Size I.D. 1000 PSI WP MSHA 1C-114/1 Made In USA Non-conductive

Cover Color:	Yellow
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	XNBR, RMA Class A (Pin Pricked)
Reinforcement:	4-spiral polyester yarn - 1/4", 3/8", 1/2" sizes 4-spiral aramid fiber - 3/4" and 1" sizes
Temperature Range:	-40°F to +212°F -40°C to +100°C
Packaging:	Reels

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
22544168662▲	1/4 6.35	0.63 15.88	4	1000 6.89	1.50 38.10	0.16 0.24
22544248662	3/8 9.53	0.75 19.05	4	1000 6.89	2.25 57.15	0.22 0.33
22544328662	1/2 12.70	0.94 23.81	4	1000 6.89	3.00 76.20	0.24 0.36
22544488662	3/4 19.05	1.13 28.58	4	1000 6.89	4.50 114.30	0.35 0.52
22544648662	1 25.40	1.50 38.10	4	1000 6.89	7.00 177.80	0.47 0.70

▲ = Make To Order (MTO)



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

GLACIER™ MULTIPURPOSE

Glacier is a cold weather hose specifically engineered for use in sub-zero applications. It handles air, oil, gasoline, diesel, kerosene, fuel oil and some chemicals. Even at temperatures as low as -65°F, Glacier keeps its flexibility, resists kinks and maintains its easy-reeling characteristics. Glacier has an oil resistant, synthetic rubber tube that is reinforced with a spiraled high tensile polyester cord. These features combine to provide a constant working pressure of 300 psi and a 4:1 burst safety factor. Glacier's blue synthetic rubber cover is designed for maximum abrasion resistance. Glacier comes in a variety of sizes. The Glacier hose is designed to operate effectively and remain easy to handle and reel in temperatures ranging from -65°F to +180°F.

Note: A static wire is included on all sizes as a safety precaution.

**Resistance:****Branding:**

Thermoid Glacier MP Hose Size
I.D. WP Made In USA

Cover Color: Blue **Also available in black cover.**

Oil Resistance: High

Construction:

Tube: ECO low temperature oil resistant synthetic rubber
RMA Class A

Cover: ECO low temperature oil resistant synthetic rubber
RMA Class A

Reinforcement: Spiral polyester yarn

Temperature Range: -65°F to +180°F
-54°C to +82°C

Packaging: Reels

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
22554166662▲	1/4 6.35	0.63 15.88	4	300 2.07	1.50 38.10	0.15 0.22
22554246662	3/8 9.53	0.75 19.05	4	300 2.07	2.25 57.15	0.21 0.31
22554326662	1/2 12.70	0.94 23.81	4	300 2.07	3.00 76.20	0.30 0.45
22554486662	3/4 19.05	1.25 31.75	4	300 2.07	4.50 114.30	0.39 0.58
22554646662	1 25.40	1.50 38.10	4	300 2.07	7.00 177.80	0.49 0.73
22554806662	1-1/4 31.75	1.78 45.24	4	300 2.07	8.75 222.25	0.61 0.91
22554886662▲	1-3/8 34.93	1.88 47.63	4	300 2.07	9.25 234.95	0.68 1.01
22554966662	1-1/2 38.10	2.09 53.18	4	300 2.07	10.50 266.70	0.83 1.23

▲ = Make To Order (MTO)

ZEPHYR™ AIR

Zephyr is an industrial strength high-pressure, wire-braid air hose. It is well suited for multiple uses in air tool and air activated equipment. It has applications for use in either construction or industrial environments. Zephyr Air hose features a variety of hose construction designs, sizes and working pressures to fit your application. In the 1/2" I.D. to 1" I.D. sizes, Zephyr features a SBR/NBR tube. In 1-1/4" I.D. or larger sizes, Zephyr has an EPDM tube. All hose sizes are reinforced with heavy-duty, spiral wire braids to provide excellent strength and durability. Zephyr's cover consists of a NBR/PVC compound in the 1/2" I.D. to 1" I.D. sizes. EPDM is the cover compound for sizes 1-1/4" I.D. and larger. All hose sizes have a distinct yellow cover that is abrasion, kink and ozone resistant. Zephyr Air hose provides a dependable and constant working pressure. Zephyr has 3 different working pressure ranges to select from, including 500, 650 or 1000 psi. This durable, high-pressure air hose delivers smooth, trouble-free performance. It is available in sizes and lengths to fit your requirements.

**Resistance:****Branding:**

Thermoid Zephyr Air Hose WP
Made In USA

Cover Color: Yellow

Oil Resistance: Determined by size

Construction:

Tube: SBR/NBR, RMA Class C: 1/2" to 1"
EPDM, RMA Class C: 1-1/4" and over

Cover: NBR/PVC, RMA Class A: 1/2" to 1"
EPDM, RMA Class C: 1-1/4" and over

Reinforcement: One or multiple wire braids

Temperature Range: -40°F to +180°F
-40°C to +82°C

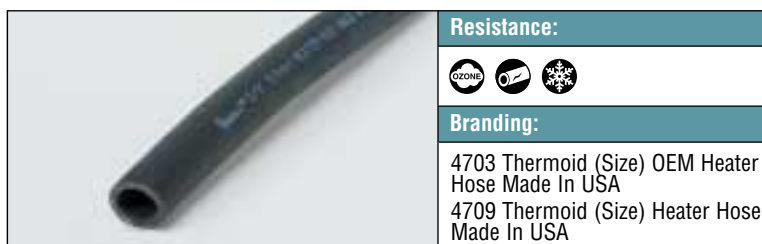
Packaging: 50 ft. lengths – all sizes; Reels – 1/2" to 1"

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Braids	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
22441328662▲	1/2 12.70	0.81 20.64	1	1000 6.89	3.00 76.20	0.32 0.48
22441488662▲	3/4 19.05	1.13 28.58	1	1000 6.89	4.50 114.30	0.44 0.65
22441648662▲	1 25.40	1.38 34.93	1	1000 6.89	7.00 177.80	0.77 1.15
01014444502▲	1-1/4 31.75	1.81 46.04	1	650 4.48	8.75 222.25	0.90 1.34
01014445502▲	1-1/2 38.10	2.00 50.80	1	500 3.45	10.50 266.70	1.00 1.49
01014446502▲	2 50.80	2.50 63.50	2	500 3.45	14.00 355.60	1.40 2.08
01014447502▲	2-1/2 63.50	3.13 79.50	2	400 2.76	15.00 381.00	1.80 2.67

▲ = Make To Order (MTO)

BLACK STANDARD HEATER & BLACK OEM HEATER SAE 20R3, CLASS D2 TYPE

Kink-resistant EPDM tube and cover resist cracking and weather checking. Multi-spiral polyester reinforced to stay flexible even in extreme temperatures. Long service life since hoses can withstand the abuse of corrosive additives, ozone and abrasion. Series 4703 is SAE 20R3, Class D2-Type. Series 4709 is standard duty heater hose.



Resistance:



Branding:

4703 Thermoid (Size) OEM Heater Hose Made In USA
4709 Thermoid (Size) Heater Hose Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: EPDM
Cover: EPDM
Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +200°F
-40°C to +93°C
Packaging: Reels, †50 ft. length – 1 per carton

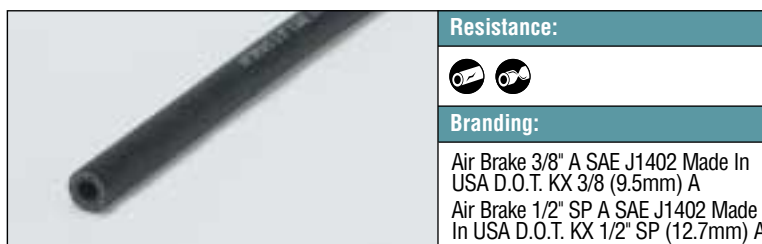
Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00470308151†▲	1/2 12.70	0.80 20.24	2	62 0.43	3.00 76.20	0.18 0.27
00470310199	5/8 15.88	0.94 23.81	2	62 0.43	3.75 95.25	0.22 0.33
00470310151†▲	5/8 15.88	0.94 23.81	2	62 0.43	3.75 95.25	0.22 0.33
00470312199	3/4 19.05	1.06 26.99	2	50 0.34	4.50 114.30	0.25 0.37
00470312151†▲	3/4 19.05	1.06 26.99	2	50 0.34	4.50 114.30	0.25 0.37
00470316199▲	1 25.40	1.34 34.13	2	44 0.30	7.00 177.80	0.38 0.57
00470316151†▲	1 25.40	1.34 34.13	2	44 0.30	7.00 177.80	0.38 0.57
00470908199	1/2 12.70	0.81 20.64	2	35 0.24	3.00 76.20	0.16 0.24
00470908151†▲	1/2 12.70	0.81 20.64	2	35 0.24	3.00 76.20	0.16 0.24
00470910199	5/8 15.88	0.88 22.23	2	35 0.24	3.75 95.25	0.20 0.30
00470910151†▲	5/8 15.88	0.88 22.23	2	35 0.24	3.75 95.25	0.20 0.30
00470912199	3/4 19.05	1.03 26.19	2	35 0.24	4.50 114.30	0.23 0.34
00470912151†	3/4 19.05	1.03 26.19	2	35 0.24	4.50 114.30	0.23 0.34
00470916199	1 25.40	1.34 34.13	2	25 0.17	7.00 177.80	0.39 0.58
00470916151†	1 25.40	1.34 34.13	2	25 0.17	7.00 177.80	0.39 0.58

▲ = Make To Order (MTO)

† = 50 ft. length – 1 per carton

AIR BRAKE, TYPE A - SAE J1402 & DOT FMVSS 106

Air Brake hose is designed for conveying air in truck and trailer brake systems. Truck and trailer manufacturers, aftermarket packagers and wholesalers use this hose. It is certified to meet D.O.T. FMVSS 106 and SAE J1402A requirements. The EPDM tube and cover with the 4-spiral reinforcement make this hose virtually kink proof. This hose is durable enough to handle this safety related application.



Resistance:



Branding:

Air Brake 3/8" A SAE J1402 Made In USA D.O.T. KX 3/8 (9.5mm) A
Air Brake 1/2" SP A SAE J1402 Made In USA D.O.T. KX 1/2" SP (12.7mm) A

Cover Color: Black
Oil Resistance: Medium
Construction:
Tube: EPDM, RMA Class C
Cover: EPDM, RMA Class C
Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +200°F
-40°C to +93°C
Packaging: † Maximum 2 pc. 250 ft. reel, **50 ft. length – 1 per carton

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00482106499	3/8 9.53	0.75 19.05	4	Min. Burst 900 6.20	2.25 57.15	0.17 0.25
00482106498†	3/8 9.53	0.75 19.05	4	Min. Burst 900 6.20	2.25 57.15	0.17 0.25
00482106451**	3/8 9.53	0.75 19.05	4	Min. Burst 900 6.20	2.25 57.15	0.17 0.25
00482108500	1/2 12.70	0.88 22.23	4	Min. Burst 900 6.20	3.00 76.20	0.20 0.30
00482108498†	1/2 12.70	0.88 22.23	4	Min. Burst 900 6.20	3.00 76.20	0.20 0.30
00482108451**	1/2 12.70	0.88 22.23	4	Min. Burst 900 6.20	3.00 76.20	0.20 0.30

† = Maximum 2 pc. 250 ft. reel

** = 50 ft. length – 1 per carton

FUEL LINE, VAPOR EMISSION & CRANKCASE VENTILATION - SIMILAR TO SAE 30R7

This durable, quality-made hose is similar to the SAE J30R7 specifications. It is used for conveying most current types of fuels in automobiles, trucks and buses. This hose is also an aftermarket standard. It provides excellent service for original equipment, wholesalers, aftermarket packagers and auxiliary tank manufacturers. This hose provides superior temperature service and operates in a wide range from -29°F to +257°F. It features an NBR tube and an NBR/PVC cover reinforced with multiple spiral polyester. This combination helps keep the hose flexible while standing up to oil, grease, ozone and under-hood temperatures generated by today's automotive engines. It is available in a variety of sizes and packaging options to suit your application.



Resistance:



Branding:

Size SAE 30R7-KX Date
Made In USA

Cover Color:	Black
Oil Resistance:	Medium-High
Construction:	
Tube:	NBR, RMA Class A
Cover:	NBR/PVC, RMA Class B
Reinforcement:	Spiral polyester yarn
Temperature Range:	-40°F to +257°F -40°C to +125°C
Packaging:	25 ft. lengths – 10 lengths per master carton 50 ft. lengths – 5 lengths per master carton 250 ft. reel – maximum 2 lengths per reel 700 ft. reel – maximum 2 lengths per reel

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
25 ft. Coil						
00667503225▲	3/16 4.76	0.41 10.32	2	50 0.34	1.25 31.75	0.07 0.10
00667504225▲	1/4 6.35	0.50 12.70	2	50 0.34	1.50 38.10	0.09 0.13
00667505225▲	5/16 7.94	0.56 14.29	2	50 0.34	2.00 50.80	0.11 0.16
00667506225▲	3/8 9.53	0.63 15.88	2	50 0.34	2.25 57.15	0.12 0.18
00667508225	1/2 12.70	0.781 19.83	2	35 0.24	3.00 76.20	0.16 0.24
50 ft. Coil						
00667503252▲	3/16 4.76	0.41 10.32	2	50 0.34	1.25 31.75	0.07 0.10
00667504252▲	1/4 6.35	0.50 12.70	2	50 0.34	1.50 38.10	0.09 0.13
00667505252▲	5/16 7.94	0.56 14.29	2	50 0.34	2.00 50.80	0.11 0.16
00667506252▲	3/8 9.53	0.63 15.88	2	50 0.34	2.25 57.15	0.12 0.18
250 ft. Reel						
00667503298▲	3/16 4.76	0.41 10.32	2	50 0.34	1.25 31.75	0.07 0.10
00667504298	1/4 6.35	0.50 12.70	2	50 0.34	1.50 38.10	0.09 0.13
00667505298	5/16 7.94	0.56 14.29	2	50 0.34	2.00 50.80	0.11 0.16
00667506298	3/8 9.53	0.63 15.88	2	50 0.34	2.25 57.15	0.12 0.18
700 ft. Reel						
00667503299	3/16 4.76	0.41 10.32	2	50 0.34	1.25 31.75	0.07 0.10
00667504299	1/4 6.35	0.50 12.70	2	50 0.34	1.50 38.10	0.09 0.13
00667505299	5/16 7.94	0.56 14.29	2	50 0.34	2.00 50.80	0.11 0.16
00667506299	3/8 9.53	0.63 15.88	2	50 0.34	2.25 57.15	0.12 0.18
00667508299	1/2 12.70	0.781 19.83	2	35 0.24	3.00 76.20	0.16 0.24

▲ = Make To Order (MTO)

VAPOR-LOC™ FUEL LINE (30R7)

Thermoid Vapor-Loc Fuel Line Hose is approved by CARB (California Air Resources Board). This hose is similar to SAE J30R7 Fuel Line Hose Types. It traps/prevents up to 99% of all fuel vapors from permeating through the hose walls (see Vapor-Loc Fuel Line versus Standard fuel Line hose comparison illustration on page 50). These hoses are designed to carry fuel in cars, trucks, motorcycles, lawn and garden equipment and all gasoline and/or gasoline/bio-fuel engines. This hose is designed to resist gasoline/ethanol blends, oils and the caustic effects of bio-fuels, cover abrasion and ozone.



Resistance:



Branding:

Thermoid VAPOR-LOC Fuel Line
Size I.D. Date Made In USA

Cover Color:	Black with White Branding
Oil Resistance:	Medium – High
Construction:	
Tube:	NBR
Cover:	Chlorinated Polymer
Reinforcement:	Two Spiral Polyester
Barrier:	VAPOR-LOC System
Temperature Range:	-40°F to +257°F -40°C to +125°C
Packaging:	Cartons and Reels

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
22602161662	1/4 6.3	0.50 12.7	2 spiral	100 0.69	1.50 38.90	0.09 0.13
22612201662	5/16 7.94	0.56 14.29	2 spiral	50 0.34	2.00 50.80	0.11 0.16
22612241662	3/8 9.53	0.56 14.29	2 spiral	50 0.34	2.25 57.15	0.12 0.18

VAPOR-LOC™ FUEL INJECTION

Thermoid Vapor-Loc Fuel Injection Hose is approved by CARB (California Air Resources Board). This hose meets and exceeds all SAE J30R9 Fuel Injection Hose Specifications. It traps/prevents up to 99% of all fuel vapors from permeating through the hose walls (see Vapor-Loc Fuel Line versus Standard fuel Line hose comparison illustration shown below). These hoses are designed to carry fuel in cars, trucks, motorcycles, lawn and garden equipment and all gasoline and/or gasoline/bio-fuel engines. This hose is designed to resist gasoline/ethanol blends, oils and the caustic effects of bio-fuels, cover abrasion and ozone.

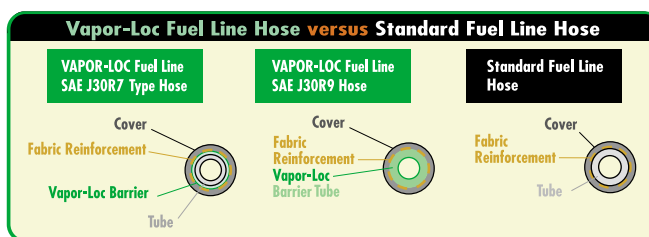
**Resistance:****Branding:**

Thermoid VAPOR-LOC Fuel Injection
Size I.D. Date Made In USA

Cover Color:	Black with White Branding
Oil Resistance:	Medium – High
Construction:	
Tube:	FKM
Cover:	Chlorinated Polymer
Reinforcement:	Two Spiral Polyester
Barrier:	VAPOR-LOC System
Temperature Range:	-40°F to +257°F -40°C to +125°C
Packaging:	Cartons and Reels

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
22602161662	1/4 6.30	0.50 12.70	2 spiral	100 0.69	1.50 38.90	0.09 0.13
22602201662	5/16 7.94	0.56 14.29	2 spiral	100 0.69	2.00 50.80	0.11 0.16
22602241662	3/8 9.53	0.56 14.29	2 spiral	100 0.69	2.25 57.15	0.12 0.18

As shown in the fuel line hose comparison illustration at right, HBD/Thermoid's Vapor-Loc System integrates a multi-layer vapor barrier between the hose components that locks in virtually all the fuel vapors that would normally permeate through the hose.

**7318 SOFT WALL FUEL FILL SAE 30R7**

Style 7318 is often used as a fill neck hose. It can carry leaded, unleaded, oxygenated fuels with aromatics of up to 30%, gasohol and diesel fuel. Applications for this hose include: passenger cars, light trucks, boats and auxiliary fuel tanks on RV's. The rugged construction helps prevent hose collapse. This hose meets all the requirements of the 30R7 specification.

**Resistance:****Branding:**

SAE 30R7 TYPE 7318 Size
Made In USA Caution Statement

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR
Cover:	CR
Reinforcement:	Nylon screen
Temperature Range:	-34°F to +257°F -37°C to +125°C
Packaging:	60 ft. Other lengths available – 5% cutting charge Contact customer service for minimum run requirements

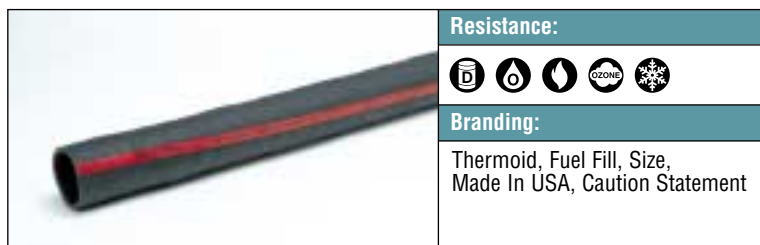
Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
16731815060▲	1-1/2 38.10	1.87 47.50	2	35 0.24	n/a n/a	0.62 0.92
16731817560▲	1-3/4 44.45	2.15 54.61	2	35 0.24	n/a n/a	0.71 1.06
16731818760▲	1-7/8 47.63	2.25 57.15	2	35 0.24	n/a n/a	0.76 1.13
16731820060▲	2 50.80	2.39 60.71	2	35 0.24	n/a n/a	0.80 1.19
16731822560▲	2-1/4 57.15	2.67 67.82	2	35 0.24	n/a n/a	0.93 1.38
16731823760▲	2-3/8 60.33	2.79 70.87	2	35 0.24	n/a n/a	0.98 1.46

▲ = Make To Order (MTO)
n/a = Not Applicable

Product information is subject to change. For full details, visit our website or contact Customer Service.

1158 SOFTWALL AROMATIC FUEL SAE 30R2 TYPE 2

This hose is an excellent multipurpose hose which is designed for use in fuel transfer applications, such as, filler neck, where aromatic fuel resistance is required. This hose features a CR cover that is oil, heat, and ozone resistant.



Resistance:



Branding:

Thermoid, Fuel Fill, Size,
Made In USA, Caution Statement

Cover Color: Black
Oil Resistance: High
Construction:
 Tube: NBR
 Cover: CR
 Reinforcement: Tire cord
Temperature Range: -40°F to +212°F
 -40°C to +100°C
Packaging: Make to Order (MTO)
 Contact Salisbury for details
 6 ft., 12 ft and 60 ft. lengths available
 1/2" and 5/8" I.D. – 25 ft. maximum
 Other lengths – 5% cutting charge

Product Number 6 Feet	Product Number 12 Feet	Product Number 60 Feet	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
16115805006▲	16115805012▲	16115805025▲	1/2 12.70	1.00 25.40	2	175 1.21	n/a n/a	0.36 0.54
16115806206▲	16115806212▲	16115806225▲	5/8 15.88	1.13 28.58	2	125 0.86	n/a n/a	0.41 0.61
16115807506▲	16115807512▲	16115807560▲	3/4 19.05	1.25 31.75	2	125 0.86	n/a n/a	0.46 0.68
16115808706	16115808712	16115808760	7/8 22.23	1.38 34.93	2	125 0.86	n/a n/a	0.52 0.77
16115810006	16115810012	16115810060	1 25.40	1.50 38.10	2	125 0.86	n/a n/a	0.59 0.88
16115811206▲	16115811212▲	16115811260▲	1-1/8 28.58	1.63 41.28	2	100 0.69	n/a n/a	0.62 0.92
16115812506	16115812512	16115812560	1-1/4 31.75	1.75 44.45	2	100 0.69	n/a n/a	0.68 1.01
16115813706▲	16115813712▲	16115813760▲	1-3/8 34.93	1.88 47.63	2	100 0.69	n/a n/a	0.73 1.09
16115815006	16115815012	16115815060	1-1/2 38.10	2.00 50.80	2	100 0.69	n/a n/a	0.79 1.18
16115816206▲	16115816212	16115816260	1-5/8 41.28	2.13 53.98	2	62 0.43	n/a n/a	0.84 1.25
16115817506	16115817512	16115817560	1-3/4 44.45	2.25 57.15	2	62 0.43	n/a n/a	0.90 1.34
16115818706	16115818712	16115818760	1-7/8 47.63	2.38 60.33	2	62 0.43	n/a n/a	0.95 1.41
16115820006	16115820012	16115820060	2 50.80	2.50 63.50	2	62 0.43	n/a n/a	1.00 1.49
16115821206▲	16115821212▲	16115821260▲	2-1/8 53.98	2.63 66.68	2	62 0.43	n/a n/a	1.06 1.58
16115822506	16115822512	16115822560	2-1/4 57.15	2.75 69.85	2	50 0.34	n/a n/a	1.11 1.65
16115823706	16115823712	16115823760	2-3/8 60.33	2.88 73.03	2	50 0.34	n/a n/a	1.17 1.74
16115825006	16115825012	16115825060	2-1/2 63.50	3.00 76.20	2	50 0.34	n/a n/a	1.22 1.82
16115826206▲	16115826212▲	16115826260▲	2-5/8 66.68	3.13 79.38	2	50 0.34	n/a n/a	1.27 1.89
16115827506▲	16115827512▲	16115827560▲	2-3/4 69.85	3.25 82.55	2	50 0.34	n/a n/a	1.33 1.98
16115828706	16115828712	16115828760	2-7/8 73.03	3.38 85.73	2	50 0.34	n/a n/a	1.39 2.07
16115830006	16115830012	16115830060	3 76.20	3.50 88.90	2	50 0.34	n/a n/a	1.44 2.14
16115831206▲	16115831212▲	16115831260▲	3-1/8 79.38	3.63 92.08	2	37 0.25	n/a n/a	1.49 2.22
16115832506▲	16115832512▲	16115832560▲	3-1/4 82.55	3.75 95.25	2	37 0.25	n/a n/a	1.55 2.31
16115835006	16115835012	16115835060	3-1/2 88.90	4.00 101.60	2	37 0.25	n/a n/a	1.66 2.47
16115837506▲	16115837512▲	16115837560▲	3-3/4 95.25	4.25 107.95	2	37 0.25	n/a n/a	1.76 2.62
16115840006▲	16115840012▲	16115840060▲	4 101.60	4.50 114.30	2	37 0.25	n/a n/a	1.87 2.78
16115842506▲	16115842512▲	16115842560▲	4-1/4 107.95	4.75 120.65	2	25 0.17	n/a n/a	1.98 2.95
16115845006▲	16115845012▲	16115845060▲	4-1/2 114.30	5.00 127.00	2	25 0.17	n/a n/a	2.09 3.11
16115850006▲	16115850012▲	16115850060▲	5 127.00	5.50 139.70	2	12 0.08	n/a n/a	2.31 3.44
16115855006▲	16115855012▲	16115855060▲	5-1/2 139.70	6.00 152.40	2	12 0.08	n/a n/a	2.52 3.75
16115860006▲	16115860012▲	16115860060▲	6 152.40	6.50 165.10	2	10 0.07	n/a n/a	2.74 4.08

▲ = Make To Order (MTO)

n/a = Not Applicable



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
 For Made to Order Hose, Customer Order Form, see catalog page 137.

GENERAL PURPOSE COOLANT & DISCHARGE 100 & 100A

This is an extremely popular "workhorse". This 2-ply hose is designed for use in engine cooling systems as a flexible connector between the engine and radiator. It is fabric reinforced and is intended for use as an upper radiator hose that operates under pressure only. It is available in virtually all the standard pipe sizes. Because of its versatility and durability, it is capable of being used in hundreds of industrial, automotive and marine applications. The tube is heat and coolant resistant. The carcass is made of 2-ply polyester cord construction.



Resistance:



Branding:

Thermoid Coolant I.D.
Made In USA foot and inch marks

Cover Color: Black
Oil Resistance: Medium to Medium-High
Construction:
 Tube: NBR/SBR
 Cover: CR/NBR blend
 Reinforcement: 2-ply polyester cord
Temperature Range: 0°F to +212°F
 -18°C to +100°C
Packaging: Make to Order (MTO)
 Contact Salisbury for details
 3 ft. and 10 ft. lengths available
 Other lengths – 5% cutting charge

Product Number 3 Feet	Product Number 10 Feet	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)	Std. Case Ea. (3 ft)	Std. Case Ea. (10 ft)
16010006203	16010006210	5/8 15.88	1.00 25.40	2	56 0.39	n/a n/a	0.34 0.51	10	6
16010007503	16010007510	3/4 19.05	1.13 28.58	2	56 0.39	n/a n/a	0.37 0.55	10	6
16010008703	16010008710	7/8 22.23	1.25 31.75	2	56 0.39	n/a n/a	0.41 0.61	10	6
16010010003	16010010010	1 25.40	1.38 34.93	2	53 0.37	n/a n/a	0.45 0.67	10	5
16010011203	16010011210	1-1/8 28.58	1.50 38.10	2	53 0.37	n/a n/a	0.50 0.74	10	5
16010012503	16010012510	1-1/4 31.75	1.63 41.28	2	51 0.35	n/a n/a	0.54 0.80	10	5
16010013103▲	16010013110▲	1-5/16 33.34	1.69 42.86	2	51 0.35	n/a n/a	0.56 0.83	10	5
16010013703	16010013710	1-3/8 34.93	1.75 44.45	2	51 0.35	n/a n/a	0.58 0.86	10	5
16010015003	16010015010	1-1/2 38.10	1.88 47.63	2	49 0.34	n/a n/a	0.63 0.94	10	2
16010016203	16010016210	1-5/8 41.28	2.00 50.80	2	49 0.34	n/a n/a	0.67 1.00	10	2
16010017503	16010017510	1-3/4 44.45	2.13 53.98	2	48 0.33	n/a n/a	0.71 1.06	10	2
16010018703	16010018710	1-7/8 47.63	2.25 57.15	2	45 0.31	n/a n/a	0.76 1.13	10	2
16010020003	16010020010	2 50.80	2.38 60.33	2	45 0.31	n/a n/a	0.80 1.19	10	2
16010021203▲	16010021210▲	2-1/8 53.98	2.50 63.50	2	44 0.30	n/a n/a	0.84 1.25	6	2
16010022503	16010022510	2-1/4 57.15	2.63 66.68	2	43 0.30	n/a n/a	0.89 1.32	6	2
16010023703	16010023710	2-3/8 60.33	2.75 69.85	2	39 0.27	n/a n/a	0.93 1.38	6	2
16010025003	16010025010	2-1/2 63.50	2.88 73.03	2	39 0.27	n/a n/a	0.99 1.47	6	2
16010026203▲	16010026210▲	2-5/8 66.68	3.00 76.20	2	38 0.26	n/a n/a	1.02 1.52	6	2
16010027503	16010027510	2-3/4 69.85	3.13 79.38	2	38 0.26	n/a n/a	1.05 1.56	6	2
16010028703	16010028710	2-7/8 73.03	3.25 82.55	2	35 0.24	n/a n/a	1.11 1.65	6	2
16010030003	16010030010	3 76.20	3.38 85.73	2	33 0.23	n/a n/a	1.15 1.71	4	1
16010031203	16010031210	3-1/8 79.38	3.50 88.90	2	33 0.23	n/a n/a	1.20 1.79	4	1
16010032503▲	16010032510▲	3-1/4 82.55	3.63 92.08	2	33 0.23	n/a n/a	1.24 1.85	4	1
16010035003	16010035010	3-1/2 88.90	3.88 98.43	2	28 0.19	n/a n/a	1.33 1.98	4	1
16010037503▲	16010037510▲	3-3/4 95.25	4.13 104.78	2	25 0.17	n/a n/a	1.43 2.13	4	1
16010040003	16010040010	4 101.60	4.38 111.13	2	19 0.13	n/a n/a	1.51 2.25	4	1
16010042503▲	16010042510▲	4-1/4 107.95	4.63 117.48	2	18 0.12	n/a n/a	1.60 2.38	4	1
16010045003	16010045010	4-1/2 114.30	4.88 123.83	2	16 0.11	n/a n/a	1.69 2.52	4	1
16010047503▲	16010047510▲	4-3/4 120.65	5.13 130.18	2	16 0.11	n/a n/a	1.78 2.65	4	1
16010050003▲	16010050010▲	5 127.00	5.38 136.53	2	15 0.10	n/a n/a	1.87 2.78	2	1
16010055003▲	16010055010▲	5-1/2 139.70	5.88 149.23	2	14 0.10	n/a n/a	2.04 3.04	2	1
16010060003▲	16010060010▲	6 152.40	6.38 161.93	2	12 0.08	n/a n/a	2.22 3.30	2	1

▲ = Make To Order (MTO)

n/a = Not Applicable

Product information is subject to change. For full details, visit our website or contact Customer Service.

HEAVY DUTY COOLANT & DISCHARGE 101 & 101B

This multi-ply heavy-duty coolant and discharge hose is suitable for use in engine cooling systems on heavy equipment, buses, trucks or other applications where a heavy-duty hose is required. This hose can also be used as a general purpose discharge hose, a pipe connector, a conveyor of many types of products, vibration isolator in piping systems, etc. The tube is heat and coolant resistant. The cover is heat and ozone resistant.



Resistance:



Branding:

Thermoid Coolant I.D.
Made In USA foot and inch marks

Cover Color: Black
Oil Resistance: Medium to Medium-High
Construction:
 Tube: NBR/SBR blend
 Cover: CR/NBR blend
 Reinforcement: 3-ply polyester cord
Temperature Range: 0°F to +212°F
 -18°C to +100°C
Packaging: Make to Order (MTO)
 Contact Salisbury for details
 3 ft. and 12 ft. lengths available
 Other lengths – 5% cutting charge

Product Number 3 Feet	Product Number 12 Feet	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (kg/m)	Std. Case Ea. (3 ft)	Std. Case Ea. (12 ft)
16010106203▲	16010106212▲	5/8 15.88	1.13 28.58	3	56 0.39	n/a n/a	0.46 0.68	10	6
16010107503▲	16010107512▲	3/4 19.05	1.25 31.75	3	56 0.39	n/a n/a	0.50 0.74	10	6
16010108703▲	16010108712▲	7/8 22.23	1.38 34.93	3	56 0.39	n/a n/a	0.54 0.80	10	6
16010110003▲	16010110012▲	1 25.40	1.50 38.10	3	88 0.61	n/a n/a	0.59 0.88	10	6
16010111203▲	16010111212▲	1-1/8 28.58	1.63 41.28	3	88 0.61	n/a n/a	0.65 0.97	10	6
16010112503	16010112512	1-1/4 31.75	1.75 44.45	3	88 0.61	n/a n/a	0.70 1.04	10	6
16010113103▲	16010113112▲	1-5/16 33.34	1.81 46.04	3	88 0.61	n/a n/a	0.73 1.09	10	6
16010113703▲	16010113712▲	1-3/8 34.93	1.88 47.63	3	88 0.61	n/a n/a	0.75 1.12	10	5
16010115003	16010115012	1-1/2 38.10	2.00 50.80	3	81 0.56	n/a n/a	0.81 1.21	10	2
16010116203	16010116212	1-5/8 41.28	2.13 53.98	3	81 0.56	n/a n/a	0.86 1.28	10	2
16010117503	16010117512	1-3/4 44.45	2.25 57.15	3	81 0.56	n/a n/a	0.91 1.35	10	2
16010118703▲	16010118712▲	1-7/8 47.63	2.38 60.33	3	75 0.52	n/a n/a	0.97 1.44	10	2
16010120003	16010120012	2 50.80	2.50 63.50	3	75 0.52	n/a n/a	1.02 1.52	10	1
16010121203▲	16010121212▲	2-1/8 53.98	2.63 66.68	3	75 0.52	n/a n/a	1.08 1.61	10	1
16010122503▲	16010122512▲	2-1/4 57.15	2.75 69.85	3	70 0.48	n/a n/a	1.13 1.68	10	1
16010123703	16010123712	2-3/8 60.33	2.88 73.03	3	70 0.48	n/a n/a	1.19 1.77	6	1
16010125003	16010125012	2-1/2 63.50	3.00 76.20	3	68 0.47	n/a n/a	1.24 1.85	6	1
16010126203▲	16010126212▲	2-5/8 66.68	3.13 79.38	3	62 0.43	n/a n/a	1.30 1.93	6	1
16010127503▲	16010127512▲	2-3/4 69.85	3.25 82.55	3	62 0.43	n/a n/a	1.35 2.01	6	1
16010128703▲	16010128712▲	2-7/8 73.03	3.38 85.73	3	62 0.43	n/a n/a	1.41 2.10	6	1
16010130003	16010130012	3 76.20	3.50 88.90	3	58 0.40	n/a n/a	1.46 2.17	4	1
16010131203▲	16010131212▲	3-1/8 79.38	3.63 92.08	3	55 0.38	n/a n/a	1.51 2.25	4	1
16010132503▲	16010132512▲	3-1/4 82.55	3.75 95.25	3	53 0.37	n/a n/a	1.57 2.34	4	1
16010135003	16010135012	3-1/2 88.90	4.00 101.60	3	50 0.34	n/a n/a	1.68 2.50	4	1
16010137503▲	16010137512▲	3-3/4 95.25	4.13 104.78	3	50 0.34	n/a n/a	1.80 2.68	4	1
16010140003▲	16010140012▲	4 101.60	4.50 114.30	3	45 0.31	n/a n/a	1.90 2.83	4	1
16010142503▲	16010142512▲	4-1/4 107.95	4.75 120.65	3	43 0.30	n/a n/a	2.01 2.99	4	1
16010145003▲	16010145012▲	4-1/2 114.30	5.00 127.00	3	41 0.28	n/a n/a	2.12 3.16	4	1
16010147503▲	16010147512▲	4-3/4 120.65	5.25 133.35	3	41 0.28	n/a n/a	2.22 3.30	4	1
16010150003▲	16010150012▲	5 127.00	5.50 139.70	3	36 0.25	n/a n/a	2.31 3.44	1	1
16010155003▲	16010155012▲	5-1/2 139.70	6.00 152.40	3	34 0.23	n/a n/a	2.55 3.80	1	1
16010160003▲	16010160012▲	6 152.40	6.50 165.10	3	30 0.21	n/a n/a	2.77 4.12	1	1

▲ = Make To Order (MTO)

n/a = Not Applicable

2012 STANDARD WALL 3/16" COOLANT SAE 20R1

Type 2012 hose is used where heavy-duty service is required for engine cooling systems such as Class 7 & 8 trucks and off-road equipment. Type 2012 can also be used as a general purpose discharge hose and for many other applications. The Class B tube, Class C cover and tire cord reinforcement fight the most corrosive elements in diesel engines, such as, oil, coolants, coolant additives and heat. This hose meets the requirements of the SAE J20R1, Class B/LT tube, Class C/LT cover standard wall construction specification.

Note: This hose is not suitable for oil or fuel transfer.



Resistance:



Branding:

Similar to SAE 20R1, Standard Wall

Cover Color: Black
Oil Resistance: Medium to Medium-High
Construction:
Tube: Class B/LT
Cover: Class C/LT
Reinforcement: Tire cord
Temperature Range: -65°F to +212°F
 -54°C to +100°C
Packaging: Make to Order (MTO)
 Contact Salisbury for details
 12 ft. and 60 ft. lengths available
 1/2" and 5/8" I.D.s are 25 ft. maximum
 Other lengths – 5% cutting charge

Product Number 12 Feet	Product Number 60 Feet	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
16201205012▲	16201205025▲	1/2 12.70	0.88 22.23	2	106 0.73	n/a n/a	0.29 0.43
16201206212	16201206225	5/8 15.88	1.00 25.40	2	94 0.65	n/a n/a	0.31 0.46
16201207512▲	16201207560▲	3/4 19.05	1.13 28.58	2	81 0.56	n/a n/a	0.36 0.54
16201208712	16201208760	7/8 22.23	1.25 31.75	2	81 0.56	n/a n/a	0.39 0.58
16201210012▲	16201210060▲	1 25.40	1.38 34.93	2	75 0.52	n/a n/a	0.43 0.64
16201211212	16201211260	1-1/8 28.58	1.50 38.10	2	75 0.52	n/a n/a	0.48 0.71
16201212512	16201212560	1-1/4 31.75	1.63 41.28	2	69 0.48	n/a n/a	0.52 0.77
16201213712▲	16201213760▲	1-3/8 34.93	1.75 44.45	2	69 0.48	n/a n/a	0.55 0.82
16201215012	16201215060	1-1/2 38.10	1.88 47.63	2	69 0.48	n/a n/a	0.58 0.86
16201216212▲	16201216260▲	1-5/8 41.28	2.06 52.39	2	69 0.48	n/a n/a	0.63 0.94
16201217512	16201217560	1-3/4 44.45	2.25 57.15	2	69 0.48	n/a n/a	0.71 1.06
16201218712▲	16201218760▲	1-7/8 47.63	2.25 57.15	2	50 0.34	n/a n/a	0.72 1.07
16201220012	16201220060	2 50.80	2.38 60.33	2	50 0.34	n/a n/a	0.77 1.15
16201221212▲	16201221260▲	2-1/8 53.98	2.50 63.50	2	47 0.32	n/a n/a	0.82 1.22
16201222512	16201222560	2-1/4 57.15	2.63 66.68	2	44 0.30	n/a n/a	0.86 1.28
16201223712▲	16201223760▲	2-3/8 60.33	2.75 69.85	2	44 0.30	n/a n/a	0.91 1.35
16201225012	16201225060	2-1/2 63.50	2.88 73.03	2	38 0.26	n/a n/a	0.95 1.41
16201227512	16201227560	2-3/4 69.85	3.13 79.38	2	31 0.21	n/a n/a	1.04 1.55
16201230012▲	16201230060▲	3 76.20	3.38 85.73	2	25 0.17	n/a n/a	1.12 1.67
16201231212▲	16201231260▲	3-1/8 79.38	3.50 88.90	2	18 0.12	n/a n/a	1.17 1.74
16201232512▲	16201232560▲	3-1/4 82.55	3.63 92.08	2	18 0.12	n/a n/a	1.21 1.80
16201235012▲	16201235060▲	3-1/2 88.90	3.88 98.43	2	19 0.13	n/a n/a	1.29 1.92
16201237512▲	16201237560▲	3-3/4 95.25	4.13 104.78	2	13 0.09	n/a n/a	1.38 2.05
16201240012▲	16201240060▲	4 101.60	4.38 111.13	2	13 0.09	n/a n/a	1.47 2.19
16201242512▲	16201242560▲	4-1/4 107.95	4.63 117.48	2	13 0.09	n/a n/a	1.55 2.31
16201245012▲	16201245060▲	4-1/2 114.30	4.88 123.83	2	13 0.09	n/a n/a	1.64 2.44
16201250012▲	16201250060▲	5 127.00	5.38 136.53	2	13 0.09	n/a n/a	1.82 2.71
16201255012▲	16201255060▲	5-1/2 139.70	5.88 149.23	2	13 0.09	n/a n/a	1.99 2.96
16201260012▲	16201260060▲	6 152.40	6.38 161.93	2	13 0.09	n/a n/a	2.16 3.21

▲ = Make To Order (MTO)

n/a = Not Applicable

2015 HEAVY WALL 1/4" COOLANT (SAE 20R1)

Type 2012 hose is used where heavy-duty service is required for engine cooling systems such as Class 7 & 8 trucks, marine, and off-road equipment and as a general purpose discharge hose. Available in various sizes: 1/2" to 6 ft. Make To Order product, for complete information, contact Customer Service or visit our website: www.hbdthermoid.com



Resistance:



Branding:

Similar to SAE 20R1, Heavy Wall

Product information is subject to change. For full details, visit our website or contact Customer Service.

2007 STANDARD WALL 3/16" COOLANT SAE 20R1

Thermoid's 2007 Standard Wall Coolant Hose is used when heavy-duty service and superior resistance to high temperatures is required in the enclosed spaces of engine cooling systems on various heavy-duty construction machinery, large trucks, off-road vehicles and many other applications. The Class D-2 (EPDM) Tube and cover on these hoses have low oil resistance as specified by SAE J20R1, Class-2 Requirements. **Note: This hose is not suitable for oil or fuel transfer.**



Resistance:



Branding:

SAE J20R1/D2 2007 COOLANT HOSE

Cover Color:	Black
Oil Resistance:	Medium to Medium-High
Construction:	
Tube:	EPDM
Cover:	EPDM
Reinforcement:	2 Plies of Polyester Cord
Temperature Range:	-40°F to +275°F -40°C to +125°C
Couplings:	Consult coupling manufacturers for specifics on recommended couplings.
Packaging:	Make to Order (MTO) 1/2" and 5/8" I.D Sizes are available in lengths up to 25 ft. All other hose sizes are available in lengths of 12 ft. and 60 ft. 12 foot lengths are boxed. 25 ft. and 60 ft. lengths are coiled and wrapped in plastic.

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
16200705012	1/2	12.7	0.88	22.2	2	106	0.73	n/a	n/a	0.30	0.41
16200706212	5/8	15.9	1.00	25.4	2	94	0.65	n/a	n/a	0.34	0.47
16200707512	3/4	19.1	1.13	28.6	2	81	0.56	n/a	n/a	0.37	0.51
16200708712	7/8	22.2	1.25	31.8	2	81	0.56	n/a	n/a	0.39	0.54
16200710012	1	25.4	1.38	34.9	2	75	0.52	n/a	n/a	0.41	0.57
16200710612	1-1/16	27.0	1.44	36.5	2	75	0.52	n/a	n/a	0.44	0.61
16200711212	1-1/8	28.6	1.50	38.1	2	69	0.48	n/a	n/a	0.46	0.64
16200712512	1-1/4	31.8	1.63	41.3	2	69	0.48	n/a	n/a	0.49	0.68
16200713212	1-5/16	33.3	1.69	42.8	2	69	0.48	n/a	n/a	0.52	0.72
16200713712	1-3/8	34.9	1.75	44.5	2	69	0.48	n/a	n/a	0.54	0.75
16200715012	1-1/2	38.1	1.88	47.6	2	69	0.48	n/a	n/a	0.57	0.79
16200716212	1-5/8	41.3	2.00	50.8	2	69	0.48	n/a	n/a	0.62	0.86
16200717512	1-3/4	44.5	2.13	54.0	2	69	0.48	n/a	n/a	0.66	0.91
16200718712	1-7/8	47.6	2.25	57.2	2	50	0.34	n/a	n/a	0.70	0.97
16200720012	2	50.8	2.38	60.3	2	47	0.32	n/a	n/a	0.73	1.01
16200721212	2-1/8	54.0	2.50	63.5	2	44	0.30	n/a	n/a	0.77	1.06
16200722512	2-1/4	57.2	2.63	66.7	2	44	0.30	n/a	n/a	0.81	1.12
16200723712	2-3/8	60.3	2.75	69.9	2	38	0.26	n/a	n/a	0.85	1.18
16200725012	2-1/2	63.5	2.88	73.0	2	31	0.21	n/a	n/a	0.91	1.26
16200726212	2-5/8	66.7	3.00	76.2	2	25	0.17	n/a	n/a	0.95	1.31
16200727512	2-3/4	69.9	3.13	79.4	2	18	0.12	n/a	n/a	0.97	1.34
16200728712	2-7/8	73.0	3.25	82.6	2	18	0.12	n/a	n/a	1.00	1.38
16200730012	3	76.2	3.38	85.7	2	13	0.09	n/a	n/a	1.06	1.46
16200731212	3-1/8	79.4	3.50	88.9	2	13	0.09	n/a	n/a	1.12	1.55
16200732512	3-1/4	82.6	3.63	92.1	2	13	0.09	n/a	n/a	1.16	1.60
16200735012	3-1/2	88.9	3.88	98.4	2	13	0.09	n/a	n/a	1.25	1.73
16200710012	4	101.6	4.38	111.1	2	13	0.09	n/a	n/a	1.41	1.94
16200715012	4-1/2	114.3	4.88	123.8	2	13	0.09	n/a	n/a	1.58	2.18
16200750012	5	127.0	5.38	136.5	2	13	0.09	n/a	n/a	1.76	2.43
16200755012	5-1/2	139.7	5.88	149.2	2	13	0.09	n/a	n/a	1.94	2.68
16200760012	6	152.4	6.38	161.9	2	13	0.09	n/a	n/a	2.12	2.93

n/a = Not Applicable



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

3003 SILICONE COOLANT STANDARD WALL 3/16"

Type 3003 Silicone Coolant hose is recommended for those heavy-duty applications such as Class 7 & 8 trucks and off-road equipment. The silicone tube and cover makes this hose tough and resistant to extreme heat (up to +347°F), chemicals, oils and other elements that attack coolant hoses in heavy-duty applications. This hose meets the requirements of SAE J20R1, Class A, standard wall construction.

Note: This hose is not suitable for fuel or oil transfer.



Resistance:



Branding:

Silicone Coolant, Style Number

Cover Color:	Blue
Oil Resistance:	High
Construction:	
Tube:	Silicone
Cover:	Silicone
Reinforcement:	2-ply polyester fabric, silicone coated
Temperature Range:	-67°F to +347°F -55°C to +175°C
Packaging:	5/8" I.D. – 25 ft. 3/4" to 3" I.D. – 60 ft. 3-1/8" to 6" I.D. – 12 ft. Other lengths available – 5% cutting charge

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
16300306212▲	5/8 15.88	1.00 25.40	2	94 0.65	n/a n/a	0.30 0.45
16300307512▲	3/4 19.05	1.13 28.58	2	81 0.56	n/a n/a	0.35 0.52
16300308712▲	7/8 22.23	1.25 31.75	2	81 0.56	n/a n/a	0.40 0.60
16300310012	1 25.40	1.38 34.93	2	75 0.52	n/a n/a	0.44 0.65
16300311212▲	1-1/8 28.58	1.50 38.10	2	71 0.49	n/a n/a	0.48 0.71
16300312512▲	1-1/4 31.75	1.63 41.28	2	69 0.48	n/a n/a	0.52 0.77
16300313712▲	1-3/8 34.93	1.75 44.45	2	66 0.45	n/a n/a	0.56 0.83
16300315012	1-1/2 38.10	1.88 47.63	2	63 0.43	n/a n/a	0.60 0.89
16300316212▲	1-5/8 41.28	2.00 50.80	2	59 0.41	n/a n/a	0.64 0.95
16300317512▲	1-3/4 44.45	2.13 53.98	2	56 0.39	n/a n/a	0.69 1.03
16300318712▲	1-7/8 47.63	2.25 57.15	2	54 0.37	n/a n/a	0.74 1.10
16300320012	2 50.80	2.38 60.33	2	50 0.34	n/a n/a	0.77 1.15
16300321212▲	2-1/8 53.98	2.50 63.50	2	46 0.32	n/a n/a	0.81 1.21
16300322512▲	2-1/4 57.15	2.63 66.68	2	44 0.30	n/a n/a	0.86 1.28
16300323712▲	2-3/8 60.33	2.75 69.85	2	41 0.28	n/a n/a	0.90 1.34
16300325012	2-1/2 63.50	2.88 73.03	2	38 0.26	n/a n/a	0.94 1.40
16300326212▲	2-5/8 66.68	3.00 76.20	2	31 0.21	n/a n/a	0.98 1.46
16300327512▲	2-3/4 69.85	3.13 79.38	2	31 0.21	n/a n/a	1.02 1.52
16300328712▲	2-7/8 73.03	3.25 82.55	2	22 0.15	n/a n/a	1.07 1.59
16300330012	3 76.20	3.38 85.73	2	22 0.15	n/a n/a	1.11 1.65
16300331212▲	3-1/8 79.38	3.50 88.90	2	19 0.13	n/a n/a	1.22 1.82
16300332512▲	3-1/4 82.55	3.63 92.08	2	18 0.12	n/a n/a	1.27 1.89
16300335012▲	3-1/2 88.90	3.88 98.43	2	18 0.12	n/a n/a	1.33 1.98
16300337512▲	3-3/4 95.25	4.13 104.78	2	13 0.09	n/a n/a	1.42 2.11
16300340012▲	4 101.60	4.38 111.13	2	12 0.08	n/a n/a	1.50 2.23
16300342512▲	4-1/4 107.95	4.63 117.48	2	12 0.08	n/a n/a	1.60 2.38
16300345012▲	4-1/2 114.30	4.88 123.83	2	12 0.08	n/a n/a	1.67 2.49
16300350012▲	5 127.00	5.38 136.53	2	12 0.08	n/a n/a	1.85 2.75
16300355012▲	5-1/2 139.70	5.88 149.23	2	11 0.08	n/a n/a	2.04 3.04
16300360012▲	6 152.40	6.38 161.93	2	10 0.07	n/a n/a	2.20 3.27

▲ = Make To Order (MTO)

n/a = Not Applicable

Product information is subject to change. For full details, visit our website or contact Customer Service.

3004 SILICONE COOLANT HEAVY WALL 1/4"

Type 3004 Silicone Coolant hose is recommended for those heavy-duty applications such as Class 7 & 8 trucks and off-road equipment. The silicone tube and cover makes this hose tough and resistant to extreme heat (up to +347°F), chemicals, oils and other elements that attack coolant hoses in heavy-duty applications. This hose meets the requirements of SAE J20R1, Class A, heavy wall construction.

Note: This hose is not suitable for fuel or oil transfer.



Resistance:



Branding:

Silicone Coolant, Style Number

Cover Color:	Blue
Oil Resistance:	High
Construction:	
Tube:	Silicone
Cover:	Silicone
Reinforcement:	3-ply polyester fabric, silicone coated
Temperature Range:	-67°F to +347°F -55°C to +175°C
Packaging:	5/8" I.D. – 25 ft. 3/4" to 3" I.D. – 60 ft. 3-1/8" to 6" I.D. – 12 ft. Other lengths available – 5% cutting charge

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
16300406212▲	5/8	15.88	1.13	28.58	3	125	0.86	n/a	n/a	0.40	0.60
16300407512▲	3/4	19.05	1.25	31.75	3	125	0.86	n/a	n/a	0.44	0.65
16300408712▲	7/8	22.23	1.38	34.93	3	125	0.86	n/a	n/a	0.50	0.74
16300410012▲	1	25.40	1.50	38.10	3	125	0.86	n/a	n/a	0.55	0.82
16300411212▲	1-1/8	28.58	1.63	41.28	3	125	0.86	n/a	n/a	0.60	0.89
16300412512▲	1-1/4	31.75	1.75	44.45	3	125	0.86	n/a	n/a	0.65	0.97
16300413712▲	1-3/8	34.93	1.88	47.63	3	113	0.78	n/a	n/a	0.70	1.04
16300415012▲	1-1/2	38.10	2.00	50.80	3	113	0.78	n/a	n/a	0.74	1.10
16300416212▲	1-5/8	41.28	2.13	53.98	3	106	0.73	n/a	n/a	0.90	1.34
16300417512▲	1-3/4	44.45	2.25	57.15	3	100	0.69	n/a	n/a	0.85	1.27
16300418712▲	1-7/8	47.63	2.38	60.33	3	94	0.65	n/a	n/a	0.91	1.35
16300420012▲	2	50.80	2.50	63.50	3	88	0.61	n/a	n/a	0.95	1.41
16300421212▲	2-1/8	53.98	2.63	66.68	3	88	0.61	n/a	n/a	1.00	1.49
16300422512▲	2-1/4	57.15	2.75	69.85	3	88	0.61	n/a	n/a	1.05	1.56
16300423712▲	2-3/8	60.33	2.88	73.03	3	75	0.52	n/a	n/a	1.10	1.64
16300425012▲	2-1/2	63.50	3.00	76.20	3	63	0.43	n/a	n/a	1.15	1.71
16300426212▲	2-5/8	66.68	3.13	79.38	3	63	0.43	n/a	n/a	1.20	1.79
16300427512▲	2-3/4	69.85	3.25	82.55	3	63	0.43	n/a	n/a	1.25	1.86
16300428712▲	2-7/8	73.03	3.38	85.73	3	63	0.43	n/a	n/a	1.31	1.95
16300430012▲	3	76.20	3.50	88.90	3	63	0.43	n/a	n/a	1.36	2.02
16300431212▲	3-1/8	79.38	3.63	92.08	3	50	0.34	n/a	n/a	1.46	2.17
16300432512▲	3-1/4	82.55	3.75	95.25	3	50	0.34	n/a	n/a	1.52	2.26
16300435012▲	3-1/2	88.90	4.00	101.60	3	50	0.34	n/a	n/a	1.60	2.38
16300437512▲	3-3/4	95.25	4.25	107.95	3	38	0.26	n/a	n/a	1.70	2.53
16300440012▲	4	101.60	4.50	114.30	3	38	0.26	n/a	n/a	1.81	2.69
16300442512▲	4-1/4	107.95	4.88	123.83	3	38	0.26	n/a	n/a	1.92	2.86
16300445012▲	4-1/2	114.30	5.00	127.00	3	38	0.26	n/a	n/a	2.09	3.11
16300450012▲	5	127.00	5.50	139.70	3	25	0.17	n/a	n/a	2.22	3.30
16300455012▲	5-1/2	139.70	6.00	152.40	3	25	0.17	n/a	n/a	2.45	3.65
16300460012▲	6	152.40	6.50	165.10	3	25	0.17	n/a	n/a	2.65	3.94

▲ = Make To Order (MTO)

n/a = Not Applicable

3005 SILICONE COOLANT HEATER SAE 20R3 CLASS A

Type 3005 Silicone Heater hose is recommended for those applications in the heavy-duty market. This hose features a special silicone compound that meets the SAE 20R3, Class A specifications. Type 3005 Silicone Heater hose is highly resistant to the deteriorating effects of oil, ozone, coolants and coolant additives. The nylon reinforcement enables this hose to be extremely flexible while resisting temperatures up to +347° (+175°C).



Resistance:



Branding:

Silicone Heater Hose - 3005, I.D.,
Made In USA

Cover Color: Blue
Oil Resistance: High
Construction:
 Tube: Silicone
 Cover: Silicone
 Reinforcement: Nylon
Temperature Range: -67°F to +347°F
 -55°C to +175°C
Packaging: 50 ft. in a carton

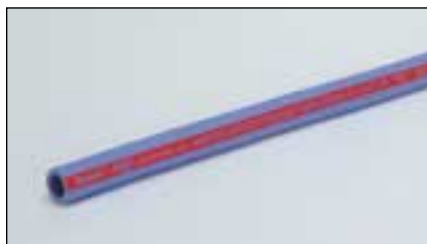
Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
16300502550▲	1/4 6.35	0.56 14.29	2	63 0.43	n/a n/a	0.19 0.28
16300503750▲	3/8 9.53	0.69 17.46	2	63 0.43	n/a n/a	0.25 0.37
16300505050▲	1/2 12.70	0.81 20.64	2	63 0.43	n/a n/a	0.29 0.43
16300506250▲	5/8 15.88	0.94 23.81	2	63 0.43	n/a n/a	0.35 0.52
16300507550▲	3/4 19.05	1.06 26.99	2	50 0.34	n/a n/a	0.39 0.58
16300508750▲	7/8 22.23	1.19 30.16	2	50 0.34	n/a n/a	0.44 0.65
16300510050▲	1 25.40	1.34 34.13	2	44 0.30	n/a n/a	0.49 0.73

▲ = Make To Order (MTO)

n/a = Not Applicable

3009 SILCOFLEX™ SILICONE COOLANT HARD WALL

Silcoflex is the industry standard for steel wire reinforced multipurpose silicone hose. The polyester with a helical wire reinforcement makes this hose very flexible and resistant to kinking and vacuum. The silicone tube and cover makes this hose extremely resistant to the ravages of heat and hostile environments. This hose is recommended for upper and lower radiator applications in the heavy-duty and off-road markets. **Full vacuum** rating for all sizes.



Resistance:



Branding:

Similar to SAE20R2, Class A.
Also Meets SAE J2006R2

Cover Color: Blue
Oil Resistance: High
Construction:
 Tube: Silicone
 Cover: Silicone
 Reinforcement: Polyester with a helical wire
Temperature Range: -67°F to +347°F
 -55°C to +175°C
Packaging: 60 ft.
 Other lengths available – 5% cutting charge
 Contact customer service for minimum run requirements

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
16300907560▲	3/4 19.05	1.19 30.16	2	75 0.51	3.00 76.20	0.43 0.62
16300910060▲	1 25.40	1.44 36.51	2	75 0.48	4.00 101.60	0.56 0.83
16300911260▲	1-1/8 28.58	1.56 39.69	2	69 0.45	4.50 114.30	0.61 0.91
16300912560▲	1-1/4 31.75	1.69 42.86	2	69 0.40	5.00 127.00	0.66 0.98
16300913760▲	1-3/8 34.93	1.81 46.04	2	69 0.40	5.50 139.70	0.72 1.07
16300915060▲	1-1/2 38.10	1.94 49.21	2	63 0.40	6.00 152.40	0.76 1.13
16300916260▲	1-5/8 41.28	2.06 52.39	2	56 0.38	6.50 165.10	0.82 1.22
16300917560▲	1-3/4 44.45	2.19 55.56	2	56 0.38	7.00 177.80	0.87 1.29
16300918760▲	1-7/8 47.63	2.31 58.74	2	50 0.34	7.50 190.50	0.93 1.38
16300920060▲	2 50.80	2.44 61.91	2	50 0.32	8.00 203.20	0.97 1.44
16300921260▲	2-1/8 53.98	2.56 65.09	2	44 0.14	8.50 215.90	1.03 1.53
16300922560▲	2-1/4 57.15	2.69 68.26	2	44 0.14	9.00 228.60	1.05 1.56
16300923760▲	2-3/8 60.33	2.81 71.44	2	40 0.30	9.50 228.60	1.10 1.64
16300925060▲	2-1/2 63.50	2.94 74.61	2	38 0.28	10.00 254.00	1.15 1.71
16300926260▲	2-5/8 66.68	3.06 77.79	2	31 0.26	10.50 266.70	1.34 1.99
16300927560▲	2-3/4 69.85	3.19 80.96	2	31 0.26	11.00 279.40	1.40 2.08
16300928760▲	2-7/8 73.03	3.31 84.14	2	25 0.25	11.50 292.10	1.47 2.19
16300930060▲	3 76.20	3.44 87.31	2	25 0.24	12.00 304.80	1.52 2.26
16300940060▲	4 101.60	4.44 112.71	2	13 0.21	16.00 406.40	2.17 3.23

▲ = Make To Order (MTO)

Product information is subject to change. For full details, visit our website or contact Customer Service.

2400 WET EXHAUST SAE J2006

Style 2400 hose is a soft wall hose designed for use as a straight connection in wet exhaust systems on marine gasoline or diesel engines. This hose can also be used in other marine applications such as drains, replacement of metal piping and vibration absorption.

Note: Wet Exhaust is not designed for vacuum service.



Resistance:



Branding:

Wet Exhaust, SAE J2006R1, Date

Cover Color:	Black
Oil Resistance:	Medium to Medium-High
Construction:	
Tube:	NBR/SBR blend
Cover:	CR/NBR blend
Reinforcement:	Tire Cord
Temperature Range:	0°F to +212°F -18°C to +100°C
Packaging:	12 ft. and 60 ft. lengths available Contact customer service for minimum run requirements Other lengths available – 5% cutting charge

Product Number 12 Feet	Product Number 60 Feet	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)	Std. Case
16240007512▲	16240007560▲	3/4 19.05	1.25 31.75	2	150 1.03	n/a n/a	0.51 0.76	2
16240008712	16240008760	7/8 22.23	1.38 35.05	2	150 1.03	n/a n/a	0.58 0.86	2
16240010012	16240010060	1 25.40	1.50 38.10	2	150 1.03	n/a n/a	0.60 0.89	2
16240010612▲	16240010660▲	1-1/16 26.99	1.56 39.62	2	150 1.03	n/a n/a	0.65 0.97	2
16240011212▲	16240011260▲	1-1/8 28.58	1.63 41.40	2	150 1.03	n/a n/a	0.71 1.06	2
16240012512	16240012560	1-1/4 31.75	1.75 44.45	2	150 1.03	n/a n/a	0.74 1.10	2
16240013112▲	16240013160▲	1-5/16 33.34	1.81 45.97	2	150 1.03	n/a n/a	0.77 1.15	2
16240013712	16240015060	1-3/8 34.93	2.08 52.83	2	150 1.03	n/a n/a	0.82 1.22	2
16240015012	16240015060	1-1/2 38.10	2.20 55.88	2	150 1.03	n/a n/a	0.88 1.31	2
16240016212	16240016260	1-5/8 41.28	2.33 59.18	2	150 1.03	n/a n/a	0.93 1.38	2
16240017512▲	16240017560▲	1-3/4 44.45	2.45 62.23	2	150 1.03	n/a n/a	0.94 1.40	2
16240018712	16240018760	1-7/8 47.63	2.57 65.28	2	150 1.03	n/a n/a	1.05 1.56	2
16240020012	16240020060	2 50.80	2.70 68.58	2	100 0.69	n/a n/a	1.11 1.65	2
16240021212▲	16240021260▲	2-1/8 53.98	2.82 71.63	2	100 0.69	n/a n/a	1.16 1.73	1
16240022512▲	16240022560▲	2-1/4 57.15	2.95 74.93	2	100 0.69	n/a n/a	1.22 1.82	1
16240023712	16240023760	2-3/8 60.33	3.07 77.98	2	100 0.69	n/a n/a	1.28 1.90	1
16240025012	16240025060	2-1/2 63.50	3.20 81.28	2	100 0.69	n/a n/a	1.33 1.98	1
16240026212▲	16240026260▲	2-5/8 66.68	3.33 84.58	2	100 0.69	n/a n/a	1.39 2.07	1
16240027512▲	16240026260▲	2-3/4 69.85	3.43 87.12	2	100 0.69	n/a n/a	1.44 2.14	1
16240028712▲	16240028760▲	2-7/8 73.03	3.57 90.68	2	100 0.69	n/a n/a	1.50 2.23	1
16240030012	16240030060	3 76.20	3.70 93.98	2	100 0.69	n/a n/a	1.56 2.32	1
16240032512▲	16240032560▲	3-1/4 82.55	3.95 100.33	2	100 0.69	n/a n/a	1.62 2.41	1
16240035012	16240035060	3-1/2 88.90	4.20 106.68	2	100 0.69	n/a n/a	1.73 2.57	1
16240037512▲	16240037560▲	3-3/4 95.25	4.45 113.03	2	100 0.69	n/a n/a	1.84 2.74	1
16240040012	16240040060	4 101.60	4.70 119.38	2	100 0.69	n/a n/a	1.96 2.92	1
16240045012	16240045060	4-1/2 114.30	5.20 132.08	2	100 0.69	n/a n/a	2.18 3.24	1
16240050012▲	16240050060▲	5 127.00	5.70 144.78	2	100 0.69	n/a n/a	2.41 3.59	1
16240055012▲	16240055060▲	5-1/2 139.70	6.20 157.48	2	100 0.69	n/a n/a	2.63 3.91	1
16240055612▲	16240055660▲	5-9/16 141.29	6.26 159.00	2	100 0.69	n/a n/a	2.66 3.96	1
16240060012▲	16240060060▲	6 152.40	6.76 159.00	2	100 0.69	n/a n/a	2.86 4.26	1
16240066212▲		6-5/8 168.28	7.38 187.45	4	100 0.69	n/a n/a	4.40 6.55	1
16240070012▲		7 177.80	7.75 196.85	4	100 0.69	n/a n/a	4.54 6.76	1
16240080012▲		8 203.20	8.75 222.25	4	85 0.59	n/a n/a	5.25 7.81	1
16240086212▲		8-5/8 219.08	9.38 238.25	4	85 0.59	n/a n/a	5.64 8.39	1
1624001012▲		10 254.00	10.75 273.05	4	75 0.52	n/a n/a	6.49 9.66	1
16240010712▲		10-3/4 273.05	11.50 292.10	4	70 0.48	n/a n/a	7.05 10.49	1
16240012012▲		12 304.80	12.75 323.85	4	60 0.41	n/a n/a	7.83 11.65	1
16240012712▲		12-3/4 323.85	13.50 342.90	4	50 0.34	n/a n/a	8.26 12.29	1

▲ = Make To Order (MTO)

n/a = Not Applicable



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

2428 MARINER PREMIUM WET EXHAUST SAE J2006

The Mariner hose is the top-of-the-line marine exhaust hose. This multi-ply soft wall hose is designed to be used as a straight connection in wet exhaust systems on marine gasoline or diesel engines. The CR/NBR blended cover is oil, heat and ozone resistant. The tube is an NBR/SBR blend that gives this hose coolant and heat resistance.



Resistance:



Branding:

Thermoid Mariner Wet Exhaust
SAE J2006 R1, Date
Made In USA

Cover Color: Black
Oil Resistance: Medium to Medium-High
Construction:

Tube: NBR/SBR blend

Cover: CR/NBR blend

Reinforcement: Tire cord

Temperature Range: 0°F to +212°F
-18°C to +100°C

Packaging: 12 ft. and 60 ft. lengths available
Contact customer service for minimum run requirements
Other lengths available – 5% cutting charge

Product Number 12 Feet	Product Number 60 Feet	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)	Std. Case
16242807512▲	16242807560▲	3/4 19.05	1.38 34.93	2	200 1.38	n/a n/a	0.61 0.91	2
16242808712▲	16242808760▲	7/8 22.23	1.50 38.10	2	200 1.38	n/a n/a	0.68 1.01	2
16242810012▲	16242810060▲	1 25.40	1.63 41.28	2	200 1.38	n/a n/a	0.75 1.12	2
16242810612▲	16242810660▲	1-1/16 26.99	1.69 42.86	2	200 1.38	n/a n/a	0.78 1.16	2
16242811212▲	16242811260▲	1-1/8 28.58	1.75 44.45	2	200 1.38	n/a n/a	0.82 1.22	2
16242812512▲	16242812560▲	1-1/4 31.75	1.88 47.63	2	200 1.38	n/a n/a	0.89 1.32	2
16242813112▲	16242813160▲	1-5/16 33.34	1.94 49.21	2	200 1.38	n/a n/a	0.93 1.38	2
16242813712▲	16242813760▲	1-3/8 34.93	2.00 50.80	2	200 1.38	n/a n/a	0.95 1.41	2
16242815012▲	16242815060▲	1-1/2 38.10	2.13 53.98	2	200 1.38	n/a n/a	1.02 1.52	2
16242816212▲	16242816260▲	1-5/8 41.28	2.25 57.15	2	200 1.38	n/a n/a	1.05 1.56	2
16242817512▲	16242817560▲	1-3/4 44.45	2.38 60.33	2	200 1.38	n/a n/a	1.12 1.67	2
16242818712▲	16242818760▲	1-7/8 47.63	2.50 63.50	2	200 1.38	n/a n/a	1.19 1.77	2
16242820012▲	16242820060▲	2 50.80	2.63 66.68	2	200 1.38	n/a n/a	1.25 1.86	2
16242821212▲	16242821260▲	2-1/8 53.98	2.75 69.85	2	200 1.38	n/a n/a	1.32 1.96	1
16242822512▲	16242822560▲	2-1/4 57.15	2.88 73.03	4	200 1.38	n/a n/a	1.59 2.37	1
16242823712▲	16242823760▲	2-3/8 60.33	3.00 76.20	4	175 1.21	n/a n/a	1.67 2.49	1
16242825012▲	16242825060▲	2-1/2 63.50	3.25 82.55	4	175 1.21	n/a n/a	1.73 2.57	1
16242826212▲	16242826260▲	2-5/8 66.68	3.38 85.73	4	175 1.21	n/a n/a	1.81 2.69	1
16242827512▲	16242827560▲	2-3/4 69.85	3.50 88.90	4	175 1.21	n/a n/a	1.88 2.80	1
16242828712▲	16242828760▲	2-7/8 73.03	3.63 92.08	4	175 1.21	n/a n/a	1.95 2.90	1
16242830012▲	16242830060▲	3 76.20	3.75 95.25	4	150 1.03	n/a n/a	2.03 3.02	1
16242831212▲	16242831260▲	3-1/8 79.38	3.88 98.43	4	150 1.03	n/a n/a	2.10 3.13	1
16242832512▲	16242832560▲	3-1/4 82.55	4.00 101.60	4	150 1.03	n/a n/a	2.18 3.24	1
16242835012▲	16242835060▲	3-1/2 88.90	4.25 107.95	4	150 1.03	n/a n/a	2.32 3.45	1
16242837512▲	16242837560▲	3-3/4 95.25	4.50 114.30	4	150 1.03	n/a n/a	2.47 3.68	1
16242840012▲	16242840060▲	4 101.60	4.75 120.65	4	150 1.03	n/a n/a	2.62 3.90	1
16242845012▲	16242845060▲	4-1/2 114.30	5.25 133.35	4	150 1.03	n/a n/a	2.91 4.33	1
16242850012▲	16242850060▲	5 127.00	5.75 146.05	4	150 1.03	n/a n/a	3.21 4.78	1
16242855012▲	16242855060▲	5-1/2 139.70	6.25 158.75	4	150 1.03	n/a n/a	3.50 5.21	1
16242860012▲	16242860060▲	6 152.40	6.63 168.28	4	150 1.03	n/a n/a	3.79 5.64	1
16242866212▲		6-5/8 168.28	7.63 193.68	6	150 1.03	n/a n/a	5.47 8.14	1
16242870012▲		7 177.80	8.00 203.20	6	150 1.03	n/a n/a	5.75 8.56	1
16242880012▲		8 203.20	9.00 228.60	6	100 0.69	n/a n/a	6.50 9.67	1
16242886212▲		8-5/8 219.08	9.63 244.48	6	100 0.69	n/a n/a	6.98 10.39	1
16242810112▲		10 254.00	11.00 279.40	6	90 0.62	n/a n/a	8.03 11.95	1
16242810712▲		10-3/4 273.05	11.75 298.45	6	75 0.52	n/a n/a	8.64 12.86	1
16242812012▲		12 304.80	13.00 330.20	6	60 0.41	n/a n/a	9.59 14.27	1
16242812712▲		12-3/4 323.85	13.75 349.25	6	50 0.34	n/a n/a	10.12 15.06	1

▲ = Make To Order (MTO)

n/a = Not Applicable

Product information is subject to change. For full details, visit our website or contact Customer Service.

TYPE 2458 MARINE – Black Cover

Type 2458 Marine hose is designed to handle wet marine exhaust, coupling coolant and heavy duty radiator service. This hose will also handle oily service applications. Type 2458 Marine hose is designed to fit over standard pipe. This hose features a CR tube and cover. This makes the tube resistant to hot water, antifreeze solutions and exhaust gasses when mixed with water. The cover will resist scuffing, gouging, ozone and sunlight.



Resistance:



Branding:

Thermoid HBD Industries
Type 58 Marine Coolant
Made In USA

Cover Color: Black
Oil Resistance: Medium
Construction:
 Tube: CR
 Cover: CR
Reinforcement: Multiple plies of polycord
Temperature Range: -40°F to +212°F
 -40°C to +100°C
Packaging: 50 ft. maximum
 Also available to meet SAE 20R1 Class C,
 standard or heavy wall construction

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Fits Over Pipe I.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
16245810650▲	1-1/16	26.99	1.53	38.89	3/4	19.05	3	150	1.03	n/a	n/a	0.60	0.89
16245813150▲	1-5/16	33.34	1.84	46.83	1	25.40	4	150	1.03	n/a	n/a	0.70	1.04
16245816250▲	1-5/8	41.28	2.16	54.77	1-1/4	31.75	4	150	1.03	n/a	n/a	0.90	1.34
16245818750▲	1-7/8	47.63	2.44	61.91	1-1/2	38.10	4	125	0.86	n/a	n/a	1.00	1.49
16245823750▲	2-3/8	60.33	2.97	75.41	2	50.80	4	100	0.69	n/a	n/a	1.30	1.93
16245828750▲	2-7/8	73.03	3.47	88.11	2-1/2	63.50	4	100	0.69	n/a	n/a	1.70	2.53
16245830050▲	3	76.20	3.59	91.28	—	—	4	100	0.69	n/a	n/a	1.80	2.68
16245835050▲	3-1/2	88.90	4.09	103.98	3	76.20	4	85	0.59	n/a	n/a	2.10	3.13
16245840050▲	4	101.60	4.66	118.27	3-1/2	88.90	5	75	0.52	n/a	n/a	2.60	3.87
16245845050▲	4-1/2	114.30	5.22	132.56	4	101.60	5	70	0.48	n/a	n/a	3.20	4.76
16245866212▲	6-5/8	168.28	7.19	182.56	6	152.40	4	100	0.69	n/a	n/a	2.90	4.32
16245886212▲	8-5/8	219.08	9.25	234.95	8	203.20	4	100	0.69	n/a	n/a	4.00	5.95
16245810712▲	10-3/4	273.05	11.38	288.93	10	254.00	4	100	0.69	n/a	n/a	4.90	7.29
16245812712▲	12-3/4	323.85	13.50	342.90	12	304.80	5	100	0.69	n/a	n/a	5.90	8.78

▲ = Make To Order (MTO)

n/a = Not Applicable

7910 BELLOWSFLEX™ “A” COOLANT, MARINE, FUEL

Type 7910 Bellowsflex hose is an extremely versatile product which has become an industry standard. This multipurpose hose is used in applications where wire reinforcement is required to provide great flexibility and resist kinking. Some of the applications include: bilge ventilation, bilge pump intake and discharge, toilet and bath connections, cabin heating, internal water systems, galleys and drains. This hose meets Type A2, USCG 1942F and SAE J2006, R2. This hose is rated at **full vacuum (30 inches Hg)**.



Resistance:



Branding:

Bellowsflex™ -A(XXX) mm (INCA) I.D.
USCG Type A-2 SAEJ1942 F(XXX) MPA WP
SAEJ2006 R2 Thermoid® Made In USA
(year) – Caution Statement

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR
Cover:	CR
Reinforcement:	Nylon screen with helical wire
Temperature Range:	-20°F to +212°F -29°C to +100°C
Packaging:	1/2" and 5/8" I.D. – 25 ft. maximum, all others 60 ft. Other lengths available – 5% cutting charge Contact customer service for minimum run requirements

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
16791005025	1/2	12.70	0.88	22.23	2	60	0.41	2.00	50.80	0.32	0.48
16791006225	5/8	15.88	1.00	25.40	2	60	0.41	2.00	50.80	0.36	0.54
16791007560	3/4	19.05	1.13	28.58	2	58	0.40	3.00	76.20	0.48	0.71
16791008760	7/8	22.23	1.25	31.75	2	55	0.38	3.00	76.20	0.55	0.82
16791010060	1	25.40	1.38	34.93	2	53	0.37	3.00	76.20	0.61	0.91
16791010660	1-1/16	26.99	1.44	36.51	2	53	0.37	3.00	76.20	0.63	0.94
16791011260	1-1/8	28.58	1.50	38.10	2	50	0.34	3.00	76.20	0.67	1.00
16791012560	1-1/4	31.75	1.63	41.28	2	44	0.30	3.00	76.20	0.72	1.07
16791013160	1-5/16	33.34	1.69	42.86	2	44	0.30	4.00	101.60	0.76	1.13
16791013760	1-3/8	34.93	1.75	44.45	2	44	0.30	4.00	101.60	0.79	1.18
16791015060	1-1/2	38.10	1.88	47.63	2	44	0.30	4.00	101.60	0.84	1.25
16791016260	1-5/8	41.28	2.00	50.80	2	41	0.28	5.00	127.00	0.90	1.34
16791017560	1-3/4	44.45	2.13	53.98	2	41	0.28	5.00	127.00	0.96	1.43
16791018760	1-7/8	47.63	2.25	57.15	2	38	0.26	5.00	127.00	1.02	1.52
16791020060	2	50.80	2.38	60.33	2	35	0.24	6.00	152.40	1.07	1.59
16791021260	2-1/8	53.98	2.50	63.50	2	34	0.23	6.00	152.40	1.13	1.68
16791022560	2-1/4	57.15	2.63	66.68	2	34	0.23	6.00	152.40	1.18	1.76
16791023760	2-3/8	60.33	2.75	69.85	2	33	0.23	7.00	177.80	1.19	1.77
16791025060	2-1/2	63.50	2.88	73.03	2	30	0.21	8.00	203.20	1.23	1.83
16791026260	2-5/8	66.68	3.00	76.20	2	30	0.21	10.00	254.00	1.28	1.90
16791027560	2-3/4	69.85	3.13	79.38	2	29	0.20	10.00	254.00	1.34	1.99
16791028760	2-7/8	73.03	3.25	82.55	2	29	0.20	11.00	279.40	1.40	2.08
16791030060	3	76.20	3.38	85.73	2	26	0.18	13.00	330.20	1.51	2.25
16791031260	3-1/8	79.38	3.50	88.90	2	23	0.16	13.00	330.20	1.57	2.34
16791032560	3-1/4	82.55	3.63	92.08	2	21	0.14	14.00	355.60	1.63	2.43
16791035060	3-1/2	88.90	3.88	98.43	2	20	0.14	14.00	355.60	1.75	2.60
16791040060	4	101.60	4.38	111.13	2	18	0.12	15.00	381.00	1.98	2.95
16791045060	4-1/2	114.30	4.88	123.83	2	16	0.11	16.00	406.40	2.21	3.29
16791050060	5	127.00	5.38	136.53	2	14	0.10	28.00	711.20	2.69	4.00
16791055060	5-1/2	139.70	5.88	149.23	2	13	0.09	31.00	787.40	2.94	4.38
16791060060	6	152.40	6.38	161.93	2	11	0.08	33.00	838.20	3.42	5.09



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

7951 SAE 100R4
HYDRAULIC RETURN/SUCTION

Style 7951 hose is designed to be used for suction or return lines on hydraulic systems. Meets all specification requirements for SAE 100R4. This hose is rated at **25 inches of Hg vacuum**.



- Cover Color:Black
- Oil Resistance:High
- Construction:

Tube:NBR

Cover:CR

Reinforcement:Tire cord with helical wire
- Temperature Range:-40°F to +212°F
-40°C to +100°C
- Packaging:60 ft. maximum
Other lengths available – 5% cutting charge
Contact customer service for minimum run requirements

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
16795107560▲	3/4	19.05	1.31	33.34	2	300	2.07	5.00	127.00	0.57	0.85
16795108760▲	7/8	22.23	1.44	36.51	2	300	2.07	5.50	139.70	0.63	0.94
16795110060	1	25.40	1.56	39.69	2	300	2.07	6.00	152.40	0.70	1.04
16795112560	1-1/4	31.75	1.81	46.04	2	300	2.07	8.00	203.20	0.83	1.24
16795115060	1-1/2	38.10	2.03	51.59	2	300	2.07	10.00	254.00	1.09	1.62
16795117560▲	1-3/4	44.45	2.31	58.74	2	300	2.07	11.00	279.40	1.24	1.85
16795120060▲	2	50.80	2.56	65.09	2	300	2.07	12.00	304.80	1.39	2.07
16795122560▲	2-1/4	57.15	2.81	71.44	2	300	2.07	13.00	330.20	1.47	2.19
16795125060▲	2-1/2	63.50	3.06	77.79	2	62	0.43	14.00	355.60	1.61	2.40
16795127560▲	2-3/4	69.85	3.31	84.14	2	60	0.41	16.00	406.40	1.75	2.60
16795130060▲	3	76.20	3.56	90.49	2	56	0.39	18.00	457.20	1.97	2.93

▲ = Make To Order (MTO)

TRANSPORTER® ULTRA-CHEM™

Transporter Ultra-Chem hose has been engineered to be extremely flexible. This hose will handle 98% of all common industrial chemicals. Ultra-Chem is ideal for pressure, gravity flow and suction service. This hose has been rated at **full vacuum**. The green EPDM cover is abrasion and chemical resistant. This hose can also come with a black EPDM cover.

Note: Working pressures reflect a permanent type coupling such as swage or internally expanded. For banded type couplings, the working pressure should reflect 65% of the ratings listed. ⚠ See Chemical Hose Warnings, pages 29 and 148.

**Resistance:****Branding:**

Thermoid HBD Industries
Transporter Ultra-Chem XXX PSI WP
Made In USA

Cover Color:	Green
Oil Resistance:	High at 70°F, not rated at 140°F
Construction:	
Tube:	UHMWPE backed with compatible rubber layer
Cover:	EPDM
Reinforcement:	Multiple synthetic textile cords and a dual wire helix(es).
Temperature Range:	Maximum temperature limitation +250°F (121°C) for for most chemicals.*
*Contact Customer Service for specific applications.	
Packaging:	100 ft. maximum

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
Green											
17709008002	1	25.40	1.47	36.75	2	250	1.72	4.00	101.60	0.53	0.79
17709009002	1-1/4	31.75	1.78	44.50	2	250	1.72	4.00	101.60	0.75	1.12
17709010002	1-1/2	38.10	2.08	52.00	2	250	1.72	4.00	101.60	0.96	1.43
17709012002	2	50.80	2.58	64.50	2	250	1.72	6.00	152.40	1.30	1.93
17709013002	2-1/2	63.50	3.13	78.25	2	200	1.38	8.00	203.20	1.77	2.63
17709014002	3	76.20	3.66	91.50	2	200	1.38	9.00	228.60	2.09	3.11
17709016002	4	101.60	4.70	117.50	2	200	1.38	12.00	304.80	2.99	4.45
17709018002▲	6	152.40	6.90	172.50	4	150	1.03	30.00	762.00	5.77	8.59
Black											
17709300002▲	1	25.40	1.47	36.75	2	250	1.72	4.00	101.60	0.52	0.77

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

ALERT: Large size, industrial hoses have caution and/or safety usage printed information attached by tag to the product or this information is printed onto the hose.



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

ATLAS™ ACID DISCHARGE

This is to be used as a discharge hose only. For pinch valve service or for use where acid forms crust inside hose that must be broken off. Also for handling many inorganic acids with the exception of strong oxidizing agents such as nitric, chromic and concentrated sulphuric. This hose will withstand most inorganic salts and alkalis. The black SBR/EPDM cover resists abrasion, sunlight and weathering.

▲ See Chemical Hose Warnings, pages 29 and 148.

	Resistance:
	
	Branding:
	Thermoid HBD Industries Atlas Acid Discharge Hose Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: 3/16" NR
Cover: SBR/EPDM
Reinforcement: Multiple plies of strong, square-woven duck
Temperature Range: -40°F to +160°F
-40°C to +71°C

Consult the Chemical Resistance Guide for specific chemical/temperature recommendations.

Packaging: 50 ft. lengths
Minimum Run: 500 ft./size

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
21204420502▲	3/4 19.05	1.50 38.10	4	150 1.03	n/a n/a	0.70 1.04
21204421502▲	1 25.40	1.75 44.45	4	150 1.03	n/a n/a	0.80 1.19
21204422502▲	1-1/4 31.75	2.00 50.80	4	150 1.03	n/a n/a	0.90 1.34
21204423502▲	1-1/2 38.10	2.25 57.15	4	100 0.69	n/a n/a	1.10 1.64
21204424502▲	2 50.80	2.81 71.44	4	100 0.69	n/a n/a	1.40 2.08
21204425502▲	2-1/2 63.50	3.31 84.14	4	75 0.52	n/a n/a	1.70 2.53
21204426502▲	3 76.20	3.81 96.84	4	75 0.52	n/a n/a	1.90 2.83

▲ = Make To Order (MTO)

n/a = Not Applicable

ATLAS™ ACID SUCTION & DISCHARGE

This hose is used for suction and discharge service handling many inorganic acids, except the strong oxidizing agents. This hose also withstands most salts and alkalis. This hose is made with capped, straight or enlarged ends. Can be made with Flexlock™ or Flexseal™ ends, so that no metal contacts corrosives. The black SBR/EPDM cover resists abrasion, sunlight and weather. The helical wire and multiple plies of reinforcement enable this hose to maintain **full vacuum** and be able to handle the discharge pressures. Flexible construction keeps the hose round when bent, reducing kinking. Tube thickness can be specified according to the severity of the service.

▲ See Chemical Hose Warnings, pages 29 and 148.

	Resistance:
	
	Branding:
	Thermoid HBD Industries Atlas Acid Suction and Discharge Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: 3/16" NR
Cover: SBR/EPDM
Reinforcement: Multiple plies of strong, square-woven duck with helical wire
Temperature Range: -40°F to +160°F
-40°C to +71°C

Consult the Chemical Resistance Guide for specific chemical/temperature recommendations.

Packaging: 50 ft. lengths maximum
Minimum Run: Varies with size. Contact customer service for required minimums

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
21204482502▲	2 50.80	2.88 73.03	3	100 0.69	7.00 177.80	2.00 2.98
21204484502▲	2-1/2 63.50	3.50 88.90	3	75 0.52	8.00 203.20	2.60 3.87
21204486502▲	3 76.20	4.00 84.14	3	75 0.52	9.00 228.60	3.00 4.46
11404532502▲	3-1/2 88.90	4.50 114.30	3	75 0.52	12.00 304.80	3.40 5.06
11404534502▲	4 101.60	5.16 127.00	4	75 0.52	16.00 406.40	4.20 6.25
11404536502▲	4-1/2 114.30	5.56 141.29	4	75 0.52	18.00 457.20	5.20 7.74
11404538502▲	5 127.00	6.13 155.58	4	50 0.34	25.00 635.00	5.70 8.48
11404541502▲	6 152.40	7.13 180.98	4	50 0.34	30.00 762.00	6.90 10.27
11404543502▲	6-5/8 168.28	7.94 198.44	5	50 0.34	39.75 1009.65	8.00 11.91
11404546502▲	8 203.20	9.31 236.54	5	50 0.34	48.00 1219.20	11.40 16.97
11404548502▲	8-5/8 219.08	9.94 252.41	5	50 0.34	51.75 1314.45	12.40 18.45
11404550502▲	10 254.00	11.38 288.93	6	50 0.34	60.00 1524.00	14.10 20.98

▲ = Make To Order (MTO)

COMMANDER® ACID DISCHARGE

This is to be used as a discharge hose only. This hose handles many highly corrosive acids such as sulphuric acid, chromic acid, nitric acid, sodium dichromate, sodium hydrochlorite and glacial acetic acid. Good for use where acid slurry deposits on hose. The CR rubber cover resists abrasion, sunlight, weathering and scuffing.

▲ See Chemical Hose Warnings, pages 29 and 148.

	Resistance:
	
	Branding:
	Thermoid HBD Industries Commander Acid Discharge Hose Hypalon Tube Made In USA

Cover Color: Black
Oil Resistance: Medium
Construction:
Tube: 3/16" CSM compound
Cover: CR
Reinforcement: Multiple plies of strong, square-woven duck
Temperature Range: -40°F to +160°F
-40°C to +71°C

Consult the Chemical Resistance Guide for specific chemical/temperature recommendations.

Packaging: 50 ft. lengths
Minimum Run: 500 ft./size

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
21204435502▲	1/2	12.70	1.25	31.75	4	150	1.03	n/a	n/a	0.50	0.74
21204436502▲	3/4	19.05	1.50	38.10	4	150	1.03	n/a	n/a	0.60	0.89
21204437502▲	1	25.40	1.75	44.45	4	150	1.03	n/a	n/a	0.80	1.19
21204438502▲	1-1/4	31.75	2.00	50.80	4	150	1.03	n/a	n/a	0.90	1.34
21204439502▲	1-1/2	38.10	2.25	57.15	4	100	0.69	n/a	n/a	1.00	1.49
21204440502▲	2	50.80	2.81	71.44	4	100	0.69	n/a	n/a	1.40	2.08
21204441502▲	2-1/2	63.50	3.31	84.14	4	75	0.52	n/a	n/a	1.70	2.53
21204442502▲	3	76.20	3.81	96.84	4	75	0.52	n/a	n/a	2.00	2.98

▲ = Make To Order (MTO)

n/a = Not Applicable

COMMANDER® ACID SUCTION & DISCHARGE

This hose is used for suction and discharge in handling many highly corrosive acids and other materials such as sulphuric acid, chromic acid, nitric acid, sodium dichromate, sodium hypochlorite and glacial acetic acid. This hose can be assembled with Flexlock™ or Flexseal™ ends, so no metal contacts corrosives. The black CR cover resists abrasion, sunlight, weather and scuffing. Flexible construction keeps the hose round when bent, reducing kinking. The helical wire and multiple plies of reinforcement enable this hose to maintain full vacuum and be able to handle the discharge pressures. Tube thickness can be specified to meet various conditions used in an open, well-ventilated environment.

▲ See Chemical Hose Warnings, pages 29 and 148.

	Resistance:
	
	Branding:
	Thermoid HBD Industries Commander Acid Suction and Discharge Hose Hypalon Tube Made In USA

Cover Color: Black
Oil Resistance: Medium
Construction:
Tube: 3/16" CSM compound
Cover: CR
Reinforcement: Multiple plies of strong, square-woven duck with helical wire
Temperature Range: -40°F to +160°F
-40°C to +71°C

Consult the Chemical Resistance Guide for specific chemical/temperature recommendations.

Packaging: 50 ft. lengths maximum
Minimum Run: Varies with size. Contact customer service for required minimums

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
21204462502▲	2	50.80	2.78	77.79	3	100	0.69	7.00	177.80	2.70	4.02
21204464502▲	2-1/2	63.50	3.50	88.90	3	75	0.52	8.00	203.20	3.20	4.76
21204466502▲	3	76.20	4.00	101.60	3	75	0.52	9.00	228.60	3.80	5.66
11404468502▲	3-1/2	88.90	4.50	114.30	3	75	0.52	12.00	304.80	4.20	6.25
11404470502▲	4	101.60	5.06	128.59	4	75	0.52	16.00	406.40	5.30	7.89
11404472502▲	4-1/2	114.30	5.69	144.46	4	75	0.52	18.00	457.20	6.40	9.52
11404474502▲	5	127.00	6.19	157.16	4	50	0.34	25.00	635.00	7.30	10.86
11404476502▲	6	152.40	7.19	182.56	4	50	0.34	30.00	762.00	8.50	12.65
11404478502▲	6-5/8	168.28	7.81	198.44	5	50	0.34	39.75	1009.65	9.80	14.58
11404480502▲	8	203.20	9.31	236.54	5	50	0.34	48.00	1219.20	13.30	19.79
11404482502▲	8-5/8	219.08	9.94	252.41	5	50	0.34	51.75	1314.45	15.00	22.32
11404485502▲	10	254.00	11.38	288.93	6	50	0.34	60.00	1524.00	17.00	25.30

▲ = Make To Order (MTO)

Product information is subject to change. For full details, visit our website or contact Customer Service.

TRANSPORTER® CHEMICAL B

Transporter Chemical B hose is a general purpose hose designed to handle strong and oxidizing acids, esters, ketones and alcohols. This hose features an EPDM cover that is resistant to heat, chemicals and weathering. This hose is rated at **full vacuum**. Chemical B hose also features a reinforcement of a spiral steel helix between synthetic textile plies.

▲ See Chemical Hose Warnings, pages 29 and 148.

	Resistance:
	   
	Branding:
Thermoid HBD Industries Transporter Chemical B WP Made In USA	

Cover Color: Brown
Oil Resistance: Limited
Construction:
Tube: CIIR
Cover: EPDM
Reinforcement: Spiral steel wire helix(es) between synthetic textile plies
Temperature Range: -40°F to +200°F
-40°C to +93°C
Consult the Chemical Resistance Guide for specific chemical/temperature recommendations.
Packaging: 1" I.D. – 50 ft.
1-1/2" - 4" I.D. – 100 ft.

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
17704010002▲	1	25.40	1.56	38.10	2	150	1.03	2.50	63.50	0.63	0.92
17704015002▲	1-1/2	38.10	2.03	51.59	2	150	1.03	4.00	101.60	0.89	1.30
17704020002▲	2	50.80	2.56	65.09	2	150	1.03	6.00	152.40	1.26	1.83
17704030002▲	3	76.20	3.69	92.08	2	150	1.03	9.00	228.60	2.16	3.16
17704040002▲	4	101.60	4.69	119.06	2	100	0.69	12.00	304.80	3.02	4.46

▲ = Make To Order (MTO)

TRANSPORTER® CHEMICAL H

Transporter Chemical H hose is recommended to handle many inorganic acids, bases, alcohols, oils, fats, chemicals, greases and solvents. This hose features a CR cover that is weather, ozone and oil resistant. The tube compound is chemical, heat and abrasion resistant.

▲ See Chemical Hose Warnings, pages 29 and 148.

	Resistance:
	   
	Branding:
HBD Industries Transporter Chemical H WP Made In USA	

Cover Color: Yellow
Oil Resistance: Medium
Construction:
Tube: CSM Black
Cover: CR
Reinforcement: Spiral steel wire helix(es) between synthetic textile plies
Temperature Range: -40°F to +250°F
-40°C to +121°C
Consult the Chemical Resistance Guide for specific chemical/temperature recommendations.
Packaging: 100 ft. maximum
Available in straight ends, uncapped only

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
17703010002▲	1	25.40	1.50	38.10	2	200	1.38	2.50	63.50	0.57	0.85
17703015002▲	1-1/2	38.10	2.00	50.80	2	150	1.03	4.00	101.60	0.83	1.24
17703020002	2	50.80	2.50	63.50	2	150	1.03	6.00	152.40	1.08	1.61
17703030002▲	3	76.20	3.56	90.49	2	150	1.03	9.00	228.60	1.81	2.69
17703040002▲	4	101.60	4.63	117.48	2	100	0.69	12.00	304.80	2.45	3.65

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

TRANSPORTER® CHEMICAL V

Transporter Chemical V hose is capable of handling aromatic and aliphatic hydrocarbons and halo generated hydrocarbons. Chemical V hose will also handle animal oil, vegetable oil, and a wide range of chemicals. The NBR/PVC cover is both oil and abrasion resistant. The reinforcement of a spiral steel helix between synthetic textile plies enables this hose to be rated at **full vacuum**.

⚠ See Chemical Hose Warnings, pages 29 and 148.

**Resistance:****Branding:**

HBD Industries Transporter Chemical V Made In USA

Cover Color: Orange

Oil Resistance: Medium

Construction:

Tube: FKM, 1-1/2" and 2" I.D. – 1/8" thick
3" I.D. and larger – 3/16" thick
Exceeds RMA Class A

Cover: NBR/PVC

Reinforcement: Spiral steel wire helix(es) between synthetic textile plies

Temperature Range: -20°F to +250°F
-29°C to +121°C

Consult the Chemical Resistance Guide for specific chemical/temperature recommendations.

Packaging: 100 ft. maximum
Available in straight ends, uncapped only

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17701115002▲	1-1/2 38.10	2.06 52.39	2	150 1.03	4.00 101.60	1.20 1.79
17701120002▲	2 50.80	2.56 65.09	2	150 1.03	6.00 152.40	1.50 2.23
17701130002▲	3 76.20	3.69 93.66	2	150 1.03	9.00 228.60	2.40 3.57
17701140002▲	4 101.60	4.69 119.06	2	100 0.69	12.00 304.80	3.40 5.06

▲ = Make To Order (MTO)

TRANSPORTER® MULTI-CHEM®

Transporter Multi-Chem hose has been designed to be able to transfer chemicals and solvents. The XLPE tube is capable of resisting approximately 90% of all industrial chemicals.

Exceptions include elevated temperatures and strong oxidizing acids such as nitric acid and chromic. The maximum temperature rating for most chemicals is 150°F. The green EPDM cover is abrasion and chemical resistant. This is a **full vacuum** hose.

Note: Working pressures reflect a permanent type coupling such as swage or internally expanded. For banded type couplings, the working pressure should reflect 65% of the ratings listed. ⚠ See Chemical Hose Warnings, pages 29 and 148.

**Resistance:****Branding:**

Thermoid HBD Industries Transporter Multi-Chem Made In USA

Cover Color: Green

Oil Resistance: High at 70°F, not rated at 140°F

Construction:

Tube: XLPE

Cover: EPDM

Reinforcement: Synthetic textile cords with wire helix(es)

Temperature Range: Maximum temperature limitation 150°F (66°C) for most chemicals

Packaging: 100 ft. maximum

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
Black	Green					
N 17704600002▲	1 25.40	1.69 42.86	2	200 1.38	5.00 127.00	0.80 1.19
N 17704601002▲	1-1/4 31.75	1.94 49.21	2	200 1.38	7.00 177.80	1.00 1.49
N 17704602002▲	1-1/2 38.10	2.19 55.56	2	200 1.38	8.00 203.20	1.10 1.64
N 17704603002	2 50.80	2.81 71.44	2	200 1.38	9.00 228.60	1.70 2.53
N 17704608002▲	2-1/2 63.50	3.34 84.93	2	150 1.03	12.00 304.80	2.38 3.54
N 17704604002▲	3 76.20	3.91 99.22	2	150 1.03	16.00 406.40	2.70 4.02
N 17704605002▲	4 101.60	4.81 122.24	2	150 1.03	21.00 533.40	3.50 5.21

N = Non-Stock. All sizes available in black cover, contact Salisbury

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

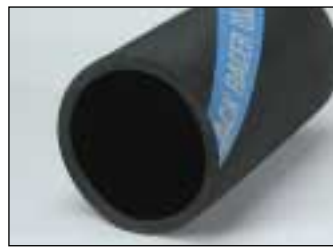


For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

BLACK RACER™ OS & D

Black Racer Oil Suction and Discharge hose is designed for barge or dock service handling, gasoline, oil and other petroleum products. This hose features smooth bore construction with a polyester tire cord, wire helix reinforcement. This makes the hose suitable for **full vacuum (30 inches of Hg)** and 200 psi discharge. Long 100 ft. lengths helps cut down on connection problems. Black Racer meets the U.S. Coast Guard requirements.



Resistance:



Branding:

Thermoid HBD Industries Inc.
Black Racer Oil S & D
Made In USA

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	CR
Reinforcement:	Polyester tire cord, with a wire helix(es)
Temperature Range:	-20°F to +200°F -29°C to +93°C
Packaging:	100 ft. maximum Hand built – \$250.00 minimum order per size
Couplings:	Constrictor swage couplings

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
34854034002▲	4 101.60	5.00 127.00	4	200 1.38	22.00 558.80	4.20 6.25
34854036002▲	6 152.40	7.13 180.98	4	200 1.38	35.00 889.00	7.60 11.31
34854038002▲	8 203.20	9.19 233.36	4	200 1.38	46.00 1168.40	10.60 15.78

▲ = Make To Order (MTO)

Fixed Flanges

Product Number	Size
34941040001▲	4
34941060001▲	6
34941080001▲	8

Floating Flanges

Product Number	Size
34942040001	4
34942060001	6
34942080001	8

▲ = Make To Order (MTO)

CHEMICAL & SOLVENT – UHMW POLYETHYLENE LINING (Smooth Bore)

Chemical and Solvent hose is used for the transfer of solvents and chemicals between the dock and barges or the dock and tankers. Like all Thermoid dock loading hose, this hose meets all U.S. Coast Guard requirements. The CR cover is resistant to abrasion, weathering and ozone.

ALERT: Large size, industrial hoses have caution and/or safety usage printed information attached by tag to the product or this information is printed onto the hose.



Resistance:



Branding:

None

Cover Color:	Black
Oil Resistance:	High at +70°F, not rated at +140°F
Construction:	
Tube:	UHMWPE
Cover:	CR
Reinforcement:	Single steel wire helix(es) spiraled between multiple plies of synthetic tire cord
Temperature Range:	-20°F to +180°F -29°C to +82°C
Packaging:	50 ft. maximum Hand built – \$250.00 minimum order per size
Couplings:	Swaged

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11434456502▲	4 101.60	5.25 133.35	4	200 1.38	36.00 914.40	5.20 7.74
11434458502▲	6 152.40	7.38 187.33	4	200 1.38	48.00 1219.20	10.70 15.92
11434460502▲	8 203.20	9.63 244.48	4	200 1.38	64.00 1625.60	14.80 22.03
11434462502▲	10 254.00	11.94 303.21	6	200 1.38	80.00 2032.00	20.70 30.81

▲ = Make To Order (MTO)

**HY-FLEX™ 200/275/300 DOCK–
NYLON/UHMWPE TUBE (Rough Bore)**

Hi-Flex Dock hose is ideal for use with chemicals, oils and hydrocarbons to 100%. This hose comes in three grades of working pressures, 200, 275 and 300 for higher pressure applications. These working pressures are due to the polyester tire cord with steel wire helix(es) reinforcement. The nylon tube liner allows a smooth flow of product through the system. All Thermoid dock loading hose meets U.S. Coast Guard requirements.

**Resistance:****Branding:**

Thermoid/HBD Industries Hy-Flex OS&D
275 psi WP Conforms to USCG 33 CFR
1545 suitable for up to 100% aromatics
Made In USA

**Resistance:****Branding:**

Thermoid/HBD Industries Hy-Flex OS&D
300 psi WP Conforms to USCG 33 CFR
1545 suitable for up to 100% aromatics
Made In USA

Cover Color: Black
Oil Resistance: High
Construction:
 Tube: Round, galvanized bore wire, plain unbonded nylon liner, UHMWPE liner
 Cover: CR
 Reinforcement: Polyester tire cord, high strength steel wire helix(es)
Flow Velocity: 35 Ft/Second maximum
Temperature Range: -20°F to +180°F
 -29°C to +82°C
Packaging: Crated
Couplings: Swage. Fixed or floating 150# or 300# flange each end

HY-FLEX 200

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
34854210502▲	4	101.60	5.19	131.76	2	200	1.38	14.00	355.60	4.50	6.70
34854215502▲	6	152.40	7.50	190.50	2	200	1.38	21.00	533.40	8.40	12.50
34854220502▲	8	203.20	9.75	247.65	4	200	1.38	29.00	736.60	14.00	20.84
34854225502▲	10	254.00	11.94	303.21	6	200	1.38	36.00	914.40	22.50	33.49

All sizes have 30 inches of mercury vacuum

HY-FLEX 275

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
34854240502▲	4	101.60	5.25	133.35	4	275	1.90	16.00	406.40	4.50	6.70
34854245502▲	6	152.40	7.50	190.50	4	275	1.90	21.00	533.40	8.40	12.50
34854250502▲	8	203.20	9.94	252.41	4	275	1.90	31.00	787.40	16.00	23.81
34854255502▲	10	254.00	11.94	303.21	6	275	1.90	38.00	965.20	22.50	33.49

All sizes have 30 inches of mercury vacuum

HY-FLEX 300

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
34854270502▲	4	101.60	5.25	133.35	4	300	2.07	16.00	406.40	4.50	6.70
34854275502▲	6	152.40	7.50	190.50	4	300	2.07	23.00	584.20	8.40	12.50
34854280502▲	8	203.20	9.94	252.41	6	300	2.07	31.00	787.40	15.00	22.32
34854285502▲	10	254.00	11.94	303.21	6	300	2.07	38.00	965.20	22.50	33.49

All sizes have 30 inches of mercury vacuum

▲ = Make To Order (MTO)



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
 For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

SAFETYFLEX®

Safetyflex is a premium hose used in the loading and unloading of gasoline, oil, and other petroleum products at dock installations. This hose features exceptional strength (**a 13:1 safety factor**) that is much greater than conventional hose. Safetyflex features amazing flexibility and durability with a unique coupling design that protects against blow-offs and leaks. The CR cover is designed to resist abrasion, weather, oil and gasoline. The reinforcement of layers of spiraled high-tensile steel wire, synthetic fabric plies between the wire and tube, provide exceptional strength, long life, maximum flexibility, and guards against bursting even at high working pressures. Safetyflex, like all Thermoid dock loading hoses, meets all U.S. Coast Guard requirements.



Resistance:



Branding:

Thermoid HBD Industries
Safetyflex Oil Service 300 PSI WP
Made In USA

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A - other elastomers available upon request
Cover:	CR
Reinforcement:	Layers of spiraled high-tensile steel wire embedded in the hose body with a rubber cushion between each ply
Flow Velocity:	50 Ft/Second maximum
Temperature Range:	-20°F to +200°F -29°C to +93°C
Packaging:	100 ft. maximum Hand built – \$250.00 minimum order per size

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
34854430002▲	3 76.20	4.44 112.71	4	300 2.07	12.00 304.80	6.90 10.27
34854435002▲	4 101.60	5.19 131.76	4	300 2.07	16.00 406.40	7.50 11.16
34854440002▲	6 152.40	7.50 190.50	6	300 2.07	24.00 609.60	15.70 23.69
34854445002▲	8 203.20	9.69 246.06	8	300 2.07	32.00 812.80	22.70 40.38

▲ = Make To Order (MTO)

SAFETYFLEX® WATER JETTING

Safetyflex Water Jetting is a rugged, heavy-duty, wire reinforced hose for inland water ways and off shore high pressure water jetting service. Safetyflex Water Jetting hose is suitable for high flow velocity (70 ft. per second) service. The multiple plies of plated steel wire reinforcement enable this hose to provide up to 1500 psi working pressure. SafetyFlex Water Jetting hose meets all U.S. Coast Guard requirements. The CR cover provides resistance to abrasion, weathering and ozone.



Resistance:



Branding:

Thermoid/HBD Industries, Inc.
1500 PSI WP Jetting
Made In USA

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	CR, taped, wrapped exterior finish
Reinforcement:	Multiple plies of plated steel wire
Temperature Range:	-20°F to +200°F -29°C to +93°C
Packaging:	100 ft. maximum Hand built – \$250.00 minimum order per size Pressures up to 2500 psi WP in sizes up to 8" I.D. are also available. Contact Salisbury customer service. Straight end hose or coupled assemblies shipped on reels or in crates. 8" I.D. hose or assemblies over 60 ft. long require special packaging or shipping.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
34854460002▲	4 101.60	5.19 131.76	4	1500 10.34	16.00 406.40	7.80 11.61
34854465002▲	6 152.40	7.50 190.50	6	1500 10.34	24.00 609.60	14.10 23.69
34854470002▲	8 203.20	9.75 247.65	8	1500 10.34	32.00 812.80	22.40 40.38

▲ = Make To Order (MTO)

ALERT: Large size, industrial hoses have caution and/or safety usage printed information attached by tag to the product or this information is printed onto the hose.

SUBMARINE 225 PSI (Smooth Bore)

Thermoid's Submarine hose is recommended for oil transfer applications in submarine installations where the hose is either partially or totally submerged. Submarine 225 hose features a double CR cover, which is very abrasion resistant, a breaker strip and a tough inner cover. This extra heavy construction is kink resistant, and resists end pulls associated with this application. The CR cover has been designed to resist long periods of being submerged. The galvanized steel helix with multiple plies of steel cord enables this hose to handle up to 225 psi in working pressure.

Submarine 225 hose:

- Meets all U.S. Coast Guard requirements.
- Meets OCIMF 4th Edition 1991 Guide to Purchasing, Manufacturing and Testing of Loading and Discharge Hoses for Offshore Mooring.
- Safety Factor 5:1
- Product offered in three styles:
 1. Mainline
 2. Plenum
 3. Tanker Rail
- Lifting lugs are supplied for built-in nipples with Tanker Rail construction
- Other working pressures available: 250, 275 and 300 psi.



Resistance:



Branding:

Thermoid HBD Industries
Submarine Service 225# PSI
Made In USA

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A - other elastomers available upon request
Cover:	CR, double thickness (.282" with nylon breaker)
Reinforcement:	Galvanized steel wire helix(es) spiralled between multiple plies of synthetic cord
Flow Velocity:	70 Ft/Second maximum
Temperature Range:	-20°F to +180°F -29°C to +82°C
Packaging:	50 ft. maximum Hand built - \$250.00 minimum order per size
Couplings:	BIN. Available to meet OCIMF specifications with galvanized weld neck flanges plus x-ray tested welds.

Other options include ANSI 150# or 300# class floating flanges. Assemblies are presumed to be Electrically Continuous unless Electrically Discontinuous assemblies are requested.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11436006002▲	6 152.40	8.34 423.86	6	225 1.55	24.00 609.60	15.70 23.37
11436008002▲	8 203.20	10.44 265.11	6	225 1.55	32.00 812.80	22.30 33.19
11436010002▲	10 254.00	12.38 314.33	6	225 1.55	40.00 1016.00	29.10 43.31
11436012002▲	12 304.80	14.88 377.83	8	225 1.55	48.00 1219.20	39.40 58.64

▲ = Make To Order (MTO)

TANKMASTER® HOT ASPHALT (Smooth Bore)

Tankmaster Hot Asphalt hose is designed to handle the transfer of petroleum based materials such as tar, hot oils and asphalt, of course.

The temperatures of these materials should not exceed +350°F. The CR tube and cover provide excellent resistance to weathering and oils. The reinforcement of multiple plies of synthetic cord with a wire helix enables this hose to work at a top working pressure of 200 psi. All Thermoid dock loading hose meets the U.S. Coast Guard requirements.



Resistance:



Branding:

Thermoid HBD Industries
Tankmaster Hot Asphalt
Made In USA -20°F to +350°F

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	CR
Cover:	CR
Reinforcement:	Single wire helix(es) spiralled between multiple plies of synthetic cord.
Temperature Range:	-20°F to +350°F -29°C to +177°C
Packaging:	100 ft. maximum Hand built - \$250.00 minimum order per size
Couplings:	Swaged couplings or built-in nipples

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11434720502▲	4 101.60	5.06 128.59	4	200 1.38	24.00 609.60	5.40 8.04
11434722502▲	6 152.40	7.56 192.09	4	200 1.38	36.00 914.40	11.50 17.11
11434724502▲	8 203.20	9.63 244.48	6	200 1.38	48.00 1219.20	17.50 26.04
11434726502▲	10 254.00	11.88 301.63	8	200 1.38	60.00 1524.00	22.50 33.49

▲ = Make To Order (MTO)

TANKMASTER® K200 OIL SUCTION & DISCHARGE 200 PSI (Smooth Bore)

Tankmaster K200 Oil Suction and Discharge hose is recommended for the transfer of petroleum based products. The smooth bore promotes an even flow through the system. The reinforcement of multiple plies of spiral tire cords with a dual steel helix allows this hose to handle up to 200 psi working pressure. Tankmaster K200 does meet all the specifications of the USCG and RMA Type 1, Class 2 regulations. The 100 ft. lengths help cut down on connection problems. Tankmaster K200, like all dock loading hose, meets the U.S. Coast Guard requirements.



Resistance:



Branding:

Thermoid HBD Industries
Tankmaster K200 Oil Suction &
Discharge 200 PSI Smooth Bore
Made In USA

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	CR - corrugated, double pitch
Reinforcement:	Dual steel wire helix(es) spiralled between multiple plies of spiral tire cords
Flow Velocity:	50 Ft/Second maximum
Temperature Range:	-20°F to +200°F -29°C to +93°C
Packaging:	100 ft. maximum Hand built – \$250.00 minimum order per size
Couplings:	Swaged couplings or built-in nipples

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11434520502▲	4 101.60	5.00 127.00	4	200 1.38	15.00 381.00	5.00 7.44
11434521502▲	6 152.40	7.31 185.74	4	200 1.38	22.00 558.80	9.30 13.84
11434523502▲	8 203.20	9.63 244.48	4	200 1.38	30.00 762.00	14.20 21.13
11434525502▲	10 254.00	11.88 301.63	6	200 1.38	40.00 1016.00	20.00 29.77

▲ = Make To Order (MTO)

TANKMASTER® OIL DISCHARGE (Smooth Bore)

Use Tankmaster Oil Discharge hose in discharge applications only. This hose handles gasoline, oils and other petroleum distillates. This hose is lightweight and resistant to petroleum products with aromatic content up to 50%. The multiple plies of synthetic cord reinforcement enable this hose to operate smoothly even up to working pressures of 200 psi. The CR cover and NBR tube are resistant to abrasions, weathering and ozone. Tankmaster Oil Discharge hose meets the requirements of the U.S. Coast Guard regulations.



Resistance:



Branding:

Thermoid HBD Industries
Tankmaster Oil Discharge
Made In USA

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	CR
Reinforcement:	Multiple plies of synthetic cord
Flow Velocity:	50 Ft/Second maximum
Temperature Range:	-20°F to +200°F -29°C to +93°C
Packaging:	100 ft. maximum
Couplings:	Swaged couplings through 10" I.D. or built-in nipples through 12" I.D.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11434650502▲	4 101.60	4.88 123.83	4	200 1.38	n/a n/a	2.80 4.17
11434655502▲	6 152.40	7.00 177.80	4	200 1.38	n/a n/a	4.90 7.29
11434660502▲	8 203.20	9.31 236.54	6	200 1.38	n/a n/a	7.70 11.46
11434665502▲	10 254.00	11.19 284.16	6	200 1.38	n/a n/a	8.30 12.35
11434670502▲	12 304.80	13.41 340.52	6	200 1.38	n/a n/a	13.30 19.79

▲ = Make To Order (MTO)

n/a = Not Applicable



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

TANKMASTER® 200/225 - FKM LINING (Smooth Bore)

Tankmaster 200/225 hose is recommended for the transfer of aromatic hydrocarbons. This hose has been designed to handle **full vacuum** applications. Also, the Tankmaster 200/225 hose will handle discharge applications up to 200 psi. The multiple plies of synthetic cord with a helical wire reinforcement allow this hose to maintain its roundness. Tankmaster 200/225 hose meets all U.S. Coast Guard requirements.

**Resistance:****Branding:**

Thermoid HBD Industries
Tankmaster 200
Made In USA

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	FKM Fluoroelastomer Exceeds RMA Class A
Cover:	CR
Reinforcement:	Single wire helix(es) spiralled between multiple plies of synthetic cord
Flow Velocity:	50 Ft/Second maximum
Temperature Range:	-20°F to +200°F -29°C to +93°C
Packaging:	100 ft. maximum
Couplings:	Swaged

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11434950502▲	4 101.60	5.31 134.94	4	200 1.38	24.00 609.60	7.50 11.16
11434955502▲	6 152.40	7.63 193.68	4	200 1.38	36.00 914.40	11.60 17.26
11434960502▲	8 203.20	9.63 244.48	4	200 1.38	48.00 1219.20	20.30 30.21
11434965502▲	10 254.00	11.88 301.63	6	200 1.38	60.00 1524.00	28.10 41.82

▲ = Make To Order (MTO)

TANKMASTER® OS & D NBR LINING 200 (Smooth Bore)

Tankmaster NBR Lining 200 hose is designed to handle **full vacuum** or suction and discharge for barge or dock service. This includes the loading or unloading of gasoline, oils and other petroleum products. Static wire is included. The multiple ply synthetic cord with a wire helix reinforcement gives a constant working pressure of 200 psi for all sizes. All U.S. Coast Guard requirements are met by this hose.

**Resistance:****Branding:**

Thermoid HBD Industries
Tankmaster 200 Smooth Bore
Oil Suction & Discharge 200 PSI
Made In USA

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A - other elastomers available upon request
Cover:	CR
Reinforcement:	Multiple plies of synthetic cord with wire helix(es) embedded in the hose body
Flow Velocity:	50 Ft/Second maximum
Temperature Range:	-20°F to +200°F -29°C to +93°C
Packaging:	100 ft. maximum Hand built – \$250.00 minimum order per size
Ends:	Built-in nipples through 12" I.D. Swaged couplings through 10" I.D.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11434480502▲	4 101.60	5.00 127.00	4	200 1.38	24.00 609.60	6.00 8.93
11434482502▲	6 152.40	7.31 185.74	4	200 1.38	36.00 914.40	10.50 15.63
11434484502▲	8 203.20	9.63 244.48	4	200 1.38	48.00 1219.20	15.10 22.47
11434486502▲	10 254.00	11.88 301.63	6	200 1.38	60.00 1524.00	22.00 32.74
11434488502▲	12 304.80	14.03 356.39	6	200 1.38	72.00 1828.80	30.50 45.39

▲ = Make To Order (MTO)

Product information is subject to change. For full details, visit our website or contact Customer Service.

FISH SUCTION

Fish Suction Hose is designed for the vacuum removal of fish from a ship's hold. The CR tube and cover are cut and abrasion resistant. This hose can come with a variety of ends; enlarged, straight or BIN with flanges. Fish Suction hose is rated at **full vacuum** since it is constructed with a reinforcement of a spring steel wire helix between multiple plies of reinforcement.

	Resistance:
	 
	Branding:
Thermoid HBD Industries Fish Suction Hose 100 psi WP CR Tube Made In USA	

Cover Color:	Black
Oil Resistance:	Medium
Construction:	
Tube:	1/4" CR
Cover:	CR
Reinforcement:	Spring steel wire helix(es) spiralled between multiple plies of polyester cord
Temperature Range:	-40°F to +180°F -40°C to +82°C
Packaging:	Make To Order Hand built – \$250.00 minimum order per size



Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
11465520502	8	203.20	9.63	244.48	4	100	0.69	80.00	2032.00	19.00	28.28
11465522502	10	254.00	12.00	304.80	5	100	0.69	100.00	2540.00	25.00	37.21
11465524502	12	304.80	14.13	358.78	6	100	0.69	120.00	3048.00	31.00	46.14

KOROBRAID® TUBING

Korobraid Tubing features a specially reinforced polyester cord braided within the PVC tube wall. This tubing will withstand about four times the normal working pressure. The PVC tube and cover is non-toxic, meets FDA requirements and also offers excellent clarity.

Physical Properties

Safety Factor	4:1
Odor	None
Taste	None
Flame-proofness	Self-extinguishing
Minimum Bend Radius	5 x I.D.

	Resistance:
	
	Branding:
None	

Cover Color:	Clear
Oil Resistance:	Medium
Construction:	
Tube:	PVC
Cover:	PVC
Reinforcement:	Polyester cord
Temperature Range:	-20° to +120°F -29°C to +49°C
Packaging:	Full coil shipments only

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Wall Thickness	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/Cft) (Kg/m)	
19340253002	1/4	6.35	0.50	12.70	1/8	350	2.41	n/a	n/a	.08	0.12
19340383002	3/8	9.53	0.63	15.88	1/8	275	1.89	n/a	n/a	.11	0.16
19340503002	1/2	12.70	0.81	20.64	1/8	250	1.72	n/a	n/a	.17	0.25
19340612002	5/8	15.88	1.00	25.40	3/16	225	1.55	n/a	n/a	.26	0.39
19340752002▲	3/4	19.05	1.00	25.40	1/8	200	1.38	n/a	n/a	.30	0.47
19341002002▲	1	25.40	1.50	38.10	1/4	150	1.03	n/a	n/a	.39	0.58

▲ = Make To Order (MTO)
n/a = Not Applicable



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

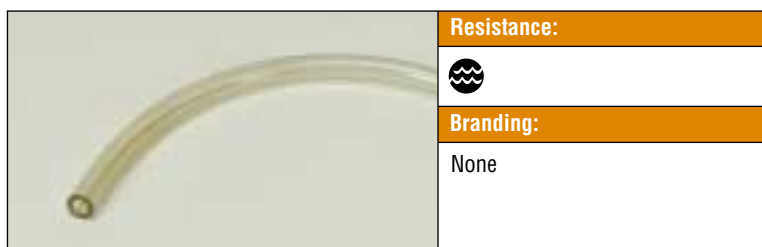
KOROKLEAR® TUBING

Koroklear is a non-toxic tubing which meets the criteria requirements of FDA and the 3A Plastics Standard for Milk Products. Koroklear is made from crystal clear, tough formulation PVC.

Physical Properties

Durometer, Shore "A"	ASTM-D-676	70
Specific Gravity	ASTM-D-792-66	1.23
Ultimate Tensile Strength (psi)	ASTM-D-412	2400
Ultimate Elongation (%)	ASTM-D-412	390
100% Modulus	ASTM-D-412	1200

Recommended working pressure for intermittent pressure only. The figures on the chart are based on 70°F temperature.

**Resistance:****Branding:**

None

Cover Color: Clear**Oil Resistance:** Medium**Construction:****Tube:** PVC**Cover:** PVC**Reinforcement:** N/A**Temperature Range:** 0°F to +100°F
-18°C to +38°C

Packaging: Full carton shipments only
P/Ns KK1 through KK37 – 100 ft. per carton
Larger sizes are packed 50 ft. per carton
Make-To-Order (MTO) orders have a stand alone minimum charge of \$100.00

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Wall Thickness	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/Cft) (Kg/m)	
19330204002	1/8	3.18	0.25	6.35	1/16	68	0.47	n/a	n/a	.02	0.03
19330304002	3/16	4.76	0.31	7.94	1/16	55	0.38	n/a	n/a	.04	0.06
19330306002	3/16	4.76	0.38	9.53	3/32	70	0.48	n/a	n/a	.05	0.07
19330308002	3/16	4.76	0.44	11.11	1/8	80	0.55	n/a	n/a	.05	0.07
19330406002	1/4	6.35	0.44	11.11	3/32	60	0.41	n/a	n/a	.07	0.10
19330504002	5/16	7.94	0.44	11.11	1/16	50	0.34	n/a	n/a	.04	0.06
19330506002	5/16	7.94	0.50	12.70	3/32	60	0.41	n/a	n/a	.07	0.10
19330604002	3/8	9.53	0.50	12.70	1/16	40	0.28	n/a	n/a	.05	0.07
19330606002	3/8	9.53	0.56	14.29	3/32	50	0.34	n/a	n/a	.08	0.12
19330608002	3/8	9.53	0.63	15.88	1/8	65	0.45	n/a	n/a	.12	0.18
19330804002	1/2	12.70	0.63	15.88	1/16	30	0.21	n/a	n/a	.08	0.12
19330808002	1/2	12.70	0.75	19.05	1/8	45	0.31	n/a	n/a	.14	0.21
19331008002	5/8	15.88	0.88	22.23	1/8	40	0.28	n/a	n/a	.17	0.25
19331208002	3/4	19.05	1.00	25.40	1/8	35	0.24	n/a	n/a	.21	0.31
19331210002	3/4	19.05	1.06	26.99	5/32	40	0.28	n/a	n/a	.26	0.39
19331408002	7/8	22.23	1.13	28.58	1/8	30	0.21	n/a	n/a	.24	0.36
19331608002	1	25.40	1.25	31.75	1/8	28	0.19	n/a	n/a	.27	0.40
19331616002	1	25.40	1.50	38.10	1/4	50	0.34	n/a	n/a	.56	0.83

n/a = Not Applicable

RADIAL FLEX® CLEAR FOOD PROCESSING

Radial Flex Clear Food Processing hose is recommended for fluid-handling needs in the bottling, canning, dairy and related food processing areas. This hose provides excellent service in agricultural irrigation applications. The PVC construction with a helical wire reinforcement enables all sizes to take a **full vacuum** without collapsing. This hose is manufactured from compounds compliant with FDA and 3-A non-toxic specifications. This is satisfactory for the transfer of any liquids or dry material for human consumption. This hose is recommended for use between 0°F to +150°F. Outside these limits, rubber hose is recommended.



Resistance:



Branding:

None

Cover Color: Clear
Oil Resistance: Medium
Construction:
Tube: PVC
Cover: PVC
Reinforcement: Helical wire
Temperature Range: 0°F to +150°F
 -18°C to +66°C
Packaging: Coils, 100 ft. maximum, 1" to 4" I.D.

72 Degrees F 150 Degrees F

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
19131000002	1 25.40	1.24 31.50	n/a	86 0.59	20 0.14	1.90 48.26	0.26 0.39
19131250002▲	1-1/4 31.75	1.54 39.12	n/a	79 0.54	20 0.14	2.70 68.58	0.37 0.55
19131500002▲	1-1/2 38.10	1.82 46.23	n/a	72 0.50	20 0.14	2.80 71.12	0.44 0.65
19132000002▲	2 50.80	2.39 60.71	n/a	72 0.50	20 0.14	3.90 99.06	0.74 1.10
19132500002▲	2-1/2 63.50	2.93 74.42	n/a	72 0.50	20 0.14	4.70 119.38	1.01 1.50
19133000002▲	3 76.20	3.43 87.12	n/a	62 0.43	15 0.10	6.10 154.94	1.21 1.80
19134000002▲	4 101.60	4.53 115.06	n/a	55 0.38	15 0.10	9.10 231.14	2.01 2.99

▲ = Make To Order (MTO)
 n/a = Not Applicable

TRANSPORTER® FOOD DISCHARGE

Transporter Food Discharge hose has been designed to handle liquid products including oily edibles. The white nitrile tube will not impart taste or odor to the liquids being transferred. This hose meets FDA requirements. The long 100 ft. lengths help reduce connection problems.



Resistance:



Branding:

Thermoid HBD Industries
 Transporter Food Discharge
 FDA Nitrile Tube Made In USA

Cover Color: Gray
Oil Resistance: Limited
Construction:
Tube: RMA Class A/B, FDA White, NBR
Cover: Gray NBR/PVC with green stripe
Reinforcement: Synthetic textile plies
Temperature Range: -30°F to +200°F
 -34°C to +93°C
Packaging: 100 ft. lengths

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17752020002▲	2 50.80	2.41 61.12	2	150 1.03	n/a n/a	0.80 1.19
17752025002▲	2-1/2 63.50	2.94 74.61	2	150 1.03	n/a n/a	1.00 1.49
17752030002▲	3 76.20	3.44 87.31	2	150 1.03	n/a n/a	1.20 1.79
17752040002▲	4 101.60	4.44 112.71	2	100 0.69	n/a n/a	1.70 2.53

▲ = Make To Order (MTO)
 n/a = Not Applicable

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

TRANSPORTER® FOOD SUCTION White Corrugated Cover

Transporter Food Suction hose is designed to handle a wide variety of liquid products including oily edibles. The white nitrile tube will not impart taste or odor to the liquids being transferred. This hose meets FDA requirements. A reinforcement of a spiral steel wire between synthetic textile plies allows this hose to perform at **full vacuum**.



Resistance:



Branding:

Thermoid HBD Industries
Transporter Food Suction
White Nitrile Tube WP Made In USA

Cover Color: White
Oil Resistance: Limited
Construction:
 Tube: RMA Class A/B, FDA White, NBR
 Cover: NBR/PVC Corrugated
 Reinforcement: Spiral steel wire between synthetic textile plies
Temperature Range: -30°F to +200°F
 -34°C to +93°C
Packaging: 100 ft. lengths; minimum run 1200 ft. per size

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17751112502▲	1-1/4 31.75	1.81 46.04	2	150 1.03	4.00 101.60	0.80 1.19
17751115002▲	1-1/2 38.10	2.06 52.39	2	150 1.03	4.50 114.30	1.00 1.49
17751120002▲	2 50.80	2.56 65.09	2	150 1.03	6.00 152.40	1.20 1.79
17751125002▲	2-1/2 63.50	3.13 79.38	2	150 1.03	7.50 190.50	1.70 2.53
17751130002▲	3 76.20	3.63 92.08	2	150 1.03	9.00 228.60	2.10 3.13
17751140002▲	4 101.60	4.69 119.06	2	100 0.69	12.00 304.80	2.80 4.17

▲ = Make To Order (MTO)

TRANSPORTER® FOOD SUCTION Gray Smooth Cover

Transporter Food Suction hose is designed to handle a wide variety of liquid products including oily edibles. The white nitrile tube will not impart taste or odor to the liquids being transferred. This hose meets FDA requirements. A reinforcement of a spiral steel wire between synthetic textile plies allows this hose to perform at **full vacuum**.



Resistance:



Branding:

Thermoid HBD Industries
Transporter Food Suction
White Nitrile Tube WP Made In USA

Cover Color: Gray
Oil Resistance: Limited
Construction:
 Tube: RMA Class A/B, FDA White, NBR
 Cover: Gray NBR/PVC Smooth
 Reinforcement: Spiral steel wire between synthetic textile plies
Temperature Range: -30°F to +200°F
 -34°C to +93°C
Packaging: 100 ft. lengths

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17750015002▲	1-1/2 38.10	2.06 52.39	2	150 1.03	4.50 114.30	1.00 1.49
17750020002	2 50.80	2.56 65.09	2	150 1.03	6.00 152.40	1.20 1.79
17750030002▲	3 76.20	3.63 92.08	2	150 1.03	9.00 228.60	2.20 3.27
17750040002▲	4 101.60	4.69 119.06	2	100 0.69	12.00 304.80	2.90 4.32

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
 For Made to Order Hose, Customer Order Form, see catalog page 137.

TRANSPORTER® GRAY SHADOW FOOD SUCTION

Transporter Gray Food Suction hose is designed to handle a wide variety of liquid products, including oily edibles. The white nitrile tube will not impart taste or odor to the liquids being transferred. This hose meets the requirements of the FDA and USDA regulations. The dual wire helix in the multiple plies of reinforcement, maintains the roundness of the hose. This combination also allows hose to be rated at **full vacuum** as well as a constant 150 psi working pressure on all sizes.

Resistance:	  
Branding:	Thermoid/HBD Industries Inc. Gray Shadow Food 150 PSI WP Made In USA

Cover Color:	Gray
Oil Resistance:	Limited
Construction:	
Tube:	Sizes 1-1/2", 2", 2-1/2" have a 3/32" thick tube RMA Class A/B, NBR
Cover:	NBR/PVC, gray, deep corrugations with a flat hose exterior
Reinforcement:	Multiple synthetic textile colors with dual wire helix(es)
Temperature Range:	-30°F to +200°F -34°C to +93°C
Packaging:	100 ft. lengths; minimum run is 1200 ft. per size

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17751240002▲	1-1/2	38.10	2.19	55.56	2	150	1.03	3.00	76.20	1.20	1.79
17751250002	2	50.80	2.69	68.26	2	150	1.03	4.00	101.60	1.60	2.38
17751260002▲	2-1/2	63.50	3.22	81.76	2	150	1.03	5.00	127.00	2.00	2.98
17751270002▲	3	76.20	3.72	94.46	2	150	1.03	6.00	152.40	2.30	3.42
17751280002▲	4	101.60	4.80	121.84	2	150	1.03	8.00	203.20	3.40	5.06

▲ = Make To Order (MTO)

TYPE 95 FOOD – Gray Cover

Type 95 Food hose has been engineered to handle sugar and flour bulk truck usage and other pneumatically conveyed non-fat food handling services. It has also been designed to handle a **vacuum rating of 15 inches of mercury**. Type 95 Food hose can be used for plastic pellets and powders where contamination is a problem. This hose complies with current FDA regulations regarding aqueous foods. Depending on the application, this hose can be furnished with or without a static wire. It also can be furnished with straight or enlarged ends. The 3/16" thick natural rubber tube and 1/16" thick SBR cover are both abrasion resistant. The two to three plies of reinforcement give this hose flexibility. The helical wire maintains the roundness of the hose.

Resistance:	  
Branding:	Thermoid HBD Industries Type 95 Food Handling Hose Made In USA

Cover Color:	Gray
Oil Resistance:	Limited
Construction:	
Tube:	3/16" thick amber colored NR, non-toxic
Cover:	1/16" thick gray SBR rubber – corrugated
Reinforcement:	Two to three plies of fabric with helical wire
Temperature Range:	-40°F to +160°F -40°C to +71°C
Packaging:	50 ft. lengths maximum, for flour use 25 ft. maximum Hand built – \$250.00 minimum order per size Specify static ground wire , if required. Will be built and grounded – no charge

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
11454533502▲	3	75.20	3.88	98.43	2	15	0.10	18.00	457.20	2.20	3.27
11454534502▲	4	101.60	4.88	123.83	2	15	0.10	24.00	609.60	2.70	4.02
11454535502▲	5	127.00	6.00	152.40	3	15	0.10	30.00	762.00	3.40	5.06
11454536502▲	6	152.40	7.00	177.80	3	15	0.10	36.00	914.40	4.20	6.25

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

TYPE 96 FOOD – Gray Cover

Type 96 Food hose is the right hose for pneumatic handling of bulk, non-fat foods and gravity-drop service. Type 96 Food hose can be used for handling plastic pellets and powders where contamination is a problem. This hose is excellent for plant process and switch lines. Complies with the Food and Drug Administration current regulations for aqueous foods. This hose has been designed to handle a **vacuum rating of 15 inches of mercury**. Depending on the application, Type 96 Food hose can be furnished with or without a static wire. The natural rubber tube is non-toxic and abrasion resistant. The corrugated SBR cover resists the harmful effects of the weather. The coiled wire in the two plies of reinforcement maintain the roundness of the hose.

**Resistance:****Branding:**

Thermoid HBD Industries
Type 96 Food Handling Hose
Made In USA

Cover Color:	Gray
Oil Resistance:	Limited
Construction:	
Tube:	Sizes 1-1/2", 2", 2-1/2" have a 3/32" thick tube All other sizes have a 1/8" thick tube Amber colored NR
Cover:	1/16" thick gray SBR rubber – corrugated
Reinforcement:	Two to three plies of fabric with helical wire
Temperature Range:	-40°F to +160°F -40°C to +71°C
Packaging:	50 ft. lengths maximum, for flour use 25 ft. maximum Hand built – \$250.00 minimum order per size Specify static ground wire , if required. Will be built and grounded – no charge

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
11454468502▲	1-1/2	38.10	2.00	50.80	2	15	0.10	8.00	203.20	1.00	1.49
11454469502▲	2	50.80	2.50	63.50	2	15	0.10	10.00	254.00	1.10	1.64
11454470502▲	2-1/2	63.50	3.06	77.79	2	15	0.10	13.00	330.20	1.30	1.93
11454471502▲	3	76.20	3.63	92.08	2	15	0.10	15.00	381.00	1.50	2.23
11454472502▲	4	101.60	4.63	117.48	2	15	0.10	20.00	508.00	2.70	4.02
11454473502▲	5	127.00	5.69	144.46	2	15	0.10	25.00	635.00	3.30	4.91
11454474502▲	6	152.40	6.69	169.86	2	15	0.10	30.00	762.00	3.80	5.66
11454476502▲	8	203.20	8.75	222.25	2	15	0.10	40.00	1016.00	6.00	8.93

▲ = Make To Order (MTO)

TYPE 120 FOOD – Gray Cover

Type 120 Food hose is designed for bulk truck discharge and pneumatic handling of non-fat food grade materials, plastic pellets and powders. Type 120 Food hose complies with the current FDA regulations. This hose can be furnished with or without a static wire. It is also available with straight or enlarged ends. The natural rubber tube and SBR cover are both abrasion resistant. The two plies of cord fabric reinforcement allow the hose to be flexible enough to be collapsed and rolled up on itself. In service, this hose will round out when fully pressurized.

**Resistance:****Branding:**

Thermoid HBD Industries
Type 120 Food Handling Hose
Made In USA

Cover Color:	Gray
Oil Resistance:	Limited
Construction:	
Tube:	1/8" thick amber colored NR-FDA
Cover:	1/16" thick gray SBR rubber
Reinforcement:	Two plies of cord fabric
Temperature Range:	-40°F to +160°F -40°C to +71°C
Packaging:	50 ft. lengths maximum, for flour use 25 ft. maximum Hand built – \$250.00 minimum order per size

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
▲	5	127.00	5.56	141.29	2	15	0.10	n/a	n/a	2.50	3.72
▲	6	152.40	6.56	166.69	2	15	0.10	n/a	n/a	3.00	4.46

▲ = Make To Order (MTO)

n/a = Not Applicable



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

DREDGING SLEEVES

The recommended use for Dredging Sleeves is for the flexible connection between pipes used in dredging service. This hose features a high strength polyester reinforcement that gives this hose a high working pressure (125 psi) with less plies. The SBR/NR tube and cover compound is highly abrasion resistant. The SBR/EPDM cover is also weather resistant.



Resistance:



Branding:

Thermoid HBD Industries
Dredge Sleeves
Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: SBR/NR - 3/8" thick
Cover: SBR/EPDM - 3/32" thick
Reinforcement: High strength polyester cord
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 50 ft. lengths maximum
 Hand built – \$250.00 minimum order per size

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11444520502▲	4-1/2 114.30	5.88 149.23	4	125 0.86	45.00 1143.00	5.70 8.48
11444524502▲	6-5/8 168.28	8.00 203.20	4	125 0.86	66.25 1682.75	8.20 12.20
11444525502▲	8-5/8 219.08	10.19 258.76	6	125 0.86	86.25 2190.75	11.60 17.26
11444527502▲	10-3/4 273.05	12.31 312.74	6	125 0.86	107.50 2730.50	14.60 21.73
11444528502▲	12-3/4 323.85	14.50 368.30	8	125 0.86	127.50 3238.50	18.60 27.68
11444529502▲	14 355.60	15.88 403.23	8	125 0.86	140.00 3556.00	22.32 30.36
11444535502▲	16 406.40	17.75 450.85	10	125 0.86	160.00 4064.00	24.40 36.31
11444537502▲	18 457.20	20.00 508.00	12	125 0.86	180.00 4572.00	37.10 55.21
11444539502▲	20 508.00	22.25 565.15	14	125 0.86	200.00 5080.00	49.70 73.97
11444540502▲	24 609.60	27.50 698.50	18	125 0.86	240.00 6096.00	72.40 107.75

▲ = Make To Order (MTO)

RADIAL FLEX® AIR DUCTING – BLUE

The recommended use for Radial Flex Air Ducting is for air conveying, dry material transfer, dust removal and many other air service applications. The PVC construction with a helical wire reinforcement gives this a smaller bending radius, lighter weight and added flexibility. It has a smooth inner surface for maximum flow rate. It is also non-marking, abrasion resistant, plus resistant to sunlight, ozone and damaging industrial atmospheres. This is **not** designed for liquid or slurry applications. The bright blue color is non-fading. Good for use between 0°F to 150°F. Outside these limits, rubber hose is recommended. This hose has a **vacuum rating of 15 in. of Hg** for each size.



Resistance:



Branding:

None

Cover Color: Blue
Oil Resistance: Medium
Construction:
Tube: PVC
Cover: PVC
Reinforcement: Helical wire
Temperature Range: 0°F to +150°F
 -18°C to +66°C
Packaging: Coils, 100 ft. maximum, 1-1/2" to 4" I.D.

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	70 Degrees F		150 Degrees F		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
						Working Pressure (psi)	(Mpa)	Working Pressure (psi)	(Mpa)				
19031501002▲	1-1/2	38.10	1.33	33.78	n/a	30	0.21	5	0.03	4.00	101.60	0.24	0.36
19032001002▲	2	50.80	2.30	58.42	n/a	25	0.17	5	0.03	5.00	127.00	0.37	0.55
19032501002▲	2-1/2	63.50	2.83	71.88	n/a	25	0.17	5	0.03	6.00	152.40	0.63	0.94
19033001002▲	3	76.20	3.37	85.60	n/a	20	0.14	5	0.03	7.00	177.80	0.74	1.10
19034001002▲	4	101.60	4.44	112.78	n/a	15	0.10	5	0.03	10.00	254.00	1.00	1.49

▲ = Make To Order (MTO)

n/a = Not Applicable

ALERT: Large size, industrial hoses have caution and/or safety usage printed information attached by tag to the product or this information is printed onto the hose.

FROM LIGHT TO HEAVY DUTY MATERIAL HANDLING, TUFTEX CAN GET THE JOB DONE!

TUFTEX® is a versatile Ducting Product and offers you:

- MH-1 to MH-3 for Light to Heavy Duty Applications
- A Variety of Lengths & I.D. Diameters: 3" to 18" and/or more
- Top Performance in Wide Temperatures Ranging from -40°F to +280°F
- Designed for gravity or positive/negative pressure applications
- Superior abrasion resistance, long-term service and low maintenance

For complete details on TUFTEX products, see **PAGES 17-18** or call: 800/835-0682.

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SAND SUCTION

Sand Suction hose provides a flexible member on the suction side of a dredge for ease of movement of the dredge ladder. This hose also handles applications of severe suction service, sand, gravel and other abrasive materials. This hose features a wide variety of sizes available with two tube thicknesses (3/8" and 1/2"), all of which have excellent weathering abrasion resistance. This hose has been designed to hold a **vacuum rating of 30 inches of mercury** for every size.



Resistance:



Branding:

Thermoid HBD Industries
Sand Suction Made In USA

Cover Color:	Black
Oil Resistance:	Limited
Construction:	
Tube:	NR - 3/8" or 1/2" thick
Cover:	SBR/EPDM
Reinforcement:	Single steel helix spiralled between multiple plies of high tensile square woven polyester
Temperature Range:	-40°F to +160°F -40°C to +71°C
Packaging:	50 ft. lengths maximum Hand built - \$250.00 minimum order per size
Ends:	Built-in nipples, straight or enlarged Straight only for 6-5/8", 8-5/8", 10-3/4" and 12-3/4"

3/8" Inner Tube, 30 Inch Hg. Vacuum

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11444456502▲	6 152.40	7.88 200.03	5	125 0.86	60.00 1524.00	12.40 18.45
11444457502▲	6-5/8 168.28	8.56 242.89	5	125 0.86	66.25 1682.75	13.90 20.69
11444458502▲	8 203.20	10.00 254.00	5	125 0.86	80.00 2032.00	16.10 23.96
11444459502▲	8-5/8 219.08	10.69 271.46	6	125 0.86	86.25 2190.75	19.50 29.02
11444460502▲	10 254.00	12.25 311.15	6	125 0.86	100.00 2540.00	24.70 36.76
11444461502▲	10-3/4 273.05	13.00 330.20	6	125 0.86	107.50 2730.50	26.40 39.29
11444462502▲	12 304.80	14.31 363.54	7	125 0.86	120.00 3047.00	30.70 45.69
11444463502▲	12-3/4 323.85	15.06 382.59	7	125 0.86	127.50 3238.50	33.00 49.11
11444464502▲	14 355.60	16.44 417.51	8	125 0.86	140.00 3556.00	38.20 56.85
11444466502▲	16 406.40	18.63 473.08	9	125 0.86	160.00 4064.00	45.70 68.01
11444468502▲	18 457.20	20.75 527.05	10	125 0.86	180.00 4572.00	54.60 81.26
11444470502▲	20 508.00	23.06 585.79	11	125 0.86	200.00 5080.00	68.40 101.80

1/2" Inner Tube, 30 Inch Hg. Vacuum

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11444586502▲	6 152.40	8.13 206.38	5	125 0.86	60.00 1524.00	14.10 20.98
11444587502▲	6-5/8 168.28	8.81 249.24	5	125 0.86	66.25 1682.75	15.70 23.37
11444588502▲	8 203.20	10.25 260.35	5	125 0.86	80.00 2032.00	19.10 28.43
11444589502▲	8-5/8 219.08	11.00 279.40	6	125 0.86	86.25 2190.75	21.70 32.30
11444590502▲	10 254.00	12.50 317.50	6	125 0.86	100.00 2540.00	27.20 40.48
11444591502▲	10-3/4 273.05	13.25 336.55	6	125 0.86	107.50 2730.50	28.30 42.12
11444592502▲	12 304.80	14.63 371.48	7	125 0.86	120.00 3047.00	33.80 50.30
11444593502▲	12-3/4 323.85	15.38 390.53	7	125 0.86	127.50 3238.50	35.70 53.13
11444594502▲	14 355.60	16.69 423.86	8	125 0.86	140.00 3556.00	41.60 61.91
11444596502▲	16 406.40	18.94 481.01	9	125 0.86	160.00 4064.00	49.50 73.67
11444598502▲	18 457.20	21.00 533.40	10	125 0.86	180.00 4572.00	58.50 87.06
11444599502▲	20 508.00	23.38 593.73	11	125 0.86	200.00 5080.00	73.20 108.94

▲ = Make To Order (MTO)



LEAF REMOVAL MADE EASY WITH TUFTEX-LSH.

TUFTEX Type LSH-CB Leaf suction hose gets the job done. It is weather and abrasion resistant and built to get the job done. It comes in a variety of I.D. Sizes (6"- 18") and lengths to suit your application needs, including:

12" X 100' X 6" 12" X 10' X 6" 16" X 4' X 4"
 16" X 5' X 4" 16" X 100' X 4" 16" X 10' X 4"
 16" X 12' X 4" **AND MORE!**

For complete details on TUFTEX products, see **PAGES 17-18** or call: 800/835-0682.

Product information is subject to change. For full details, visit our website or contact Customer Service.

SAND AND CEMENT DISCHARGE Black Cover

Sand and Cement Discharge is the right hose for cement and concrete placement and sand slurry discharge applications. This hose is available with two tube thicknesses (1/4" and 1/2") both of which are very abrasion resistant. The black SBR/EPDM cover is resistant to abrasion, moisture, weathering and aging. The 4 to 10 plies of reinforcement allow for a range of working pressures from 60 to 100 psi.



Resistance:



Branding:

Thermoid HBD Industries
Sand and Cement Discharge
Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: SBR - 1/4" or 1/2" thick
Cover: SBR/EPDM
Reinforcement: Wrapped construction with 4 to 10 plies of medium weight duck fabric
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 50 ft. lengths maximum
 Hand built – \$250.00 minimum order per size

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11444632502▲	3 76.20	4.19 106.36	4	100 0.69	n/a n/a	4.40 6.55
11444633502▲	4 101.60	5.19 131.76	4	75 0.52	n/a n/a	5.60 8.33
11444634502▲	5 127.00	6.81 173.04	5	75 0.52	n/a n/a	10.20 15.18
11444635502▲	6 152.40	7.81 198.44	5	75 0.52	n/a n/a	11.90 17.71
11444636502▲	8 203.20	9.88 250.83	6	60 0.41	n/a n/a	16.30 24.26
11444637502▲	10 254.00	12.13 307.98	8	60 0.41	n/a n/a	23.90 35.57
11444638502▲	12 304.80	14.25 361.95	10	60 0.41	n/a n/a	28.00 41.67

▲ = Make To Order (MTO)
 n/a = Not Applicable

TRANSPORTER® HOT AIR BLOWER

Transporter Hot Air Blower hose is designed to handle air supply service up to 150 psi. This hose is also used for the transferring of hot air to tanks on dry bulk material trucks. This hose features an EPDM tube and cover which offers excellent heat resistance. The EPDM cover also stands up to the effects of ozone and weathering. This construction resists customary transport conditions. This hose is rated at **full vacuum**.



Resistance:



Branding:

Thermoid HBD Industries
Hot Air Blower Made In USA.
-20F to +350F

Cover Color: Brown
Oil Resistance: Limited
Construction:
Tube: EPDM
Cover: EPDM
Reinforcement: Spiral steel wire helix(es) between synthetic textile plies
Temperature Range: -30°F to +350°F
 -34 C to +177°C
Packaging: 100 ft. maximum

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17717025002▲	2-1/2 63.50	3.06 77.79	2	150 1.03	7.00 177.80	1.47 2.15
17717030002	3 76.20	3.56 90.49	2	150 1.03	9.00 228.60	1.72 2.49
17717040002▲	4 101.60	4.63 117.48	2	150 1.03	12.00 304.80	2.51 3.64

▲ = Make To Order (MTO)

CAN YOU HANDLE IT?

TUFTEX CAN!

TUFTEX® is a versatile Material Handling Ducting Product and offers you:

- MH-1 to MH-3 for Light to Heavy Duty Applications
- A Variety of Lengths & I.D. Diameters: 3" to 18" and/or more
- Effective Use in Wide Temperatures Ranging from -40° F to +280° F
- Products for gravity or positive/negative pressure applications
- Superior abrasion resistance, long-term service and low maintenance

For complete details on TUFTEX products, see **PAGES 17-18** or call: 800/835-0682.

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TRANSPORTER® MATERIAL DISCHARGE

Transporter Material Discharge is an extremely versatile discharge hose that will handle non-oily edibles, organic acids and abrasive products. The distinguishing blue SBR cover is abrasion and weather resistant. This hose features a 3/16" thick white natural rubber tube that meets all FDA requirements.



Resistance:



Branding:

Thermoid HBD Industries
Material Discharge FDA White
Natural Rubber Tube WP
Made In USA

Cover Color: Blue
Oil Resistance: Limited
Construction:
 Tube: NR, FDA white, nominal 3/16" thick
 Cover: SBR
 Reinforcement: Multiple plies of synthetic cord and static wire
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 100 ft. maximum

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17772020002▲	2 50.80	2.69 68.26	2	150 1.03	n/a n/a	1.20 1.79
17772030002▲	3 76.20	3.69 93.66	2	150 1.03	n/a n/a	1.70 2.53
17772040002▲	4 101.60	4.69 119.06	2	100 0.69	n/a n/a	2.40 3.57

▲ = Make To Order (MTO)

n/a = Not Applicable

TRANSPORTER® MATERIAL SUCTION

Transporter Material Suction is an extremely versatile suction hose that will handle non-oily edibles, organic acids and abrasive products. The distinguishing blue SBR corrugated cover is abrasion and weather resistant. This hose features a 3/16" thick white natural rubber tube that meets all FDA requirements. This hose is rated at **full vacuum**.



Resistance:



Branding:

Thermoid HBD Industries
Material Suction FDA White
Natural Rubber Tube WP
Made In USA

Cover Color: Blue
Oil Resistance: Limited
Construction:
 Tube: NR, FDA white, nominal 3/16" thick
 Cover: SBR, corrugated
 Reinforcement: Synthetic steel wire helix(es) between synthetic textile plies
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 100 ft. maximum

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17771115002▲	1-1/2 38.10	2.22 56.36	2	150 1.03	5.00 127.00	1.30 1.93
17771120002▲	2 50.80	2.75 69.85	2	150 1.03	7.00 177.80	1.60 2.38
17771125002▲	2-1/2 63.50	3.38 85.73	2	150 1.03	8.00 203.20	2.30 3.42
17771130002▲	3 76.20	3.88 98.43	2	150 1.03	9.00 228.60	2.70 4.02
17771140002▲	4 101.60	4.88 123.83	2	100 0.69	12.00 304.80	4.00 5.95

▲ = Make To Order (MTO)

FROM LIGHT TO HEAVY DUTY MATERIAL HANDLING,

TUFTEX CAN GET THE JOB DONE!

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For complete details on TUFTEX products, see **PAGES 17-18** or call: 800/835-0682.

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Product information is subject to change. For full details, visit our website or contact Customer Service.

TRANSPORTER® OIL FIELD VACUUM

Transporter Oil Field Vacuum hose is an economical, lightweight, rugged yet flexible hose designed for the transfer of crude oil, brine water, drilling mud, and diluted solutions of hydrochloric acids and diesel fuels. **Do not use with gasoline and other refined products with aromatic levels exceeding 35%.** This hose features a special fuel and oil resistant NBR/SBR blended compound that meets all the RMA IP-2, Class B oil resistance requirements. The reinforcement of multiple synthetic textile cords with a dual wire helix enables this hose to have a constant working pressure of 150 psi regardless of hose I.D. Transporter Oil Field Vacuum hose is rated at **full vacuum**.

**Resistance:****Branding:**

Thermoid/HBD Industries, Inc.
Transporter Oilfield Vacuum Service
150 PSI WP Not for Refined Fuels
Made In USA

Cover Color: Black
Oil Resistance: Medium
Construction:
Tube: NBR/SBR, RMA IP-2, Class B
Cover: SBR/EPDM, corrugated
Reinforcement: Multiple synthetic textile cords with dual wire helix(es)
Temperature Range: -30°F to +180°F
 -34°C to +82°C
Packaging: 100 ft. maximum

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17814461002▲	1-1/2 38.10	1.94 49.21	2	150 1.03	1.50 38.10	0.70 1.04
17814462002	2 50.80	2.44 61.91	2	150 1.03	2.00 50.80	0.90 1.34
17814463002▲	2-1/2 63.50	2.97 75.41	2	150 1.03	2.50 63.50	1.20 1.79
17814464002	3 76.20	3.47 88.11	2	150 1.03	3.00 76.20	1.40 2.08
17814465002	4 101.60	4.55 115.49	2	150 1.03	4.00 101.60	2.30 3.42

▲ = Make To Order (MTO)

TRANSPORTER® PLASTER & CONCRETE

The Transporter Plaster and Concrete hose is designed for rugged service in conveying concrete, grout and plaster-like materials being pumped to construction placement sites at high pressure. This hose features a SBR/NR tube that is static dissipative and abrasion resistant. The black SBR/EPDM cover is abrasion, weather and ozone resistant. The reinforcement of multiple plies of reinforcement enables this hose to perform at a constant working pressure of 1,233 psi per ASME B30.27-2009 Material Placement System Document, regardless of the I.D. of the hose.

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

**Resistance:****Branding:**

Thermoid HBD Industries
Plaster and Concrete "XXX" PSI
Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: SBR/NR
Cover: SBR/EPDM
Reinforcement: Multiple plies of high strength polyester
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 100 ft. maximum

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17779500002▲	1-1/4 31.75	1.88 47.63	4	1,233 8.50	11.00 279.40	0.90 1.34
17779510002▲	1-1/2 38.10	2.28 57.94	4	1,233 8.50	13.50 342.90	1.30 1.93
17779515002▲	2 50.80	2.81 71.44	4	1,233 8.50	18.00 457.20	1.70 2.53
17779520002▲	2-1/2 63.50	3.50 88.90	6	1,233 8.50	20.00 508.00	2.50 3.72

▲ = Make To Order (MTO)

**SEWER CLEANING SOLUTIONS...****TUFTEX M-2 and MH-3!**

Sewer cleaning needs vary, but **TUFTEX** handles the toughest jobs. **TUFTEX** comes in a variety of lengths and of ID Sizes. Shown below are just some of the many standard /common sizes:

8" X 60" X 4"
 8" X 66" X 4"
 8" X 72" X 4"
 8" X 102" X 4"
 8" X 127" X 4"
 8" X 62" X 4"
 8" X 68" X 4"
 8" X 100" X 4"
 8" X 120" X 4"
 8" X 20ft X 4"



For complete details on TUFTEX products, see **PAGES 17-18** or call: 800/835-0682.

TRANSPORTER® TYPE 120 DRY CEMENT

Transporter Type 120 Dry Cement hose is recommended for the unloading of dry bulk cement from trailer to storage silo by means of air pressure created in the trailer tank. This hose features a collapsible construction for easier handling and clean-up. The tube compound of SBR/NR blend resists the abrasive action of cement. This hose is also static conductive. The SBR/EPDM cover offers excellent abrasion resistance.



Resistance:



Branding:

Thermoid HBD Industries
Tube Size Type 120
Dry Cement/Dry Material
Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
 Tube: SBR/NR
 Cover: SBR/EPDM, 1/16" thick
 Reinforcement: Two plies of cord fabric
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 100 ft. maximum

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
17774454002	4	101.60	4.44	112.71	2	50	0.34	n/a	n/a	1.50	2.23
17774456002	4	101.60	4.56	115.89	2	50	0.34	n/a	n/a	2.00	2.98
17774458002	4	101.60	4.70	119.46	2	50	0.34	n/a	n/a	2.60	3.87

n/a = Not Applicable

Product Number	Tube Thickness (nominal)
17774454002▲	1/8
17774456002	3/16
17774458002	1/4

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

TYPE 101 MATERIAL HANDLING – Black Cover

Type 101 Material Handling hose has been designed to handle applications where a **vacuum rating of 20 inches of Hg** is required for discharge of open-end services. This hose can also handle air-suspended materials such as hay, silage, canning waste, dried leaves and street litter. This hose is lightweight, extremely easy to handle. This hose is available with straight or enlarged ends.



Resistance:



Branding:

Thermoid HBD Industries
Type 101 Material Handling
Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
 Tube: SBR/NR - 1/16" thick
 Cover: SBR/EPDM - corrugated
 Reinforcement: One wrapped ply of very lightweight fabric.
 Steel helix(es) wire resists collapse.
 Extra ply reinforcement at the ends.
 Standard 3' long straight blank ends.
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 30 ft. lengths maximum
 Hand built – \$250.00 minimum order per size

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
11470020502▲	2	50.80	2.50	63.50	1	20	0.14	6.00	152.40	0.60	0.89
11470025502▲	2-1/2	63.50	3.00	76.20	1	20	0.14	8.00	203.20	0.70	1.04
11470030502▲	3	76.20	3.50	88.90	1	20	0.14	9.00	228.60	0.80	1.19
11470035502▲	3-1/2	88.90	4.00	101.60	1	20	0.14	11.00	279.40	1.00	1.49
11470040502▲	4	101.60	4.50	114.30	1	20	0.14	12.00	304.80	1.10	1.64
11470050502▲	5	127.00	5.50	139.70	1	15	0.10	15.00	381.00	1.30	1.93
11470060502▲	6	152.40	6.50	165.10	1	15	0.10	18.00	457.20	1.60	2.38
11470080502▲	8	203.20	8.50	215.90	1	15	0.10	24.00	609.60	2.30	3.42
11470100502▲	10	254.00	10.50	266.70	1	10	0.07	30.00	762.00	2.90	4.32
11470120502▲	12	304.80	12.50	317.50	1	10	0.07	36.00	914.40	3.50	5.21
11470140502▲	14	355.60	14.50	368.30	1	10	0.07	42.00	1066.80	4.30	6.40
11470160502▲	16	406.40	16.50	419.10	1	10	0.07	48.00	1219.20	5.20	7.74

▲ = Make To Order (MTO)

TYPE 102 MATERIAL HANDLING

Type 102 Material Handling hose is used in those areas where those applications require either a **full vacuum rating** or 150 psi working pressure. This hose has been specifically designed to be compatible with 2 piece aluminum coupling for ease of field installation. The reinforcement of polyester plies with a helical wire allows Type 102 Material Handling hose to resist crushing, kinking or collapsing.



Resistance:



Branding:

Thermoid HBD Industries
Type 102 Material Handling
Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
 Tube: NR - tan. 40 durometer
 Cover: SBR/EPDM - corrugated
 Reinforcement: Wrapped construction with polyester plies and a steel wire helix(es)
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 30 ft. lengths maximum
 Hand built - \$250.00 minimum order per size

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
11476003502▲	3	76.20	4.50	114.30	3	150	1.03	18.00	457.20	5.10	7.59
11476004502▲	4	101.60	5.25	133.35	3	150	1.03	24.00	609.60	5.50	8.19
11476005502▲	5	127.00	6.44	163.51	3	150	1.03	30.00	762.00	8.00	11.91
11476006502▲	6	152.40	7.50	190.50	4	150	1.03	36.00	914.40	11.40	16.97
11476007502▲	8	203.20	9.50	241.30	4	150	1.03	48.00	1219.20	16.00	23.81
11476010502▲	10	254.00	11.50	292.10	4	150	1.03	60.00	1524.00	19.80	29.47
11476012502▲	12	304.80	13.50	342.90	4	150	1.03	72.00	1828.80	24.20	36.02

▲ = Make To Order (MTO)

TYPE 103 EXHAUST – Black Cover

Type 103 Exhaust hose is recommended for **full vacuum** and low pressure discharge service for exhausting toxic and corrosive fumes from working areas. Type 103 Exhaust hose is **not** designed to carry abrasives. This hose features a corrugated construction which makes the hose very flexible. Straight or enlarged ends are available depending on the application. The wrapped construction with two to four plies of medium weight, loosely woven fabric, along with a steel wire helix allows Type 103 Exhaust hose to resist crushing, kinking or collapsing. This hose comes with the standard 3" long straight blank ends.



Resistance:



Branding:

Thermoid HBD Industries
Type 103 Exhaust
Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
 Tube: SBR/NR - 3/64" thick
 Cover: SBR/EPDM - corrugated
 Reinforcement: Wrapped construction with two to four plies with a helical wire
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 50 ft. lengths maximum
 Hand built - \$250.00 minimum order per size

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
11474020502▲	2	50.80	2.50	63.50	2	25	0.17	12.00	304.80	0.90	1.34
11474025502▲	2-1/2	63.50	3.00	76.20	2	25	0.17	15.00	381.00	1.20	1.79
11474030502▲	3	76.20	3.50	88.90	2	25	0.17	18.00	457.20	1.40	2.08
11474035502▲	3-1/2	88.90	4.00	101.60	2	25	0.17	21.00	533.40	1.80	2.68
11474040502▲	4	101.60	4.50	114.30	2	25	0.17	24.00	609.60	2.00	2.98
11474050502▲	5	127.00	5.75	146.05	3	25	0.17	30.00	762.00	2.80	4.17
11474060502▲	6	152.40	6.75	171.45	3	25	0.17	36.00	914.40	3.30	4.91
11474080502▲	8	203.20	8.75	222.25	3	25	0.17	48.00	1219.20	4.90	7.29
11474100502▲	10	254.00	10.94	277.81	4	25	0.17	60.00	1524.00	7.00	10.42
11474120502▲	12	304.80	12.94	328.61	4	25	0.17	72.00	1828.80	8.70	12.95
11474140502▲	14	355.60	14.94	379.41	4	25	0.17	84.00	2133.60	10.10	15.03
11474160502▲	16	406.40	16.94	430.21	4	25	0.17	96.00	2438.40	11.50	17.11

▲ = Make To Order (MTO)



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
 For Made to Order Hose, Customer Order Form, see catalog page 137.

TYPE 105 COLLECTOR – Black Cover

Type 105 Collector hose has been designed for applications that require **full vacuum** and low pressure discharge service to conduct dust and abrasive materials suspended in the air. This hose also handles dust collectors, metal machining tools, graphite and marble chipping tools. Type 105 will handle some grains if not too abrasive. Suitable for street cleaning machine. Straight, enlarged or Flexseal™ ends are available. This hose features a wrapped construction with either two or four plies of medium weight, loosely woven fabric with a helical steel wire. This allows the hose to resist crushing, kinking or collapsing.

**Resistance:****Branding:**

Thermoid HBD Industries
Type 105 Collector
Made In USA

Cover Color:	Black
Oil Resistance:	Limited
Construction:	
Tube:	SBR/NR - 1/8" thick
Cover:	SBR/NR - corrugated
Reinforcement:	Wrapped construction with two to four plies with a helical wire
Temperature Range:	-40°F to +160°F -40°C to +71°C
Packaging:	50 ft. lengths maximum Hand built – \$250.00 minimum order per size

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11474660502▲	2 50.80	2.75 69.85	2	25 0.17	12.00 304.80	1.20 1.79
11474661502▲	2-1/2 63.50	3.25 82.55	2	25 0.17	15.00 381.00	1.50 2.23
11474662502▲	3 76.20	3.75 95.25	2	25 0.17	18.00 457.20	1.80 2.68
11474657502▲	3-1/2 88.90	4.25 107.95	2	25 0.17	21.00 533.40	2.00 2.98
11474664502▲	4 101.60	4.75 120.65	2	25 0.17	24.00 609.60	2.40 3.57
11474665502▲	5 127.00	5.88 149.23	3	25 0.17	30.00 762.00	3.30 4.91
11474666502▲	6 152.40	6.88 174.63	3	25 0.17	36.00 914.40	4.00 5.95
11474668502▲	8 203.20	8.88 225.43	3	25 0.17	48.00 1219.20	5.80 8.63
11474670502▲	10 254.00	11.13 282.58	4	25 0.17	60.00 1524.00	8.10 12.05
11474672502▲	12 304.80	13.13 333.38	4	25 0.17	72.00 1828.80	10.00 14.88
11474674502▲	14 355.60	15.13 384.18	4	25 0.17	84.00 2133.60	11.60 17.26
11474676502▲	16 406.40	17.18 434.98	4	25 0.17	96.00 2438.40	13.20 19.65

▲ = Make To Order (MTO)

TURN TO
PAGE 17
OF THIS CATALOG!

SWEEP IT CLEAN WITH TUFTEX- LSH.

TUFTEX Type LSH-CB is weather and abrasion resistant and built to clean up. It is available in a wide variety of I.D. Sizes (6" to 18") and lengths for your street cleaning requirements.

Common Sizes:

9" X 34" X 3" 10" X 26" X 3" 10" X 28" X 3" 10" X 32" X 3"
11" X 62" X 3" 12" X 28" X 3" 14" X 26" X 3" 14" X 30" X 3"
14" X 36" X 3" 14" X 38" X 3" **AND MORE!**

For complete details on TUFTEX products, see **PAGES 17-18** or call: 800/835-0682.

FROM LIGHT TO HEAVY DUTY MATERIAL HANDLING,**TUFTEX CAN GET THE JOB DONE!**

TUFTEX® is a versatile Ducting Product and offers you:

- MH-1 to MH-3 for Light to Heavy Duty Applications
- A Variety of Lengths & I.D. Diameters: 3" to 18" and/or more
- Top Performance in Wide Temperatures Ranging from -40°F to +280°F
- Designed for gravity or positive/negative pressure applications
- Superior abrasion resistance, long-term service and low maintenance

For complete details on TUFTEX products, see **PAGES 17-18** or call: 800/835-0682.

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Product information is subject to change. For full details, visit our website or contact Customer Service.

CONVERTAPIPE® – Black Cover

Convertapipe is a flexible rubber hose used for the process piping in suction or discharge service. This hose is frequently used for handling ore in water suspension, dry or water suspended grain, chemicals, metal shavings, wood particles, fish, shells and some sand and gravel. Convertapipe is rated at **full vacuum**. The black SBR/EPDM cover is resistant to snagging, abrasion and weather aging. The reinforcement of a steel wire helix and multiple plies of square woven fabric resists kinking, crushing and collapsing. The exclusive SBR/NR compound has excellent abrasion resistance. Convertapipe is available in a variety of tube gauges, compounds and end types. Please contact Salisbury for more information.

Tube compounds available:

SBR	CSM	SBR/NR blend
NR	EPDM	Additional compounds available
CR	IIR	

Tube gauges available:

1/8"	3/8"	3/4"
3/16"	1/2"	1"
1/4"		



Resistance:



Branding:

Thermoid HBD Industries
Convertapipe WP
Made In USA

Cover Color:	Black	
Oil Resistance:	Limited	
Construction:		
Tube:	SBR/NR	
Cover:	SBR/EPDM	
Cover Thickness:	25 lb. WP and 50 lb. WP - 3/64" 75 lb. through 250 lb. - 1/16" For other thicknesses, contact Salisbury for details	
Reinforcement:	Square woven fabric plies with helical wire(s) embedded in a cushion of rubber	
Temperature Range:	-40°F to +160°F -40°C to +71°C	
Packaging:	Make to Order (MTO), minimum order \$250.00 Contact Salisbury for details	
Type Ends:		
1. Straight	3. Flexlock™	5. Built-In Nipple
2. Enlarged	4. Flexseal™	6. Soft Cuffs

1/4" Tube	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Fits Over Pipe I.D. (inches) (mm)	Type Ends	Working Pressure (psi) (Mpa)	Weight (lb/ft) (Kg/m)
	1 25.40	1.94 49.21		1 2	25 0.17	1.20 1.79
	1-1/2 38.10	2.44 61.91		1 2 3	25 0.17	1.70 2.53
	2 50.80	3.00 76.20		1 2 3 4 5	25 0.17	2.70 4.02
	2-3/8 60.33	3.38 85.73	2 50.80	1	25 0.17	2.70 4.02
	2-1/2 63.50	3.50 88.90		1 2 3 4 5	25 0.17	2.80 4.17
	2-7/8 73.03	3.88 98.43	2-1/2 63.50	1	25 0.17	3.20 4.76
	3 76.20	4.06 103.19		1 2 3 4 5	25 0.17	3.70 5.51
	3-1/2 88.90	4.56 115.89	3 76.20	1 2 3 4 5	25 0.17	4.10 6.10
	4 101.60	5.06 128.59		1 2 3 4 5	25 0.17	5.00 7.44
	4-1/2 114.30	5.56 141.29	4 101.60	1	25 0.17	5.50 8.18
	5 127.00	6.25 158.75		1 2 3 4 5	25 0.17	6.10 9.08
	6 152.40	7.31 185.74		1 2 3 4 5	25 0.17	8.10 12.05
	6-5/8 168.28	7.94 201.61	6 152.40	1	25 0.17	8.60 12.80
	8 203.20	9.44 239.71		1 2 3 4 5	25 0.17	10.80 16.07
	8-5/8 219.08	10.06 255.59	8 203.20	1	25 0.17	11.80 17.56
	10 254.00	11.50 292.10		1 2 3 4 5	25 0.17	14.60 21.72
	10-3/4 273.05	12.25 311.15	10 254.00	1	25 0.17	16.90 25.15
	12 304.80	13.56 344.49		1 2 3 4 5	25 0.17	18.20 27.08
	12-3/4 323.85	14.31 363.54	12 304.80	1	25 0.17	21.00 31.25
	14 355.60	15.81 401.64	14" OD 355.60	1 3 4 5	25 0.17	25.10 37.35
	16 406.40	17.81 458.79	16" OD 406.40	1 3 4 5	25 0.17	31.80 47.31

1/4" Tube	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Fits Over Pipe I.D. (inches) (mm)	Type Ends	Working Pressure (psi) (Mpa)	Weight (lb/ft) (Kg/m)
	1 25.40	1.94 49.21		1 2	50 0.35	1.20 1.79
	1-1/2 38.10	2.44 61.91		1 2 3	50 0.35	1.70 2.53
	2 50.80	3.00 76.20		1 2 3 4 5	50 0.35	2.50 3.72
	2-3/8 60.33	3.38 85.73	2 50.80	1	50 0.35	2.80 4.17
	2-1/2 63.50	3.50 88.90		1 2 3 4 5	50 0.35	3.00 4.46
	2-7/8 73.03	3.88 98.43	2-1/2 63.50	1	50 0.35	3.50 5.21
	3 76.20	4.06 103.19		1 2 3 4 5	50 0.35	3.70 5.51
	3-1/2 88.90	4.56 115.89	3 76.20	1 2 3 4 5	50 0.35	4.00 5.95
	4 101.60	5.06 128.59		1 2 3 4 5	50 0.35	4.90 7.29
	4-1/2 114.30	5.56 141.29	4 101.60	1	50 0.35	5.50 8.18
	5 127.00	6.25 158.75		1 2 3 4 5	50 0.35	6.30 9.37
	6 152.40	7.31 185.74		1 2 3 4 5	50 0.35	8.10 12.05
	6-5/8 168.28	8.13 206.38	6 152.40	1	50 0.35	8.90 13.24
	8 203.20	9.44 239.71		1 2 3 4 5	50 0.35	11.20 16.66
	8-5/8 219.08	10.06 255.59	8 203.20	1	50 0.35	13.10 19.49
	10 254.00	11.50 292.10		1 2 3 4 5	50 0.35	15.70 23.36
	10-3/4 273.05	12.31 312.74	10 254.00	1	50 0.35	17.00 25.29
	12 304.80	13.63 346.08		1 2 3 4 5	50 0.35	19.20 28.57
	12-3/4 323.85	14.38 365.13	12 304.80	1	50 0.35	19.80 29.46
	14 355.60	15.81 401.64	14" OD 355.60	1 3 4 5	50 0.35	25.10 37.35
	16 406.40	17.81 452.44	16" OD 406.40	1 3 4 5	50 0.35	31.90 47.46

CONVERTAPIPE® – Black Cover (Continued)

1/4" Tube	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Fits Over Pipe I.D. (inches) (mm)	Type Ends	Working Pressure (psi) (Mpa)	Weight (lb/ft) (Kg/m)
	1 25.40	1.94 49.21		1 2 4	75 0.52	1.20 1.79
	1-1/2 38.10	2.44 61.91		1 2 3	75 0.52	1.70 2.53
	2 50.80	3.06 77.79		1 2 3 4 5	75 0.52	2.70 4.02
	2-3/8 60.33	3.44 87.31	2 50.80	1	75 0.52	3.00 4.46
	2-1/2 63.50	3.56 90.49		1 2 3 4 5	75 0.52	3.20 4.76
	2-7/8 73.03	3.94 100.01	2-1/2 63.50	1	75 0.52	3.50 5.21
	3 76.20	4.13 104.78		1 2 3 4 5	75 0.52	3.70 5.51
	3-1/2 88.90	4.63 117.48	3 76.20	1 2 3 4 5	75 0.52	4.10 6.10
	4 101.60	5.19 131.76		1 2 3 4 5	75 0.52	5.30 7.89
	4-1/2 114.30	5.69 144.46	4 101.60	1	75 0.52	5.80 8.63
	5 127.00	6.25 158.75		1 2 3 4 5	75 0.52	6.40 9.52
	6 152.40	7.38 187.33		1 2 3 4 5	75 0.52	8.40 12.50
	6-5/8 168.28	8.13 206.38	6 152.40	1	75 0.52	9.40 13.99
	8 203.20	9.44 239.71		1 2 3 4 5	75 0.52	11.90 17.71
	8-5/8 219.08	10.06 255.59	8 203.20	1	75 0.52	13.80 20.53
	10 254.00	11.56 293.69		1 2 3 4 5	75 0.52	16.40 24.40
	10-3/4 273.05	12.31 312.74	10 254.00	1	75 0.52	18.10 26.93
	12 304.80	13.75 349.25		1 2 3 5	75 0.52	23.80 35.41
	12-3/4 323.85	14.50 368.30	12 304.80	1	75 0.52	25.70 38.24
	14 355.60	16.00 406.40	14" OD 355.60	1 3 5	75 0.52	30.90 45.98
	16 406.40	18.06 458.79	16" OD 406.40	1 3 5	75 0.52	42.40 63.09

1/4" Tube	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Fits Over Pipe I.D. (inches) (mm)	Type Ends	Working Pressure (psi) (Mpa)	Weight (lb/ft) (Kg/m)
	1 25.40	1.94 49.21		1 2	100 0.69	1.20 1.79
	1-1/2 38.10	2.44 61.91		1 2	100 0.69	1.60 2.38
	2 50.80	3.06 77.79		1 2 3 4 5	100 0.69	2.70 4.02
	2-3/8 60.33	3.44 87.31		1	100 0.69	2.80 4.17
	2-1/2 63.50	3.56 90.49		1 2 3 4 5	100 0.69	3.10 4.61
	2-7/8 73.03	3.94 100.01	2-1/2 63.50	1	100 0.69	3.30 4.91
	3 76.20	4.19 106.36		1 2 3 4 5	100 0.69	3.70 5.51
	3-1/2 88.90	4.69 119.06	3 76.20	1 2 3 4 5	100 0.69	4.10 6.10
	4 101.60	5.19 131.76		1 2 3 4 5	100 0.69	5.20 7.74
	4-1/2 114.30	5.69 144.46	4 101.60	1	100 0.69	5.80 8.63
	5 127.00	6.31 160.34		1 2 3 4 5	100 0.69	6.40 9.52
	6 152.40	7.38 187.33		1 2 3 4 5	100 0.69	8.70 12.94
	6-5/8 168.28	8.13 206.38	6 152.40	1	100 0.69	9.50 14.13
	8 203.20	9.56 242.89		1 2 3 4 5	100 0.69	12.50 18.60
	8-5/8 219.08	10.19 258.76	8 203.20	1	100 0.69	13.90 20.68
	10 254.00	11.69 296.86		1 2 3 4 5	100 0.69	17.50 26.04
	10-3/4 273.05	12.44 315.91	10 254.00	1	100 0.69	18.70 27.82
	12 304.80	13.88 352.43		1 2 3 5	100 0.69	25.30 37.64
	12-3/4 323.85	14.63 371.48	12 304.80	1	100 0.69	25.80 38.39
	14 355.60	16.13 409.58	14" OD 355.60	1 5	100 0.69	31.10 46.27
	16 406.40	18.31 465.14	16" OD 406.40	1 5	100 0.69	42.50 63.24

1/4" Tube	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Fits Over Pipe I.D. (inches) (mm)	Type Ends	Working Pressure (psi) (Mpa)	Weight (lb/ft) (Kg/m)
	1-1/2 38.10	2.56 65.09		1 2	150 1.03	2.00 2.98
	2 50.80	3.06 77.79		1 2 3 5	150 1.03	2.60 3.87
	2-3/8 60.33	3.44 87.31	2	1	150 1.03	3.00 4.46
	2-1/2 63.50	3.56 90.49		1 2 3 5	150 1.03	3.10 4.61
	2-7/8 73.03	3.94 100.01	2-1/2 63.50	1	150 1.03	3.50 5.21
	3 76.20	4.25 107.95		1 2 3 5	150 1.03	3.60 5.36
	3-1/2 88.90	4.75 120.65	3 76.20	1 2 3 5	150 1.03	4.10 6.10
	4 101.60	5.31 134.94		1 2 3 5	150 1.03	5.80 8.63
	4-1/2 114.30	5.81 147.64	4 101.60	1	150 1.03	6.60 9.82
	5 127.00	6.44 163.51		1 2 3 5	150 1.03	7.10 10.56
	6 152.40	7.56 192.09		1 2 3 5	150 1.03	9.50 14.13
	6-5/8 168.28	8.19 207.96	6 152.40	1	150 1.03	10.50 15.62
	8 203.20	9.81 249.24		1 2 3 5	150 1.03	14.80 22.02
	8-5/8 219.08	10.44 265.11	8 203.20	1	150 1.03	16.30 24.25
	10 254.00	12.06 306.39		1 2 3 5	150 1.03	20.00 29.76
	10-3/4 273.05	12.81 325.44	10 254.00	1	150 1.03	22.10 32.88
	12 304.80	14.31 363.54		1 5	150 1.03	28.90 43.00
	12-3/4 323.85	15.06 382.59	12 304.80	1	150 1.03	30.40 45.23
	14 355.60	16.56 420.69	14" OD 355.60	1 5	150 1.03	36.20 53.86

1/4" Tube	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Fits Over Pipe I.D. (inches) (mm)	Type Ends	Working Pressure (psi) (Mpa)	Weight (lb/ft) (Kg/m)
	2 50.80			5	250 1.72	12.00 17.85
	2-1/2 63.50			5	250 1.72	21.80 32.44
	3 76.20			5	250 1.72	27.20 40.47
	4 101.60			5	250 1.72	32.90 48.95
	5 127.00			5	250 1.72	39.70 59.07

Product information is subject to change. For full details, visit our website or contact Customer Service.

FLEXLOCK™ ENDS – Full Face Flanges (Duck & Rubber Ends)

Flexlock Ends applications are the same as the Flexseal™ Ends. This Thermoid patented method of joining hose produces a flexible, rubber-to-rubber seal of great strength. Rubber facing eliminates the need for a gasket. It also provides a rubber seal, thus eliminating any metal contact with the contents of the hose. Flexlock Ends are a rubber flange, reinforced with heavy hose fabric and forming a continuation of the hose tube, backed by a solid steel ring with either 150 lb. or 300 lb. drilling. Flanges cannot be rotated to align bolt holes.

Nominal I.D. (inches)	(mm)	Working Pressure (psi)	(Mpa)
1-1/2" to 10"	38.1 to 254	150	1.03
12	304.80	125	0.86
14	355.60	90	0.62
16	406.40	90	0.62
18	457.20	75	0.52
20	508.00	75	0.52



Resistance:

Varies

Industry Reference:

Duck & Rubber Ends

Cover Color: N/A
Oil Resistance: Varies, depending on polymer used in compound
Construction:
Tube: N/A
Cover: N/A
Reinforcement: N/A
Temperature Range: Varies, depending on the polymer used in compound
Packaging: Hand built – \$250.00 minimum order per size

FLEXLOCK™ CONNECTORS (Duck & Rubber Connectors)

Flexlock Connectors are stronger than the Flexseal™ connectors. Flexlock is designed for working pressures from 100 to 150 psi. The natural rubber tube is abrasion and acid resistant. No metal touches the material being carried. Flexlock can be ordered with or without wire reinforcement. Flanged ends are drilled to bolt to companion standard flat-face flanges, providing a tight seal without a gasket. The connector is furnished with a solid steel backup flange, vulcanized to the duck of the rubber flange. Flexlock Connectors are short lengths of hose for joining metal piping thereby putting non-rigid couplings into the lines. Made of thick flexible rubber, they absorb vibrations and prevent the transmission of noise and damaging vibrations through the metal pipes. As a result, pumps, controls, valves and other equipment have longer life.



Resistance:



Industry Reference:

Duck & Rubber Connectors

Cover Color: N/A
Oil Resistance: Limited
Construction:
Tube: Natural rubber, 3/16" thick
Cover: SBR
Reinforcement: N/A
Temperature Range: -40° to +160°F
-40°C to +71°C
Packaging: Hand built – \$250.00 minimum order per size

Non-wire Reinforced Wire Reinforced

Nominal I.D. (inches)	(mm)	Working Pressure (psi)	(Mpa)	Working Pressure (psi)	(Mpa)
1-1/2	38.10	150	1.03	150	1.03
2	50.80	150	1.03	150	1.03
2-1/2	63.50	150	1.03	150	1.03
3	76.20	100	0.69	150	1.03
4	101.60	100	0.69	150	1.03
5	127.00	100	0.69	150	1.03
6	152.40	100	0.69	150	1.03
8	203.20	100	0.69	150	1.03
10	254.00	100	0.69	150	1.03
12	304.80	100	0.69	100	0.69

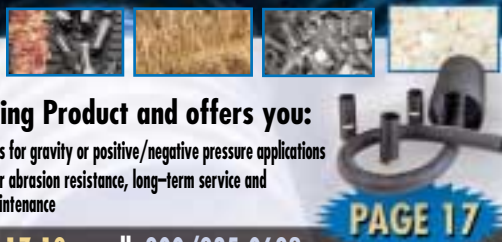
CAN YOU HANDLE IT?

TUFTEX CAN!

TUFTEX® is a versatile Material Handling Ducting Product and offers you:

- MH-1 to MH-3 for Light to Heavy Duty Applications
- A Variety of Lengths & I.D. Diameters: 3" to 18" and/or more
- Effective Use in Wide Temperatures Ranging from -40° F to +280° F
- Products for gravity or positive/negative pressure applications
- Superior abrasion resistance, long-term service and low maintenance

For complete details on TUFTEX products, see **PAGES 17-18** or call: 800/835-0682.



PAGE 17

FLEXSEAL™ ENDS (Beaded Ends)

Flexseal Ends are designed to be used where hose must be joined to another hose or pipe for carrying acids and other chemicals, abrasive materials and fluids that must be kept uncontaminated by metals. Hose I.D. is unrestricted. O.D. end is flared out by building the reinforcement and rubber around an angle steel ring and extending the tube out and over the enlargement. Around each end, behind the flare, a split flange is used with either 150 lb. or 300 lb. drilling. To join two Flexseal Ends, they are aligned without twisting the hose. Bolts are inserted and drawn tight. This compresses the rubber hose ends together making a leakproof seal. No gasket is required. Beaded end.

Nominal I.D. (inches) (mm)		Working Pressure (psi) (Mpa)	
1-1/2" to 10"	38.1 to 254	100	0.69
12	304.80	70	0.48
14	355.60	60	0.41
18	457.20	50	0.34
20	508.00	50	0.34

FLEXSEAL™ CONNECTORS (Beaded Connectors)

Flexseal Connectors allow full flow in the pipeline. Designed for working pressures from 50 to 100 psi, depending on the inside diameter of the connector. The natural rubber tube is abrasion and acid resistant. No metal touches the material being carried. Flexseal is available with or without wire reinforcement. The wire-reinforced type has a helix(es) of steel wire buried in the hose to keep it from collapsing under full suction. Used in both suction and discharge services. Non wire-reinforced type only recommended for pinch-valve or discharge service, where material handled cakes in the tube. Split flanges are drilled to bolt companion standard flat-face flanges. They provide a tight seal without a gasket. Since the flanges rotate freely, alignment of the bolts is easy, thus reducing installation time to a minimum. Service involving operating temperatures over 150°F should be reviewed with Salisbury. Flexseal Connectors are short lengths of hose for joining metal piping, thereby putting non-rigid couplings into the lines. Made of thick flexible rubber, they absorb vibrations and prevent the transmission of noise and damaging vibrations through the metal pipes. As a result, pumps, controls, valves and other equipment have longer life.

**Resistance:**

Varies

Industry Reference:

Beaded Ends

Cover Color:

N/A

Oil Resistance:

Varies, depending on polymer used in compound

Construction:**Tube:** N/A**Cover:** N/A**Reinforcement:** N/A**Temperature Range:**

Varies, depending on the polymer used in compound

Packaging:

Hand built – \$250.00 minimum order per size

**Resistance:****Industry Reference:**

Beaded Connectors

Cover Color:

N/A

Oil Resistance:

Limited

Construction:**Tube:** Natural rubber, 3/16" thick**Cover:** SBR**Reinforcement:** N/A**Temperature Range:**

-40°F to +160°F

-40°C to +71°C

Packaging:

Hand built – \$250.00 minimum order per size

		Non-wire Reinforced		Wire Reinforced	
Nominal I.D. (inches) (mm)		Working Pressure (psi) (Mpa)		Working Pressure (psi) (Mpa)	
1-1/2	38.10	100	0.69	100	0.69
2	50.80	100	0.69	100	0.69
2-1/2	63.50	100	0.69	100	0.69
3	76.20	75	0.52	75	0.52
4	101.60	75	0.52	75	0.52
5	127.00	70	0.48	60	0.41
6	152.40	60	0.41	50	0.34
8	203.20	50	0.34	50	0.34
10	254.00	50	0.34	50	0.34
12	304.80	50	0.34	50	0.34

FROM LIGHT TO HEAVY DUTY MATERIAL HANDLING,**TUFTEX CAN GET THE JOB DONE!****TUFTEX® is a versatile Ducting Product and offers you:**

- MH-1 to MH-3 for Light to Heavy Duty Applications
- A Variety of Lengths & I.D. Diameters: 3" to 18" and/or more
- Top Performance in Wide Temperatures Ranging from -40°F to +280°F
- Designed for gravity or positive/negative pressure applications
- Superior abrasion resistance, long-term service and low maintenance

For complete details on TUFTEX products, see **PAGES 17-18** or call: 800/835-0682.**PAGE 17**

Product information is subject to change. For full details, visit our website or contact Customer Service.

BOTTOM LOADING

Bottom Loading hose is engineered specifically for bottom loading, high pressure tank truck service. Construction of this hose has been stabilized to prevent elongation during service. This hose is rated at **full vacuum**. The black CR cover has excellent resistance to abrasion, weathering and ozone. The NBR tube is resistant to oil. Bottom Loading hose has a reinforcement of tire cord with a dual wire helix that allows this to handle a constant working pressure of 250 psi for both the 3" or 4" I.D.



Resistance:

Branding:
None

- Cover Color: Black
- Oil Resistance: High
- Construction:

Tube: NBR with an aromatic range up to 55%

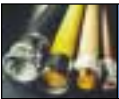
Cover: CR

Reinforcement: Tire cord with dual wire helix(es)
- Temperature Range: -20°F to +200°F
-29°C to +93°C
- Packaging: 100 ft. maximum. Minimum run of 1200 ft. per size.

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17811503002▲	3	76.20	3.75	95.25	4	250	1.72	12.00	304.80	2.30	3.42
17811504002▲	4	101.60	4.88	123.83	4	250	1.72	18.00	457.20	3.51	5.22

▲ = Make To Order (MTO)

ALERT: Large size, industrial hoses have caution and/or safety usage printed information attached by tag to the product or this information is printed onto the hose.



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Thermoid® FUEL OIL DELIVERY

Thermoid Fuel Oil Delivery hose is designed for the delivery and transfer of a wide variety of fuels, oils, and other petroleum-based products for home delivery, marine, commercial and industrial service*. This hose's unique spiral construction adds strength and flexibility to the hose while making it easy to handle, kink resistant and its smooth, durable cover resists oil and abrasion plus is less resistant to dragging. These tough features help make Thermoid, the driver's choice for fuel oil delivery hose.

Note: A static wire is included on all sizes as a safety precaution

* Compatible fuels are kerosene, commercial unleaded gasoline and ethanol blends (up to E-85), diesel, Bio-diesel and Bio-diesel blends (based on bio-diesel fuel equivalent to ASTM D 6751.

**Resistance:****Branding:**

Thermoid Fuel Oil Hose WP 250
PSI Made In USA Month/Year

Cover Color: Red

Oil Resistance: High

Construction:

Tube: NBR, RMA Class A

Cover: NBR/PVC, RMA Class A

Reinforcement: High tensile spiral polyester cord

Temperature Range: Fuel Oils -40°F (-40°C) to +150°F (+70°C)
Gasoline/Gasoline Blends -40°F (-40°C) to +104°F (40°C)■

Packaging: Reels

■ Use in Gasoline or Ethanol Blend Applications above +104°F (40°C) is not recommended.

Reels (Thermocure)

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
22564642662	1	25.40	1.50	38.10	4	250	1.72	7.00	177.80	0.47	0.70
22564802662	1-1/4	31.75	1.78	45.24	4	250	1.72	8.75	222.25	0.59	0.88
22564882662	1-3/8	34.93	1.88	47.63	4	250	1.72	9.25	234.95	0.65	0.97
22564962662	1-1/2	38.10	2.09	53.18	4	250	1.72	10.50	266.70	0.80	1.19

Cut and Coupled Lengths

Product Number Uncoupled Coupled		Nominal I.D. (inches) (mm)		Lengths (feet) (meters)	
22564642102	22564642111	1	25.40	100.00	30.48
22564642122	22564642131	1	25.40	125.00	38.10
22564642152	22564642141	1	25.40	150.00	45.72
22564642172	22564642171	1	25.40	175.00	53.34
22564802102	22564802111	1-1/4	31.75	100.00	30.48
22564802122	22564802131	1-1/4	31.75	125.00	38.10
22564802152	22564802141	1-1/4	31.75	150.00	45.72
22564802162	22564802171	1-1/4	31.75	175.00	53.34
22564882102	22564882111	1-3/8	34.93	100.00	30.48
22564882122	22564882131	1-3/8	34.93	125.00	38.10
22564882152	22564882141	1-3/8	34.93	150.00	45.72
22564882162	22564882201	1-3/8	34.93	175.00	53.34
22564962102	22564962111	1-1/2	38.10	100.00	30.48
22564962122	22564962131	1-1/2	38.10	125.00	38.10
22564962152	22564962141	1-1/2	38.10	150.00	45.72
22564962162	22564962171	1-1/2	38.10	175.00	53.34

Product information is subject to change. For full details, visit our website or contact Customer Service.

FUEL TRANSFER 150

The Transporter® Fuel Transfer 150 hose is designed for gasoline/fuel oil delivery type applications. This hose features a polyester cord, dual lead stainless steel static wire reinforcement that enables this to have a constant working pressure of 150 psi regardless of the size of the hose. The NBR/PVC cover is both oil and abrasion resistant. The NBR tube has excellent resistance to oil.



Cover Color: Black
Oil Resistance: High
Construction:
Tube: NBR, RMA Class A
Cover: NBR/PVC, RMA Class B
Reinforcement: Polyester cord, dual lead stainless steel static wire
Temperature Range: -20°F to +200°F
-29°C to +93°C
Packaging: 100 ft. maximum
Minimum run of 1200 ft. per size

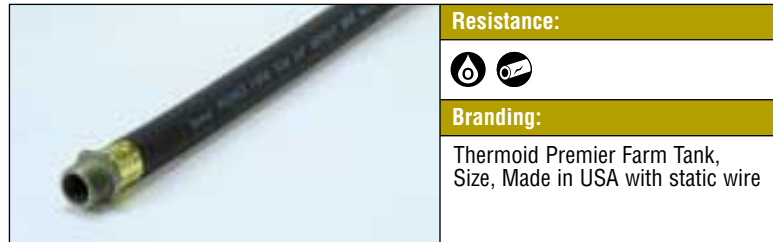
Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
17817002002▲	2	50.80	2.50	63.50	2	150	1.03	14.00	355.60	1.00	1.49
17817006002▲	3	76.20	3.50	88.90	2	150	1.03	24.00	609.60	1.50	2.23
17817008002▲	4	101.60	4.63	117.48	2	150	1.03	32.00	812.80	2.40	3.57

▲ = Make To Order (MTO)

PREMIER FARM TANK

Premier Farm Tank hose is an economical hose designed for use in agricultural, industrial and construction maintenance applications. It features 2-spiral, high-tensile, polyester cord reinforcement with an NBR tube and a NBR/PVC cover. Premier Farm Tank hose is oil and abrasion resistant. This hose was engineered for dispensing gasoline, kerosene and oil from farm or barrel-type pumps where UL approval is not required. Farm Tank hose is supplied with static wire. Static wire hose is designed for use with electric pumps.

Note: Do not use these hoses at a service station or to refuel any aircraft.



Cover Color: Black
Oil Resistance: High
Construction:
Tube: NBR, RMA Class A
Cover: NBR/PVC RMA Class A
Reinforcement: Spiral high tensile polyester cord
Temperature Range: -20°F to +160°F
-29°C to +71°C
Packaging: Reels or coupled lengths

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00667212200	3/4	19.05	1.13	28.58	2	60	0.41	4.50	114.30	0.29	0.43
00667216200	1	25.40	1.38	34.93	2	60	0.41	7.00	177.80	0.45	0.67

Coupled Lengths – Male x Male Coupling – With Static Wire

Product Number	Nominal I.D. (inches) (mm)		Length (feet) (meters)	
00667212208	3/4	19.05	8.00	2.44
00667212210	3/4	19.05	10.00	3.05
00667212212	3/4	19.05	12.00	3.66
00667212214	3/4	19.05	14.00	4.27
00667216208	1	25.40	8.00	2.44
00667216210	1	25.40	10.00	3.05
00667216212	1	25.40	12.00	3.66
00667216214	1	25.40	14.00	4.27



PUMPFLEX® I – Softwall

Pumpflex I is designed for curb pump self-service stations and highly sensitive electronic fuel pumps. Pumpflex I is the longest lasting automotive refueling hose in use at service stations today. The durable construction of this hose resists deterioration from fuel, ozone, sunlight and cracking around/behind the nozzle end coupling. The cover stands up to the ravages of ozone and sunlight. Many hoses fail from cracking behind the nozzle end coupling within two to three years, but Pumpflex I will last longer under normal circumstances.

Thermoid's PUMPFLEX I Hose is now available with new, crimped aluminum fittings. These new aluminum fittings like the quality PUMPFLEX Hose are built to stand up to the rough treatment received at curb pump self-service stations. The crimping process used to affix these aluminum fittings was designed to insure a tight and permanent connection to the hose. Our new crimped aluminum fittings offer you a quality product, better value and more economical choice for your curb pump dispensing hose needs. HBD/Thermoid offers you this quality hose product with your choice of permanent fittings: our economical crimped aluminum or a chrome-plated brass version. When you need a curb pump hose, use the best with the best value... PUMPFLEX I

Note: Do not use reusable couplings with this product.



Cover Color:	Black
Oil Resistance:	High, Medium-High
Construction:	
Tube:	NBR/PVC, RMA Class A
Cover:	Thermalon™, U/L approved, Class B
Reinforcement:	Spiral polyester cord with static wire (Softwall)
Temperature range:	-40°F to +180°F -40°C to +82°C
Packaging:	Reels, coupled lengths

Reels (Thermocure)

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
22462401662▲	5/8 15.88	1.03 26.19	2	200 1.38	3.75 95.25	0.27 0.40
22462481662	3/4 19.05	1.13 28.58	2	200 1.38	4.50 114.30	0.32 0.48
22464641662	1 25.40	1.50 38.10	4	150 1.03	7.00 177.80	0.62 0.92

▲ = Make To Order (MTO)

Coupled Lengths, Male x Male Permanent Fittings*

Aluminum Crimped Coupling Product Number	Chrome-Plated Brass Coupling Product Number	Nominal I.D. (inches) (mm)	Lengths (feet) (meters)
22762401111	22462401111	5/8 15.88	11.00 3.35
22762401121	22462401121	5/8 15.88	12.00 3.66
22762401131	22462401131	5/8 15.88	13.00 3.96
22762401141	22462401141	5/8 15.88	14.00 4.27
22762401151	22462401151	5/8 15.88	15.00 4.57
22762401161	22462401161	5/8 15.88	16.00 4.88
22762401171	22462401171	5/8 15.88	17.00 5.18
22762401181	22462401181	5/8 15.88	18.00 5.49
22762401201	22462401201	5/8 15.88	20.00 6.10
22762481301	22462481301	3/4 19.05	10.50 3.20
22762481111	22462481111	3/4 19.05	11.00 3.35
22762481121	22462481121	3/4 19.05	12.00 3.66
22762481131	22462481131	3/4 19.05	13.00 3.96
22762481141	22462481141	3/4 19.05	14.00 4.27
22762481151	22462481151	3/4 19.05	15.00 4.57
22762481161	22462481161	3/4 19.05	16.00 4.88
22762481171	22462481171	3/4 19.05	17.00 5.18
22762481181	22462481181	3/4 19.05	18.00 5.49
22762481191	22462481191	3/4 19.05	19.00 5.79
22762481201	22462481201	3/4 19.05	20.00 6.10
22764641111	22464641111	1 25.40	11.00 3.35
22764641131	22464641131	1 25.40	13.00 3.96
22764641161	22464641161	1 25.40	16.00 4.88
22764641171	22464641171	1 25.40	17.00 5.18
22764641181	22464641181	1 25.40	18.00 5.49
22764641191	22464641191	1 25.40	19.00 5.79
22764641201	22464641201	1 25.40	20.00 6.10

* = Other lengths are available upon request.



Pictured are Thermoid Aluminum Crimped and Chrome-plated Brass Hose Fittings



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

PUMPFLEX® II – Hardwall

Pumpflex II is designed for curb pump self-service stations and highly sensitive electronic fuel pumps. Pumpflex II is the longest lasting automotive refueling hose in use at service stations today. The durable construction of this hose resists deterioration from fuel, ozone, sunlight and cracking around/behind the nozzle end coupling. The cover stands up to the ravages of ozone and sunlight. Many hoses fail from cracking behind the nozzle end coupling within two to three years, but Pumpflex II will last longer under normal circumstances.

Thermoid's PUMPFLEX II Hose is now available with new, crimped aluminum fittings. These new aluminum fittings like the quality PUMPFLEX Hose are built to stand up to the rough treatment received at curb pump self-service stations. The crimping process used to affix these aluminum fittings was designed to insure a tight and permanent connection to the hose. Our new crimped aluminum fittings offer you a quality product, better value and more economical choice for your curb pump dispensing hose needs. HBD/Thermoid offers you this quality hose product with your choice of permanent fittings: our economical crimped aluminum or a chrome-plated brass version. When you need a curb pump hose, use the best with the best value... PUMPFLEX II

Note: Do not use reusable couplings with this product.

Reels (Thermocure)

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
22341401662	5/8 15.88	1.03 26.19	1	200 1.38	3.75 95.25	0.40 0.60
22341481662	3/4 19.05	1.13 28.58	1	200 1.38	4.50 114.30	0.44 0.65
22341641662	1 25.40	1.50 38.10	1	150 1.03	7.00 177.80	0.69 1.03

Coupled Lengths, Male x Male Permanent Fittings*

Aluminum Crimped Coupling Product Number	Chrome-Plated Brass Coupling Product Number	Nominal I.D. (inches) (mm)	Lengths (feet) (meters)
22361401591	22341401591●	5/8 15.88	9.00 2.74
22361401231	22341401231	5/8 15.88	9.50 2.90
22361401071	22341401071●	5/8 15.88	9.50 2.90
22361401351	22341401351●	5/8 15.88	10.00 3.05
22361401211	22341401211	5/8 15.88	10.50 3.20
22361401111	22341401111	5/8 15.88	11.00 3.35
22361401121	22341401121	5/8 15.88	12.00 3.66
22361401391	22341401391●	5/8 15.88	12.00 3.66
22361401131	22341401131	5/8 15.88	13.00 3.96
22361401141	22341401141	5/8 15.88	14.00 4.27
22361401151	22341401151	5/8 15.88	15.00 4.57
22361401161	22341401161	5/8 15.88	16.00 4.88
22361401171	22341401171	5/8 15.88	17.00 5.18
22361401181	22341401181	5/8 15.88	18.00 5.49
22361401191	22341401191	5/8 15.88	19.00 5.79
22361401201	22341401201	5/8 15.88	20.00 6.10
22361481651	22341481651	3/4 19.05	8.50 2.59
22361481581	22341481581●	3/4 19.05	9.00 2.74
22361481221	22341481221	3/4 19.05	9.50 2.90
22361481301	22341481301	3/4 19.05	10.50 3.20
22361481111	22341481111	3/4 19.05	11.00 3.35
22361481131	22341481131	3/4 19.05	13.00 3.96
22361481141	22341481141	3/4 19.05	14.00 4.27
22361481241	22341481241●	3/4 19.05	14.00 4.27
22361481151	22341481151	3/4 19.05	15.00 4.57
22361481161	22341481161	3/4 19.05	16.00 4.88
22361481171	22341481171	3/4 19.05	17.00 5.18
22361481181	22341481181	3/4 19.05	18.00 5.49
22361481201	22341481201	3/4 19.05	20.00 6.10
22361641011	22341641091●	1 25.40	1.00 0.30
22361641301	22341641301	1 25.40	10.50 3.20
22361641111	22341641111	1 25.40	11.00 3.35
22361641131	22341641131	1 25.40	13.00 3.96
22361641161	22341641161	1 25.40	16.00 4.88
22361641171	22341641171	1 25.40	17.00 5.18
22361641181	22341641181	1 25.40	18.00 5.49
22361641191	22341641191	1 25.40	19.00 5.79
22361641201	22341641201	1 25.40	20.00 6.10

● = MxS (Swivel M) – Chrome-plated Brass Finish

* = Other lengths are available upon request.



Resistance:



Branding:

Thermoid Size Pumpflex II
Gasoline Hose UL Listed 97M0
Made In USA Month/Year

Cover Color:	Black
Oil Resistance:	High, Medium-High
Construction:	
Tube:	NBR/PVC, RMA Class A
Cover:	Thermalon™, U/L approved, Class B
Reinforcement:	1 wire braid (Hardwall)
Temperature Range:	-40°F to +180°F -40°C to +82°C
Packaging:	Reels, Coupled Lengths



Pictured are Thermoid Aluminum Crimped and Chrome-plated Brass Hose Fittings



PUMPFLEX® II – Jumper

Pumpflex II - Jumper hose primary application is the dual low hose dispenser converted to Stage II vapor recovery external liquid line connection. This hose is used in conjunction with the Pumpflex II hose.

Note: Do not use reusable couplings with this product.

**Resistance:****Branding:**

Thermoid Size Pumpflex II
Gasoline Hose UL Listed 97MO
Made In USA Month/Year

Cover Color:	Black
Oil Resistance:	High, Medium-High
Construction:	
Tube:	NBR/PVC, RMA Class A
Cover:	Thermalon™, U/L approved, RMA Class B
Reinforcement:	1 wire braid (Hardwall)
Temperature Range:	-40°F to +180°F -40°C to +82°C
Packaging:	Bulk

Coupled Lengths, Male x Swivel Permanent Fittings

Product Number	Nominal I.D.		Lengths		Weight per Length	
	(inches)	(mm)	(inches)	(mm)	(lbs)	(Kgs)
22341481271▲	3/4	19.05	14.00	355.60	1.42	0.64
22341481051▲	3/4	19.05	16.00	406.40	1.47	0.67
22341481561▲	3/4	19.05	18.00	457.20	1.56	0.71
22341481061▲	3/4	19.05	21.00	533.40	1.63	0.74
22341481571▲	3/4	19.05	24.00	609.60	1.72	0.78

▲ = Make To Order (MTO)

PUMPFLEX® MARINA – Softwall

Pumpflex Marina hose is color coded green for marina use. This durable hose is designed to handle severe weather conditions, rough deck or dock use. It has a durable four spiral construction and static wire for continuity. This hose can be used for all types of gasoline, oil and other petroleum products. The green cover is oil and weather resistant as well as being UL approved.

**Resistance:****Branding:**

Thermoid Size Pumpflex Marina
Hose UL Listed 97MO Made In
USA Month/Year

Cover Color:	Green
Oil Resistance:	High, Medium-High
Construction:	
Tube:	NBR/PVC, RMA Class A
Cover:	CM, RMA Class B
Reinforcement:	Spiral polyester yarn with static wire (Softwall)
Temperature Range:	-40°F to +180°F -40°C to +82°C
Packaging:	Reels

Product Number	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22463484662▲	3/4	19.05	1.13	28.58	4	200	1.38	4.50	114.30	0.32	0.48
22464644662▲	1	25.40	1.50	38.10	4	150	1.03	7.00	177.80	0.62	0.92

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

Product information is subject to change. For full details, visit our website or contact Customer Service.

HI-VAC™ CO-AX®

Hi-Vac Co-Ax hose is designed for the new vacuum assist systems using a bootless nozzle. Hi-Vac's inverted design pulls the vapor through the inner hose while fuel is dispensed in the outer hose. Its construction is uncomplicated, well-balanced and exceptionally easy to handle. Hi-Vac is UL Listed, CARB certified and delivers up to 12 gpm.

Coupling: Chrome plated brass metric thread (M34)

Retractor Clamp: Use product number 22973101611.
Max. tension is 10 lbs.

	Resistance:
	 
	Branding:
Manufacturer's Identification, Product Name UL Listed	

Cover Color: Black
Oil Resistance: High, Medium-High
Construction:

Inner Hose Tube: NBR/PVC
Outer Hose Tube: NBR/PVC, RMA Class A
Inner Hose Cover: NBR/PVC
Outer Hose Cover: CSM, RMA Class B
Reinforcement: Braided steel wire

Temperature Range: -40°F to +180°F
-40°C to +82°C

Packaging: Depends on the order quantity

HI-VAC™-S CO-AX®

The Hi-Vac-S Co-Ax is a premium, advanced design hose for vacuum-assist Stage II systems using a bootless nozzle. This hose was developed for high volume, intensely competitive markets. Its lightweight and easy handling properties are designed in without sacrificing performance, strength or long service life. Hi-Vac-S is UL Listed, CARB certified and delivers up to 11 gpm.

Coupling: Chrome plated brass metric thread (M34)

Retractor Clamp: Use product number 22973101611.
Max. tension is 10 lbs.

	Resistance:
	 
	Branding:
Manufacturer's Identification, Product Name UL Listed	

Cover Color: Black
Oil Resistance: High, Medium-High
Construction:

Inner Hose Tube: NBR/PVC
Outer Hose Tube: NBR/PVC, RMA Class A
Inner Hose Cover: NBR/PVC
Outer Hose Cover: CSM, RMA Class B
Reinforcement: Braided steel wire

Temperature Range: -40°F to +180°F
-40°C to +82°C

Packaging: Individual carton, 6 per master carton

	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Steel Braid Reinforcement	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
7/8" I.D. Hi-Vac											
Inner Hose	5/16	7.94	0.52	13.08	1						
Outer Hose	7/8	22.23	1.25	31.75	1	250	1.72	4.00	101.60	0.12	0.18
3/4" I.D. Hi-Vac-S											
Inner Hose	5/16	7.94	0.52	13.08	1						
Outer Hose	4/5	20.32	1.13	28.58	1	250	1.72	4.00	101.60	0.23	0.34

Hi-Vac 7/8" Product Number	Length	
	(feet)	(meters)
22473222041▲	4.00	1.22
22473222061▲	5.00	1.52
22473222291▲	6.00	1.83
22473222251▲	6.50	1.98
22473222221▲	7.00	2.13
22473222231▲	7.50	2.29
22473222071	8.00	2.44
22473222081	8.50	2.59
22473222091	9.00	2.74
22473222101	9.50	2.90
22473222111▲	10.00	3.05
22473222121▲	10.50	3.20
22473222131▲	11.00	3.35
22473222141▲	11.50	3.51
22473222151	12.00	3.66
22473222161▲	12.50	3.81
22473222171▲	13.00	3.96
22473222181▲	13.50	4.11
22473222191▲	14.00	4.27

▲ = Make To Order (MTO)

Hi-Vac-S 3/4" Product Number	Length	
	(feet)	(meters)
22471111041▲	4.00	1.22
22471111061▲	5.00	1.52
22471111291▲	6.00	1.83
22471111251▲	6.50	1.98
22471111221▲	7.00	2.13
22471111231	7.50	2.29
22471111071	8.00	2.44
22471111081	8.50	2.59
22471111091	9.00	2.74
22471111101	9.50	2.90
22471111111▲	10.00	3.05
22471111121▲	10.50	3.20
22471111131▲	11.00	3.35
22471111141▲	11.50	3.51
22471111151▲	12.00	3.66
22471111161▲	12.50	3.81
22471111171▲	13.00	3.96
22471111181▲	13.50	4.11
22471111191▲	14.00	4.27

▲ = Make To Order (MTO)

HI-VAC™ WHIP

Hi-Vac Whip hose's primary application is the "breakaway" connection from the pump to the primary hose assembly. This hose is used in conjunction with the Hi-Vac™ Co-Ax® hose assembly.

Note: Do not use reusable couplings with this product.

Coupling: Chrome plated brass metric thread (M34)

**Resistance:****Branding:**

Manufacturer's Identification,
Product name UL Listed

Cover Color: Black

Construction:

Inner Hose Tube: NBR/PVC

Outer Hose Tube: NBR/PVC, RMA Class A

Inner Hose Cover: NBR/PVC

Outer Hose Cover: CSM, RMA Class B

Reinforcement: Braided steel wire

Temperature Range: -40°F to +180°F
-40°C to +82°C

Packaging: Depends on the order quantity

Hi-Vac Whip Product Number	Nominal I.D.		Length	
	(inches)	(mm)	(inches)	(mm)
22471111031	3/4	19.05	10	254.00
22471111011	3/4	19.05	12	304.80
22473222021	7/8	22.23	10	254.00
22473222011	7/8	22.23	12	304.80

**TRANSPORTER® EBONITE™
CORRUGATED TANK TRUCK**

The Transporter Ebonite Corrugated Tank Truck hose is recommended for hydrocarbons with aromatic content up to 55% maximum, fats, greases, animal oil, vegetable oil, hydraulic fluid and a wide range of chemicals. This hose features a flat corrugated NBR/PVC cover which is ideal for those applications where flexibility is an issue. The reinforcement of two plies of polyester cord with a dual wire helix enables this hose to be rated at **full vacuum**. Also, this construction allows each size to have a constant working pressure of 150 psi.

**Resistance:****Branding:**

Thermoid HBD Industries Inc.
Ebonite™ 150 PSI WP
Made In USA

Cover Color: Black

Oil Resistance: High

Construction:

Tube: NBR, RMA Class A

Cover: NBR/PVC corrugated, RMA Class B

Reinforcement: 2 plies of polyester cord with a dual wire helix(es) between plies

Temperature Range: -30°F to +200°F
-34°C to +93°C

Packaging: 100 ft. maximum

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17813045002▲	1	25.40	1.53	38.89	2	150	1.03	2.00	50.80	0.60	0.89
17813046002▲	1-1/4	31.75	1.78	45.24	2	150	1.03	2.50	63.50	0.70	1.04
17813047002▲	1-1/2	38.10	2.06	52.39	2	150	1.03	3.00	76.20	0.90	1.34
17813048002	2	50.80	2.56	65.09	2	150	1.03	4.50	114.30	1.20	1.79
17813050002	3	76.20	3.56	90.49	2	150	1.03	6.00	152.40	1.80	2.68
17813055002	4	101.60	4.66	118.27	2	150	1.03	8.00	203.20	2.70	4.02

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

TRANSPORTER® EBONITE™ LT
CORRUGATED TANK TRUCK

The Transporter Ebonite LT Corrugated Tank Truck hose is designed to handle the applications for suction and discharge for tank truck, tank car and bulk station. This hose is used to convey gasoline, distilled kerosene, diesel and other fuels with maximum aromatic content of 30% to -65°F. This hose features a flat corrugated NBR cover which is ideal for those applications where flexibility and weight are issues. The two plies of polyester cord with a dual wire helix reinforcement allows this hose to be rated at **full vacuum**.



Resistance:



Branding:

Thermoid HBD Industries Inc.
Ebonite™ LT 150 PSI WP
Made In USA

- Cover Color:Black
- Oil Resistance:Medium-High
- Construction:

Tube:NBR (low temperature)

Cover:NBR/PVC corrugated

Reinforcement:2 plies of polyester cord with a dual wire helix(es) between plies
- Temperature Range:-65°F to +180°F
-54°C to +82°C
- Packaging:100 ft. maximum

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17813057002▲	1-1/2	38.10	2.06	52.39	2	150	1.03	3.00	76.20	0.90	1.34
17813058002	2	50.80	2.56	65.09	2	150	1.03	4.00	101.60	1.20	1.79
17813060002	3	76.20	3.56	90.49	2	150	1.03	5.50	139.70	1.80	2.68
17813065002	4	101.60	4.66	118.27	2	150	1.03	8.00	203.20	2.70	4.02

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

ALERT: Large size, industrial hoses have caution and/or safety usage printed information attached by tag to the product or this information is printed onto the hose.

TRANSPORTER® RED TANK TRUCK

The Transporter Red Tank Truck hose is recommended for use to handle the bulk transfer of petroleum products. This hose will also handle most hydrocarbons with aromatic content up to 55% maximum, fats, greases, animal oil, vegetable oil, hydraulic fluid and a wide range of chemicals. The NBR tube gives excellent resistance to oil, while the NBR/PVC cover is both oil and weather resistant. Transporter Red Tank Truck hose is rated at **full vacuum**.

**Resistance:****Branding:**

Thermoid HBD Industries Inc.
Transporter Tank Truck
Made In USA

Cover Color: Red
Oil Resistance: High
Construction:
Tube: NBR, RMA Class A
Cover: NBR/PVC, RMA Class B
Reinforcement: Spiral steel wire helix(es) between synthetic textile plies
Temperature Range: -30°F to +200°F
 -34°C to +93°C
Packaging: 100 ft. maximum

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17813015002	1-1/2 38.10	2.00 50.80	2	150 1.03	4.50 114.30	0.80 1.19
17813020002	2 50.80	2.47 62.71	2	150 1.03	6.00 152.40	1.00 1.49
17813025002▲	2-1/2 63.50	3.06 77.79	2	150 1.03	7.50 190.50	1.50 2.23
17813030002▲	3 76.20	3.56 90.49	2	150 1.03	9.00 228.60	1.70 2.53
17813040002▲	4 101.60	4.63 117.48	2	150 1.03	12.00 304.80	2.50 3.72

▲ = Make To Order (MTO)

TRANSPORTER® BLACK TANK TRUCK

The Transporter Black Tank Truck hose is rated at **full vacuum**. Like the red version, this hose is recommended for most hydrocarbons with aromatic content up to 55% maximum, fats, greases, animal oil, vegetable oil, hydraulic fluid and a wide range of chemicals. The black NBR tube has high oil resistance. The NBR/PVC cover is both oil and abrasion resistant.

**Resistance:****Branding:**

Thermoid HBD Industries Inc.
Transporter Tank Truck
Made In USA

Cover Color: Black
Oil Resistance: High
Construction:
Tube: NBR, RMA Class A
Cover: NBR/PVC, RMA Class B
Reinforcement: Spiral steel wire helix(es) between synthetic textile plies
Temperature Range: -30°F to +200°F
 -34°C to +93°C
Packaging: 1"-4" I.D. – 100 ft. maximum
 6" I.D. – 50 ft.; 100 ft. available upon request

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17811008002	1 25.40	1.50 38.10	2	200 1.38	2.50 63.50	0.50 0.74
17811010002	1-1/4 31.75	1.75 44.45	2	200 1.38	3.00 76.20	0.70 1.04
17811015002	1-1/2 38.10	2.00 50.80	2	150 1.03	4.50 114.30	0.80 1.19
17811020002	2 50.80	2.47 62.71	2	150 1.03	6.00 152.40	1.00 1.49
17811025002	2-1/2 63.50	3.06 77.79	2	150 1.03	7.50 190.50	1.50 2.23
17811030002	3 76.20	3.56 90.49	2	150 1.03	9.00 228.60	1.70 2.53
17811040002	4 101.60	4.63 117.48	2	150 1.03	12.00 304.80	2.50 3.72
17811060002▲	6 152.40	6.78 172.24	2	100 0.69	30.00 762.00	5.00 7.44

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

Product information is subject to change. For full details, visit our website or contact Customer Service.

TYPE 924 PETROLEUM TRANSFER

Type 924 Petroleum Transfer hose is perfect for those applications for the bulk transfer of petroleum products. This hose can also be used to handle most hydrocarbons with aromatic content up to 55% maximum, fats, greases, animal oil, vegetable oil, hydraulic fluid and a wide range of chemicals. The black NBR tube has excellent resistance to oil. The cover compound of NBR/PVC is both oil and abrasion resistant. This hose is rated at **full vacuum**.



Resistance:



Branding:

Thermoid HBD Industries Inc.
Type 924 Petroleum Transfer WP
Made In USA

Cover Color: Black
Oil Resistance: High
Construction:
Tube: NBR, RMA Class A
Cover: NBR/PVC, RMA Class B
Reinforcement: Spiral steel wire helix(es) between synthetic textile plies
Temperature Range: -30°F to +200°F
-34°C to +93°C
Packaging: 100 ft. maximum

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17812008002	1 25.40	1.50 38.10	2	200 1.38	2.50 63.50	0.50 0.74
17812010002▲	1-1/4 31.75	1.75 44.45	2	200 1.38	3.00 76.20	0.70 1.04
17812015002	1-1/2 38.10	2.00 50.80	2	150 1.03	4.50 114.30	0.80 1.19
17812020002	2 50.80	2.47 62.71	2	150 1.03	6.00 152.40	1.00 1.49
17812025002	2-1/2 63.50	3.06 77.79	2	150 1.03	7.50 190.50	1.50 2.23
17812030002	3 76.20	3.56 90.49	2	150 1.03	9.00 228.60	1.70 2.53
17812040002	4 101.60	4.63 117.48	2	150 1.03	12.00 304.80	2.50 3.72
17812060002▲	6 152.40	6.75 171.45	2	100 0.69	30.00 762.00	5.00 7.44

▲ = Make To Order (MTO)

TRANSPORTER® FLEX-DEVIL™

Flex-Devil is a transfer hose for gasoline, a wide range of oils and chemicals and petroleum based products. Flex-Devil is made from special rubber compounds that produce an exceptional light-weight and flexible hose for use in temperatures down to -40°F (-40°C). Rated at **full vacuum** (30"Hg), Flex-Devil is compatible with gasoline grades up to 50% aromatic content and MRBE/unleaded blends up to 15% MTBE. This hose accepts a range of coupling types: swaged crimped, internally expanded or banded shank. **Consult coupling manufacturer for specific coupling recommendations/attachment procedures.**



Resistance:



Branding:

Thermoid/HBD Industries
Transporter Flex-Devil 150 PSI WP
Made In USA – Caution Statement

Cover Color: Red
Oil Resistance: High
Construction:
Tube: NBR, RMA Class A (low temperature)
Cover: CR, RMA Class B (corrugated)
Reinforcement: Multiple ply synthetic textile cords with dual helix wire
Temperature Range: -40°F to +200°F
-40°C to +93°C
Packaging: 100 ft. lengths, straight ends only
Couplings: Accepts variety of types. Consult coupling manufacturers for proper procedures.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17814532002	2 50.80	2.43 61.70	2	150 1.03	4.00 101.60	0.90 1.35
17814534002	3 76.20	3.47 88.70	2	150 1.03	6.00 152.40	1.56 2.32
17814536002	4 101.60	4.54 115.30	2	150 1.03	8.00 203.40	2.24 3.34

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

TRANSPORTER® VAPOR-LOC™

Transporter VAPOR-LOC Bio-Fuels tank truck hose is designed to meet and exceed today's demanding needs for standard fuel and bio-fuel bulk transfer applications. Where standard tank truck hoses fail to meet the requirement of safely transferring bio-fuels, most petroleum based products, various types of fats, oils, hydraulic fluids and some chemicals, Vapor-Loc™ Bio-Fuels tank truck hose is built to last.

Using a unique, multi-layered permeation barrier system, VAPOR-LOC™ Bio-Fuels tank truck hose reduces media permeation into the hose carcass over time, a common cause of standard tank truck hose failures. It virtually eliminates smelly media odors. It is lightweight, flexible, handles easily and is ideal for outdoor work conditions.

Thermoid's VAPOR-LOC Bio Fuels Tank Truck Hose was designed for use on trucks and in-plant operations to transfer diesel, bio-diesel blends up to B-100, ethanol blends, gasoline, oil, most petroleum base products up to 60% aromatic content, various types of fats, hydraulic fluids and some chemicals.

Our exclusive VAPOR-LOC manufacturing process, provides these VAPOR-LOC "Bio-Fuel" Tank Truck Hoses with added protection to offer you the following: resists the corrosive effects of Bio-Fuels, saves fuel and money. VAPOR-LOC Bio-Fuel Tank Truck Hoses also eliminate smelly fuel/oil odors and reduces hydrocarbon emissions up to 99%. These hoses are lightweight, flexible and handle easily. Rated at Full Vacuum and these hoses accept a wide variety of hose couplings.



Size:	1"-4" I.D.
Working Pressure:	200 psi, Vacuum Rating – Full (30" HG) – 1"-1-1/4" I.D. 150 psi, Vacuum Rating – Full (30" HG) – 1-1/2"-4" I.D.
Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	Smooth – NBR/PVC
Reinforcement:	Spiral steel wire helix(es) between synthetic textile plies
Barrier:	Unique, 3-ply, multi-layer vapor barrier
Temperature Range:	-30°F to +200°F -34°C to +93°C
Couplings:	Swaged, crimped, internally expanded or banned shank types. Consult coupling manufacturer for proper hose assembly-coupling procedures.
Packaging:	1"-4" I.D. – 100 ft. maximum

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17814811002	1	25.40	1.53	38.86	2	200	1.38	2.50	63.50	0.61	0.91
17814812002▲	1-1/4	31.75	1.80	44.72	2	200	1.38	3.00	76.20	0.77	1.14
17814813002▲	1-1/2	38.10	2.04	51.82	2	150	1.03	4.50	114.30	0.88	1.31
17814814002	2	50.80	2.54	64.52	2	150	1.03	6.00	152.40	1.14	1.69
17814815002▲	2-1/2	63.50	3.10	78.74	2	150	1.03	7.50	190.50	1.62	2.41
17814816002	3	76.20	3.60	91.44	2	150	1.03	9.00	228.60	1.89	2.81
17814818002▲	4	101.60	4.68	118.87	2	150	1.03	12.00	304.80	2.73	4.06

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

Product information is subject to change. For full details, visit our website or contact Customer Service.

TRANSPORTER® VAPOR RECOVERY

The recommended use for the Transporter Vapor Recovery hose is for the transfer of vapors with maximum aromatic content of 55% back to the tank truck during loading operations. This hose has been rated at **full vacuum**. This hose features an NBR tube, an NBR/PVC cover and includes a reinforcement of two plies of synthetic cord with spiral wire helix between the plies. This combination's benefits are that the hose is lightweight and easy to maneuver.

	Resistance:
	
	Branding:
Thermoid HBD Industries Inc. Transporter® Vapor Recovery Made In USA	

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	NBR/PVC, RMA Class B
Reinforcement:	Two plies of synthetic cord with a spiral wire helix(es) between plies
Temperature Range:	-30°F to +200°F -34°C to +93°C
Packaging:	100 ft. maximum

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17811130002▲	3	76.20	3.44	87.31	2	100	0.69	9.00	228.60	1.30	1.93
17811140002▲	4	101.60	4.44	112.71	2	80	0.55	12.00	304.80	1.80	2.68

▲ = Make To Order (MTO)

LP GAS/PROPANE TANKMASTER®

LP Gas/Propane Tankmaster is specifically designed for the transfer of LP Gas and propane between the docks and tankers. LP Gas/Propane is a high strength hose with a design safety factor of 5:1. This hose meets the NFPA-58 and USCG specifications of 46 CFR 38.15-5 for non-refrigerated transfer of compressed LP Gas and Propane to -20°F to +150°F temperatures. This hose features a string vented carcass to avoid blistering due to gas permeation. The CR cover resists abrasion, weathering and ozone.

Note: Two black covers offered:

1. CR for Electrically Discontinuous (ED) hose assemblies.
2. NBR/PVC for Electrically Continuous (EC) hose assemblies.

Please specify electrical property of hose required when ordering a hose assembly.

	Resistance:
	
	Branding:
Thermoid HBD Industries Inc. LP Gas/Propane – 350 WP Made In USA Date Code Warning Label	

Cover Color:	Black
Oil Resistance:	High, Medium-High
Construction:	
Tube:	Nitrile/Hydrin blend
Cover:	CR (See note in box)
Reinforcement:	Multiple synthetic textile cord plies with helix(es) wire. String vented carcass
Temperature Range:	-20°F to +150°F -29°C to +66°C
Packaging:	2" I.D. through 6" I.D. – 100 ft. maximum length 8" I.D. or larger, up to 60 ft. long Hand built – \$250.00 minimum order per size

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
11434602002▲	2	50.80	3.03	76.99	4	350	2.41	12.00	304.80	3.10	4.61
11434603002▲	3	76.20	4.16	105.57	4	350	2.41	18.00	457.20	3.70	5.51
11434604002▲	4	101.60	5.53	140.49	6	350	2.41	24.00	609.60	6.50	9.67
11434606002▲	6	152.40	7.63	193.68	6	350	2.41	36.00	914.40	11.70	17.41
11434608002▲	8	203.20	10.20	259.16	8	350	2.41	54.00	1371.60	19.30	28.72

*All sizes have 25 inches of mercury vacuum rating

▲ = Make To Order (MTO)

POLAR-FLEX/CGA TYPE 1 BUTANE-PROPANE – Thermocure

Polar-Flex is a cold weather hose specifically engineered for use in transferring liquefied petroleum gases at peak efficiency even in extreme sub-zero temperatures. Polar-Flex is ideal for moving propane or butane from bulk storage to tank cars or cylinders or from bobtails trucks to residential home storage tanks.

Polar-Flex is UL 21 File MH12585 listed and is approved to CGA (Canadian Gas Association) Type 1 requirements. Polar-Flex also meets all hose and hose assembly requirements of the Canadian Gas Association (CSA). Polar-Flex is exceptionally flexible and resists abrasion. It is very easy to handle. It provides a constant working pressure of 350 psi. Polar-Flex has an oil resistant and flame-retardant cover. It is available in a wide range of sizes for your application requirements.



Resistance:



Branding:

Thermoid Polar-Flex, CGA Type 1
UL Listed LP Gas Hose Issue No.
(Quarter) MH12585 350 PSI Max.
WP Made In USA

Cover Color:	Black
Oil Resistance:	High, Medium-High
Construction:	
Tube:	NBR, RMA Class A
Cover:	CM, RMA Class B
Reinforcement:	2 and 4 spiral polyester yarn
Temperature Range:	-50°F to +180°F -46°C to +82°C
Packaging:	Reels, *Coupled Lengths 1" I.D. can be ordered with coupled (M x M) Pro-Sur™ brass fittings. The D.O.T. test certificate is included Hose assemblies tested/approved to 7/1/99 D.O.T. reg. CGA approval on 1" I.D. assemblies only

Product Number	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22071161662▲	1/4	6.35	0.58	14.68	2	350	2.41	1.50	38.10	0.13	0.19
22071241662▲	3/8	9.53	0.69	17.46	2	350	2.41	2.25	57.15	0.16	0.24
22073321662▲	1/2	12.70	0.94	23.81	4	350	2.41	3.00	76.20	0.30	0.45
22073481662	3/4	19.05	1.25	31.75	4	350	2.41	4.50	114.30	0.43	0.64
22073641662	1	25.40	1.50	38.10	4	350	2.41	6.00	152.40	0.58	0.86

▲ = Make To Order (MTO)

Coupled, Male x Male with Thermoid® PRO SUR™ Brass Fittings

Product Number	Nominal I.D.		Lengths	
	(inches)	(mm)	(feet)	(meters)
22073641101	1	25.40	100.00	30.48
22073641121	1	25.40	125.00	38.10
22073641151	1	25.40	150.00	45.72

*Hose proof tested to 700 psi



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

TYPE 65 BUTANE-PROPANE

Type 65 Butane-Propane hose is designed for use to transfer LP Gas from bulk storage to tank cars or cylinders. This hose features a black CR cover that is oil resistant and also resists snagging, abrasion and weather. This hose is lightweight and flexible. All sizes have a flexible static wire. Meets all UL requirements. The 1-1/2" size meets CAN/CGA-8.1-M86, Type 1. The high tensile cord reinforcement is designed for a minimum burst of 1750 psi.

Note: Do not use reusable couplings with this product. This hose is intentionally pin-pricked for safety reasons. Type 65 Butane-Propane hose must be used in an open, well-ventilated environment. Not recommended for use with natural gas or propylene.



Resistance:



Branding:

Thermoid HBD Industries Inc.
Type 65 UL Listed LPG Hose
MH12585 Issue Number 350 PSI
Max. WP Quarter/Year Made In USA

Cover Color: Black
Oil Resistance: High, Medium-High
Construction:
Tube: CR
Cover: CR
Reinforcement: High tensile cord
Temperature Range: -40°F to +180°F
-40°C to +82°C
Packaging: 100 ft.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies**	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17814605*	1-1/4 31.75	1.81 46.04	4	350 2.41	8.00 203.20	0.92 1.37
17814610*	1-1/2 38.10	2.19 55.56	4	350 2.41	9.00 228.60	1.21 1.80
17814615*	2 50.80	2.75 69.85	4	350 2.41	12.00 304.80	1.77 2.63

* To order 50/100 ft., use product number and 002 = 100 ft. and 502 = 50 ft.

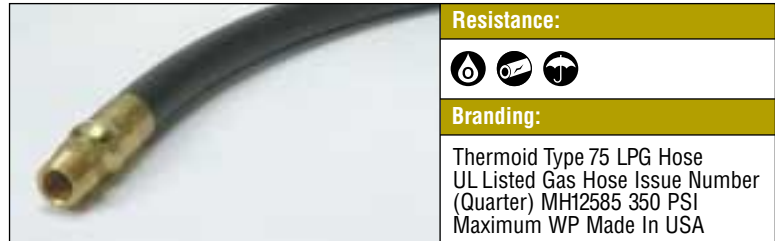
** Includes dual stainless steel static wire, spiral applied, in all sizes.

TYPE 75 BUTANE-PROPANE

Thermocure

Type 75 Butane-Propane hose is specifically designed for transferring liquefied propane gas from bulk storage tank cars or cylinders or from bobtails trucks to home storage tanks. The black cover on the Type 75 hose resists oil, snagging and abrasion. This hose has been pin-pricked to permit gas diffusion. The cover is smooth, making it a driver's choice. This hose has multi-spiral, high tensile reinforcement providing maximum strength and flexibility. It is engineered for a minimum burst of 1750 pounds for the ultimate in safety. A variety of Type 75 hose sizes can be ordered in coupled lengths (M x M) complete with Thermoid's PRO-SUR Brass Fittings (D.O.T. Test Certificate included).

Note: Do not use reusable couplings with this product. This hose is intentionally pin-pricked for safety reasons. Type 75 Butane-Propane hose must be used in an open, well-ventilated environment.



Resistance:



Branding:

Thermoid Type 75 LPG Hose
UL Listed Gas Hose Issue Number
(Quarter) MH12585 350 PSI
Maximum WP Made In USA

Cover Color: Black
Oil Resistance: High, Medium-High
Construction:
Tube: NBR, RMA Class A
Cover: CM, RMA Class B - 3/4" & 1", NBR/PVC - 1/4"-1/2"
Reinforcement: 2 or 4 spiral polyester yarn
Temperature Range: -40°F to +180°F
-40°C to +82°C
Packaging: Reels, *Coupled lengths
D.O.T. test certificate included with assemblies.
Hose assemblies tested/approved to
7/1/99 D.O.T. regulations.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00667304600	1/4 6.35	0.63 15.88	4	350 2.41	1.50 38.10	0.14 0.22
00667306600	3/8 9.53	0.75 19.05	4	350 2.41	2.25 57.15	0.18 0.30
00667308600	1/2 12.70	0.94 23.81	4	350 2.41	3.00 76.20	0.29 0.43
22074481662	3/4 19.05	1.25 31.75	4	350 2.41	4.50 114.30	0.27 0.61
22074641662	1 25.40	1.50 38.10	4	350 2.41	7.00 177.80	0.58 0.86

Coupled, Male x Male with Thermoid® PRO SUR™ Brass Fittings

Product Number	Nominal I.D. (inches) (mm)	Lengths (feet) (meters)
22074481101	3/4 19.05	100.00 30.48
22074481121	3/4 19.05	125.00 38.10
22074481151	3/4 19.05	150.00 45.72
22074481171	3/4 19.05	175.00 53.34
22074641101	1 25.40	100.00 30.48
22074641121	1 25.40	125.00 38.10
22074641151	1 25.40	150.00 45.72
22074641171	1 25.40	175.00 53.34



TRANSPORTER® HOT TAR & ASPHALT

Transporter Hot Tar and Asphalt hose has been designed to handle the transfer of hot asphaltic materials between trucks, rail transport cars, storage tanks and disposing units. The specially compounded CR tube and cover are exceptionally heat resistant (tube to +350°F) as well as being strong and durable. The spiral synthetic cord and helical wire reinforcement allow this hose to work at 150 psi.



Resistance:



Branding:

Thermoid HBD Industries
Hot Tar & Asphalt 150 WP
350°F Max. Temp.
Made In USA

Cover Color:	Black
Oil Resistance:	Medium
Construction:	
Tube:	CR, suitable to +350°F
Cover:	CR
Reinforcement:	Spiral synthetic cord with spiral helix(es) inserted
Temperature Range:	-20°F to +350°F -29°C to +177°C
Packaging:	100 ft. maximum Minimum order is 1200 ft. per size

Product Number	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17771515002▲	1-1/2	38.10	2.13	53.98	2	150	1.03	6.00	152.40	1.30	1.93
17771520002▲	2	50.80	2.63	66.68	2	150	1.03	8.00	203.20	1.50	2.23
17771525002▲	2-1/2	63.50	3.19	80.96	2	150	1.03	10.00	254.00	2.30	3.42
17771530002▲	3	76.20	3.75	95.25	2	150	1.03	14.00	355.60	2.80	4.17
17771540002▲	4	101.60	4.75	120.65	2	150	1.03	18.00	457.20	4.00	5.95

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

ALERT: Large size, industrial hoses have caution and/or safety usage printed information attached by tag to the product or this information is printed onto the hose.



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

ELEPHANT TRUNK

The recommended use for Elephant Trunk hose is for gravity flow transfer of dry bulk materials. This hose features SBR/NR tube and SBR/EPDM cover compound with a polyester cord reinforcement. This combination allows this hose to be lightweight and flexible. Other benefits include resistance to moisture absorption, weathering, aging and sun-checking.



Cover Color:	Black
Oil Resistance:	Limited
Construction:	
Tube:	SBR/NR - 1/8" thick
Cover:	SBR/EPDM - 1/32" thick
Reinforcement:	Polyester cord
Temperature Range:	-40°F to +160°F -40°C to +71°C
Packaging:	50 ft. maximum Hand built - \$250.00 minimum order per size Straight ends

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
11474600502▲	4	101.60	4.44	112.71	2	15	0.10	n/a	n/a	1.60	2.38
11474602502▲	5	127.00	5.44	138.11	2	15	0.10	n/a	n/a	1.90	2.83
11474603502▲	6	152.40	6.44	163.51	2	15	0.10	n/a	n/a	2.30	3.42
11474604502▲	6-5/8	168.28	7.06	179.39	2	15	0.10	n/a	n/a	2.50	3.72
11474605502▲	8	203.20	8.44	214.31	2	15	0.10	n/a	n/a	3.00	4.46
11474606502▲	8-5/8	219.08	9.06	230.19	2	15	0.10	n/a	n/a	3.30	4.91
11474607502▲	10	254.00	10.44	265.11	2	15	0.10	n/a	n/a	3.70	5.51
11474608502▲	10-3/4	273.05	11.19	284.16	2	15	0.10	n/a	n/a	4.00	5.95
11474609502▲	12	304.80	12.44	315.91	2	15	0.10	n/a	n/a	4.50	6.70
11474610502▲	12-3/4	323.85	13.19	331.79	2	15	0.10	n/a	n/a	4.80	7.14
11474612502▲	14	355.60	14.44	366.71	2	15	0.10	n/a	n/a	5.40	8.04
11474614502▲	16	406.40	16.44	417.51	2	15	0.10	n/a	n/a	6.20	9.23
11474618502▲	18	457.20	18.44	468.31	2	15	0.10	n/a	n/a	7.00	10.42
11474619502▲	20	508.00	20.44	519.11	2	15	0.10	n/a	n/a	7.70	10.72
11474620502▲	24	609.60	24.56	623.89	2	15	0.10	n/a	n/a	9.30	13.84
11474621502▲	26	660.40	26.44	671.51	2	15	0.10	n/a	n/a	10.00	14.88

▲ = Make To Order (MTO)

n/a = Not Applicable

FURNACE DOOR (Wire Braid)

Furnace Door hose is used as a water cooling hose on open hearth steel mill furnaces. This hose is so light and flexible, only one person is required when changing out this hose. Furnace Door hose features reinforcement braids of high-tensile carbon steel wire with a heat resistant textile layer. This combination provides an insulating layer against severe external heat. The flexible braid of stainless steel used for the cover of this hose is designed to prevent the build-up of metal spattering. This cover also resists the tendency for molten metal to cling to the hose.



Cover Color:	Black
Oil Resistance:	Limited
Construction:	
Tube:	EPDM
Cover:	Flexible braid of stainless steel wire
Reinforcement:	One braid of high-tensile carbon steel wire
Temperature Range:	-40°F to +600°F -40°C to +315°C
	With cooling water flowing through the hose at a velocity of 20 feet per second
Packaging:	50 ft. maximum, all lengths. Minimum order is 500 ft. per size

Product Number	Nominal I.D.		Nominal O.D.		Reinforcement Braids	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
01164461502▲	1	25.40	1.69	42.86	3	250	1.72	8.00	203.20	0.61	0.91
01164462502	1-1/4	31.75	1.88	47.63	3	250	1.72	10.00	254.00	0.80	1.19
01164463502	1-1/2	38.10	2.13	53.98	3	250	1.72	12.00	304.80	0.95	1.41
01164464502	2	50.80	2.63	66.68	3	250	1.72	16.00	406.40	1.20	1.79

▲ = Make To Order (MTO)

TRANSPORTER® GP FRAC HOSE

Transporter® GP FRAC Hoses are oil and gas exploration oilfield application products. These GP Fracturing Hoses are rugged, abrasion resistant discharge products engineered to provide top performance and long term service around oilfield and gas exploration worksites.

The GP FRAC Hose is an economical and cost effective complement to our highly successful, premium, Transporter® Oilfield Fracturing Hose. These hoses have a blended, strong synthetic rubber tube and deliver solid working pressure of 400 PSIG. They can provide exceptional service and are designed for use with 98% water and sand mixtures, and oil slurries for FRAC Tank Connections.

Economical and built to perform just like the other Thermoid Oil & Gas Exploration Hoses and products, rely on the new Thermoid GP FRAC Hose to deliver reliable service you can depend on at the work-site.

**Resistance:****Branding:**

Thermoid/HBD Industries, Inc. -
Transporter GP FRAC Hose -
400 psig, M.A. W.P., Made in USA,
Caution Statement

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR/SBR Blend
Cover:	SBR/EPDM
Reinforcement:	Four high strength synthetic cord plies
Temperature Range:	-25°F to +200°F -32°C to +93°C
Packaging:	100 ft. maximum

Product Number	Nominal I.D.		Nominal O.D.		Reinforcement Braids	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17777013002	3	76.20	3.78	19.83	4	400	2.76	n/a	n/a	2.18	4.81
17777014002	4	101.60	4.78	19.83	4	400	2.76	n/a	n/a	2.83	6.24

n/a = Not Applicable

OILFIELD FRACTURING

HBD/Thermoid has always been a leader in the development of quality, petroleum and fuel drilling and exploration hose and rubber products. Thermoid's Oilfield Fracturing Hose with its unique, abrasion resistance cover and tube has been copied, but never duplicated. These products provide you the superior, reliable long-term service. Our Fracturing Hoses are rugged, abrasion resistant discharge products specifically engineered to provide top performance in oilfield and gas exploration applications. These hoses are built to withstand the extended exposure to abrasive, harsh working conditions found on drilling job sites.

**Resistance:****Branding:**

Thermoid Transporter Oilfield
Fracturing Hose W.P. 400 PSI
Made in USA Month/Year

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	Special compound with high resistance to abrasion, oil and water
Cover:	Special compound with high resistance to abrasion, oil and water
Reinforcement:	Four high Strength Synthetic Cord Plies
Temperature Range:	-25°F (-32°C) to +200°F (93°C)
Packaging:	100 ft. maximum, all lengths.

Product Number	Nominal I.D.		Nominal O.D.		Reinforcement Braids	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17812000000	3	76.20	3.78	86.70	4	400	2.75	15.00	381.00	3.10	4.61
17812000000	4	101.60	4.78	12.24	4	400	2.75	20.00	508.00	4.10	6.10

▲ = Make To Order (MTO)

HY-FLEX GRADE D ROTARY DRILLING

HY-FLEX hose is recommended for the high pressure rotary drilling requirements of API Spec 7K and ISO 6807. This hose is also used in higher pressure applications which exceed the capabilities of Grade C Rotary Drilling hose. It can also be used for the flexible connection between standpipe and swivel for pumping mud at very high pressure in oil drilling and exploration. The HY-FLEX Grade D Rotary Drilling hose features multiple plies of high strength bead wire reinforcement to exceed the minimum burst requirements of 12,500 psig, yet provide for the maximum hose flexibility. The CR cover and NBR tube offer excellent resistance to heat, oil, abrasion and weather.



Resistance:



Branding:

HBD Industries, Inc.
HY-FLEX Rotary-(month)-(Year)
5000 psig W.P.-Grade D-Made In USA
+ Warning: Caution Statement

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	CR, Class C
Reinforcement:	Multiple plies of bead wire (8 or 10) and synthetic cord fabric
Temperature Range:	-20°F to +200°F -29°C to +93°C
Packaging:	Lengths over 30 ft. shipped on metal reels Shorter pieces shipped straight – slat packed
Couplings:	Only uncoupled hose is available at this time

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
34844473002▲	2-1/2 63.50	4.00 101.60	8	5000 34.48	48.00 1219.20	8.81 12.77
34844475002▲	3 76.20	4.68 118.87	8	5000 34.48	48.00 1219.20	12.72 18.57
34844478002▲	3-1/2 88.90	5.36 136.14	10	5000 34.48	54.00 1371.60	17.04 24.88

▲ = Make To Order (MTO)

THERMOID MUD PUMP SUCTION

Thermoid Mud Pump Suction hose is designed to be used as the flexible connection between mud pits and slush pumps. This hose features a construction of multiple plies of synthetic cord fabric with a helical steel wire. This allows the hose to be flexible, helps prevent collapse and gives it a **full vacuum rating**. The CR cover and tube are resistant to abrasion, sunlight, weather and oil.



Resistance:



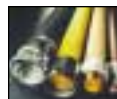
Branding:

Thermoid HBD Industries Inc.
Made In USA

Cover Color:	Black
Oil Resistance:	Medium
Construction:	
Tube:	CR
Cover:	CR
Reinforcement:	Multiple plies of synthetic cord fabric with a helical wire
Temperature Range:	-30°F to +200°F -34°C to +93°C
Packaging:	50 ft. maximum Hand built – \$250.00 minimum order per size
Couplings:	Built-in nipples

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11560006002▲	6 152.40	7.50 190.50	3	100 0.69	36.00 914.40	9.70 14.44
11560008002▲	8 203.20	9.63 244.48	4	100 0.69	48.00 1219.20	15.90 23.66
11560010002▲	10 254.00	11.75 298.45	5	100 0.69	60.00 1524.00	22.00 32.74
11560012002▲	12 304.80	13.88 352.43	6	100 0.69	72.00 1828.80	28.30 42.12

▲ = Make To Order (MTO)



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

HY-FLEX GRADE C ROTARY VIBRATOR DRILLING & DECOKER

HY-FLEX Decoker hose is the product you need for the application of the flexible connection between standpipe and swivel for pumping mud at a very high pressure in oil drilling and exploration. This is also the hose for refinery decoker service when coupled with HY-FLEX Full Flow Couplings. This hose features high strength spiral steel wire reinforcement which provides very flexible connection capable of withstanding high pumping pressures. The CR cover and NBR tube offer excellent resistance to heat, oil, drilling muds, abrasion and weather.



Resistance:



Branding:

Thermoid HBD Industries
HY-FLEX Rotary 4000 PSIG Grade C
Made In USA Month Year
+ Warning: Caution Statement

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A and ISO 6807: 2nd Edition
Cover:	CR Grade C and ISO 6807: 2nd Edition with white layline stripe
Reinforcement:	Multiple layers of spiralled high tensile carbon steel wire
Temperature Range:	-20°F to +212°F -29°C to +100°C
Packaging:	100 ft. lengths maximum Lengths for Coupled Assemblies hose are measured overall from threaded end to threaded end of the couplings Lengths tolerance is $\pm 1\%$ for the over-all length of the hose or hose assembly.
Couplings:	Highflex special internal expanded and swaged-on couplings for hose made to length. 3" male API line pipe thread on 2-1/2" size hose. 4" male API line pipe thread on 3" and 3-1/2" size hose. Flanges or Hammer Unions can also be added to couplings.

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
34844402002▲	2-1/2 63.50	4.06 103.1	6	4000 27.59	48.00 1219.20	9.73 14.48
34844403002▲	3 76.20	4.63 117.6	8	4000 27.59	48.00 1219.20	11.26 16.76
34844404002▲	3-1/2 88.90	5.15 130.8	8	4000 27.59	54.00 1371.60	15.21 22.64

▲ = Make To Order (MTO)

* Test Pressure is 8,000 psi, a 2:1 ratio to working pressure.

Minimum burst is 10,000 psi for each size, a 2.5:1 ratio to working pressure.

SLIM HOLE ROTARY DRILLING

Slim Hole Rotary Drilling hose is designed specifically for rotary drilling on portable drilling rigs, workover rigs, slim hole and seismograph rigs. This hose features a CR cover and an NBR tube which offer excellent resistance to heat, oil, abrasion and weather. Plus this hose has a reinforcement of multiple layers of high tensile steel wire and two fabric plies which give this hose high strength and flexibility. Long 100 ft. lengths help reduce possible connection problems.

Hose also available with 3,000 psi WP.



Resistance:



Branding:

Thermoid HBD Industries
Slim Hole Rotary 2500 PSI WP
Serial Number Made In USA

Cover Color:	Black
Oil Resistance:	High
Construction:	
Tube:	NBR, RMA Class A
Cover:	CR with white layline stripe – pinpricked
Reinforcement:	Multiple layers of spiralled high tensile steel wire, plus two fabric plies under the wire
Temperature Range:	-20°F to +200°F -29°C to +93°C
Packaging:	100 ft. lengths maximum
Couplings:	Swaged on high pressure carbon steel male NPT or API threaded ends or reusable couplings

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
34844487002▲	2 50.80	3.13 79.38	4	2500 17.24	18.00 457.20	5.00 7.44
34844488002▲	2-1/2 63.50	3.64 92.46	4	2500 17.24	24.00 609.60	5.77 8.42
34844489002▲	3 76.20	4.19 106.36	4	2500 17.24	30.00 762.00	7.00 10.42

▲ = Make To Order (MTO)

* Test Pressure is 5,000 psi, a 2:1 ratio to working pressure.

Minimum burst is 6,250 psi for each size.

Product information is subject to change. For full details, visit our website or contact Customer Service.

BLAST-FLEX™ SAND BLAST

Blast-Flex Sand Blast hose has been engineered to handle the cleaning, cutting or finishing stone, glass and metal surfaces. This hose will conduct sand, steel, shot or other sharp abrasives at high velocity. Blast-Flex features a 1/4" thick, SBR/NR tube that resists abrasion in sandblast service. The static-conducting properties of this hose prevent the build-up of electrical charges. The black SBR/EPDM cover resists abrasions, cuts and snags. The reinforcement of four spiral plies of heavy fabric resists collapsing and kinking when the hose is bent. The larger sizes of Blast-Flex are reinforced with heavier weight fabric for added strength.



Resistance:



Branding:

HBD Industries Sand Blast
Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: SBR/NR, 1/4" thick
Cover: SBR/EPDM
Reinforcement: Multiple plies of heavy fabric
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 50 ft. maximum, all lengths
 Minimum order is 500 ft. per size

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
17776010502	3/4	19.05	1.50	38.10	4	150	1.03	n/a	n/a	0.70	1.04
17776015502▲	1	25.40	1.88	47.63	4	150	1.03	n/a	n/a	1.00	1.49
17776025502▲	1-1/4	31.75	2.16	54.77	4	150	1.03	n/a	n/a	1.20	1.79
17776035502▲	1-1/2	38.10	2.38	60.33	4	150	1.03	n/a	n/a	1.30	1.93
17776040502▲	2	50.80	2.88	73.03	4	100	0.69	n/a	n/a	1.70	2.53
17776045502▲	2-1/2	63.50	3.41	86.52	4	100	0.69	n/a	n/a	2.00	2.98
17776050502	3	76.20	3.91	99.22	4	100	0.69	n/a	n/a	2.40	3.57

▲ = Make To Order (MTO)
 n/a = Not Applicable

WRAPPED SAND BLAST

Wrapped Sand Blast hose has been engineered to handle the cleaning, cutting or finishing stone, glass and metal surfaces. This hose will conduct sand, steel, shot or other sharp abrasives at high velocity. Wrapped Sand Blast features a 1/4" thick, SBR/NR tube that resists abrasion in sandblast service. The static-conducting properties of this hose prevent the build-up of electrical charges. The black SBR/EPDM cover resists abrasions, cuts and snags. The reinforcement of four spiral plies of heavy fabric resists collapsing and kinking when the hose is bent. The larger sizes of Wrapped Sand Blast are reinforced with heavier weight fabric for added strength.



Resistance:



Branding:

Thermoid HBD Industries
Sand Blast Hose WP
Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: SBR/NR, 1/4" thick
Cover: SBR/EPDM
Reinforcement: Multiple plies of heavy fabric
Packaging: 50 ft. maximum, all lengths
 Minimum order is 500 ft. per size

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
21224407502	1/2	12.70	1.19	30.16	4	150	1.03	n/a	n/a	0.50	0.74
21224400502▲	3/4	19.05	1.50	38.10	4	150	1.03	n/a	n/a	0.70	1.04
21224401502	1	25.40	1.88	47.63	4	150	1.03	n/a	n/a	1.00	1.49
21224402502	1-1/4	31.75	2.16	54.77	4	150	1.03	n/a	n/a	1.20	1.79
21224403502▲	1-1/2	38.10	2.38	60.33	4	150	1.03	n/a	n/a	1.30	1.93
21224404502▲	2	50.80	2.88	73.03	4	100	0.69	n/a	n/a	1.70	2.53

▲ = Make To Order (MTO)
 n/a = Not Applicable

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

BURSTPROOF™ OIL RESISTANT STEAM – Thermocure

Thermoid's Burstproof Oil Resistant Steam hose is designed for saturated steam service to +406°F and super-heated service to +450°F, where the cover may encounter petroleum products. Black and red color covers are available from stock. This hose has an EPDM cover and is reinforced with two braids of carbon steel wire providing flexibility and abrasion resistance. This durable hose provides a constant working pressure of 250 psi and is available in a range of sizes to fit most applications.

▲ See Steam Hose Warning, pages 28-29.

**Resistance:****Branding:**

BP Steam, 250# PSI WP
Oil Resistant Made In USA

Cover Color:	Black or Red
Oil Resistance:	Medium
Construction:	
Tube:	EPDM, RMA Class C
Cover:	EPDM, RMA Class C
Reinforcement:	Two braids of carbon steel wire
Temperature Range:	For saturated steam service to +406°F (+208°C) Super-heated steam to +450°F (+232°C)
Packaging:	Reels – 1/2" - 1" I.D. or 50 ft. lengths 2-1/2" I.D. – 50 ft. lengths

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Braids	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
Black						
22062321662	1/2 12.70	1.06 26.99	2	250 1.72	3.00 76.20	0.38 0.57
22062481662	3/4 19.05	1.28 32.54	2	250 1.72	4.50 114.30	0.52 0.77
22062641662	1 25.40	1.53 38.89	2	250 1.72	7.00 177.80	0.77 1.15
01104426502	2-1/2 63.50	3.13 79.38	2	250 1.72	17.00 431.80	2.00 2.98
Red						
22062322662	1/2 12.70	1.06 26.99	2	250 1.72	3.00 76.20	0.38 0.57
22062482662	3/4 19.05	1.28 32.54	2	250 1.72	4.50 114.30	0.52 0.77
22062642662▲	1 25.40	1.53 38.89	2	250 1.72	7.00 177.80	0.77 1.15

▲ = Make To Order (MTO)

BURSTPROOF™ REGULAR STEAM – Thermocure

Thermoid's Burstproof Regular Steam hose is designed for saturated steam service to +406°F and super-heated steam service to +450°F where petroleum products will **not** contact the hose. This hose meets MIL H 28596B, Type 1, Grade A specifications. The black and red cover colors are available from stock. This hose has an EPDM cover and tube. It is reinforced with two braids of carbon steel wire providing flexibility and abrasion resistance. This hose has a constant working pressure of 250 psi and is available in a range of sizes to fit your requirements.

▲ See Steam Hose Warning, pages 28-29.

**Resistance:****Branding:**

Thermoid HBD Industries
BP Steam Hose Made In USA

Cover Color:	Black or Red
Oil Resistance:	Limited
Construction:	
Tube:	EPDM
Cover:	EPDM
Reinforcement:	Two braids of carbon steel wire
Temperature Range:	For saturated steam service to +406°F (+208°C) Super-heated steam to +450°F (+232°C)
Packaging:	Reels – 1/2" - 1" I.D. or 50 ft. lengths 1-1/4" - 2" I.D. – 50 ft. lengths

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Braids	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
Black						
22052321662	1/2 12.70	1.00 25.40	2	250 1.72	3.00 76.20	0.38 0.57
22052481662	3/4 19.05	1.28 32.54	2	250 1.72	4.50 114.30	0.52 0.77
22052641662	1 25.40	1.53 38.89	2	250 1.72	7.00 177.80	0.77 1.15
01104413502	1-1/4 31.75	1.88 47.63	2	250 1.72	8.75 222.25	1.10 1.64
01104414502	1-1/2 38.10	2.11 53.58	2	250 1.72	10.50 266.70	1.23 1.83
01104415502	2 50.80	2.66 67.47	2	250 1.72	14.00 355.60	1.62 2.41
Red						
22052322662	1/2 12.70	1.00 25.40	2	250 1.72	3.00 76.20	0.38 0.57
22052482662	3/4 19.05	1.28 32.54	2	250 1.72	4.50 114.30	0.52 0.77
22052642662▲	1 25.40	1.53 38.89	2	250 1.72	7.00 177.80	0.77 1.15

▲ = Make To Order (MTO)

Product information is subject to change. For full details, visit our website or contact Customer Service.

PILE DRIVER STEAM

Pile Driver Steam hose is recommended for those applications where there is saturated steam service to +388°F on driving systems. This hose features an EPDM tube that is specifically compounded to resist permeation and prevent premature failure. The multiple plies of tire cord with plated steel cable reinforcement enable this hose to maintain a working pressure of 200 psi regardless which size hose you are using.

⚠ See Steam Hose Warning, pages 28-29.



Resistance:



Branding:

Thermoid HBD Industries
Pile Driver Steam Hose 200 PSI
WP Serial Number Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: EPDM, also available in CR for oil resistance
Cover: EPDM, also available in CR for oil resistance
Reinforcement: Multiple plies of tire cord and plated steel cable
Temperature Range: Saturated steam service to +388°F (+198°C)
Packaging: 100 ft. maximum
 Minimum order 300 ft.

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
34854634002▲	2	50.80	3.13	79.38	4	200	1.38	20.00	508.00	4.10	6.10
34854636002▲	2-1/2	63.50	3.38	85.73	4	200	1.38	25.00	635.00	5.40	8.04
34854638002▲	3	76.20	4.50	114.30	4	200	1.38	30.00	762.00	6.40	9.52
34854640002▲	4	101.60	5.63	142.88	4	200	1.38	40.00	1016.00	9.30	13.84
34854642002▲	6	152.40	7.81	198.44	6	200	1.38	60.00	1524.00	18.60	27.68

▲ = Make To Order (MTO)

ALERT: Large size, industrial hoses have caution and/or safety usage printed information attached by tag to the product or this information is printed onto the hose.



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
 For Made to Order Hose, Customer Order Form, see catalog page 137.

BLACK HEAVY-DUTY WATER – Coupled

Suitable for water pressure up to 150 psi.
Coupled with Male x Female octagonal nut spun
brass garden hose couplings with brass ferrules.



Resistance:



Branding:

None

Cover Color: Black
Oil Resistance: Limited
Construction:
 Tube: EPDM
 Cover: EPDM
 Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +180°F
 -40°C to +82°C
Packaging: 50 ft. lengths – 5 per carton

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00512281248▲	5/8	15.88	0.94	23.81	2	150	1.03	3.75	95.25	0.23	0.34
00512281255▲	3/4	19.05	1.06	26.98	2	150	1.03	4.50	114.30	0.27	0.40

▲ = Make To Order (MTO)

BLACK HEAVY-DUTY CONTRACTORS WATER – Coupled

Contractors Water hose has a 150 psi working pressure constant through all sizes. This hose is coupled (Male x Female) with crush resistant octagonal nut rod brass garden hose couplings and brass ferrules. It features an EPDM tube and cover with multi-spiral reinforcement that is heat, ozone and sunlight resistant. Designed for professional grade contractor use, this heavy-duty water hose is engineered to stay flexible even in extreme temperatures. This hose is virtually kink-proof.



Resistance:



Branding:

None

Cover Color: Black
Oil Resistance: Limited
Construction:
 Tube: EPDM
 Cover: EPDM
 Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +180°F
 -40°C to +82°C
Packaging: 50 ft. lengths – 5 per carton

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00512180769	5/8	15.88	0.94	23.81	2	150	1.03	3.75	95.25	0.23	0.34
00512180771	3/4	19.05	1.06	26.98	2	150	1.03	4.50	114.30	0.27	0.40

Product information is subject to change. For full details, visit our website or contact Customer Service.

BLACK MUNICIPAL WATER – Coupled

This economical water hose was designed to provide general water pressure service for municipalities and general construction. It features an EPDM tube and cover that stands up to the effects of heat, abrasion, weathering and ozone. The multi-spiral reinforcement keeps the hose flexible even in extreme temperatures and helps minimize kinks. It can be used by consumers or in construction and this hose will handle city water pressure. It is equipped with Male x Female spun brass fittings and ferrules.



Resistance:



Branding:

None

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: EPDM
Cover: EPDM
Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +180°F
 -40°C to +82°C
Packaging: 25 ft. or 50 ft. lengths – 5 per carton

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
25 ft.											
00511780744▲	5/8	15.88	0.88	22.23	2	100	0.69	3.75	95.25	0.18	0.27
00511780745▲	3/4	19.05	1.03	26.19	2	100	0.69	4.50	114.30	0.24	0.36
50 ft.											
00511780769▲	5/8	15.88	0.88	22.23	2	100	0.69	3.75	95.25	0.18	0.27
00511780770▲	3/4	19.05	1.03	26.19	2	100	0.69	4.50	114.30	0.24	0.36

▲ = Make To Order (MTO)

GREEN GARDEN – Coupled

Designed for home use, Thermoid's rubber Green Garden hose handles city water pressure and is coupled with male by female spun brass couplings. The EPDM tube and cover resist abrasion, ozone, cracking and weather checking. The multi-spiral polyester reinforcement helps keep it flexible even in extreme temperatures and is virtually kink-proof.



Resistance:



Branding:

None

Call Customer Service for other colors and sizes.

Cover Color: Green
Oil Resistance: Limited
Construction:
Tube: EPDM
Cover: EPDM
Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +180°F
 -40°C to +82°C
Packaging: 50 ft. lengths – 5 per carton

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00549680102	5/8	15.88	0.88	22.23	2	100	0.69	3.75	95.25	0.19	0.28



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
 For Made to Order Hose, Customer Order Form, see catalog page 137.

WASHING MACHINE DRAIN

This hose is specifically designed to withstand the heat and service life requirements needed for washing machine applications both in domestic and commercial use. It features an EPDM tube and cover with multi-spiral polyester construction. This unique spiral reinforcement helps make this hose kink resistant and easy to handle. This hose is very flexible and ideal for curves and bends.



Resistance:



Branding:

None

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: EPDM
Cover: EPDM
Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +200°F
 -40°C to +93°C
Packaging: 50 ft. lengths—1 per carton

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Reinforcement Spirals	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
00548610250▲	5/8 15.88	0.91 23.02	2	62 0.43	3.75 95.25	0.19 0.28
00548614250	7/8 22.23	1.22 30.96	2	37 0.25	5.25 133.35	0.35 0.52

▲ = Make To Order (MTO)

NYLAIR 44 WATER DISCHARGE

The recommended use for Nylair 44 is for water discharge service requiring a light to medium weight, rugged hose. This hose can be used with hot (+180°F) or cold water. The 3/32" thick SBR tube is resistant to water absorption, while the 1/16" thick black SBR/EPDM cover resists abrasions and water absorption.



Resistance:



Branding:

Thermoid HBD Industries
 Nylair 44 Water Discharge
 Made In USA

Cover Color: Black
Oil Resistance: Limited
Construction:
Tube: SBR, 3/32" thick
Cover: SBR/EPDM, 1/16" thick
Reinforcement: Multiple plies of cord
Temperature Range: -40°F to +160°F
 -40°C to +71°C
Packaging: 50 ft. maximum
 Straight ends only
 1/2" to 2-1/2" I.D., minimum order of 500 ft.
 3" I.D. or larger, \$250.00 minimum order

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
21324480502▲	1/2 12.70	1.00 25.40	4	200 1.38	n/a n/a	0.27 0.40
21324481502▲	3/4 19.05	1.25 31.75	4	200 1.38	n/a n/a	0.30 0.45
21324482502▲	1 25.40	1.50 38.10	4	200 1.38	n/a n/a	0.44 0.65
21324483502▲	1-1/4 31.75	1.75 44.45	4	200 1.38	n/a n/a	0.60 0.89
21324484502▲	1-1/2 38.10	2.06 52.39	4	200 1.38	n/a n/a	0.78 1.16
21324485502▲	2 50.80	2.56 65.09	4	200 1.38	n/a n/a	1.00 1.49
21324486502▲	2-1/2 63.50	3.06 77.79	4	150 1.03	n/a n/a	1.38 2.05
11524488502▲	3 76.20	3.56 90.49	4	150 1.03	n/a n/a	1.58 2.35
11524490502▲	4 101.60	4.63 117.48	4	150 1.03	n/a n/a	2.10 3.13
11524491502▲	4-1/2 114.30	5.06 128.59	4	125 0.86	n/a n/a	2.49 3.71
11524492502▲	5 127.00	5.56 141.29	4	125 0.86	n/a n/a	2.69 4.00
11524494502▲	6 152.40	6.56 166.69	4	100 0.69	n/a n/a	3.18 4.73
11524495502▲	8 203.20	8.75 222.25	6	100 0.69	n/a n/a	5.68 8.45
11524497502▲	8 203.20	9.00 228.60	8	150 1.03	n/a n/a	6.57 9.78
11524498502▲	10 254.00	10.81 274.64	6	75 0.52	n/a n/a	7.20 10.72
11524499502▲	10 254.00	11.00 279.40	8	100 0.69	n/a n/a	7.71 11.47


▲ = Make To Order (MTO)

n/a = Not Applicable


Product information is subject to change. For full details, visit our website or contact Customer Service.

PAPER MILL–TYPE 1788–Gray Cover

Paper Mill Type 1788 hose is ideal for use in paper and pulp mills and other processing plants. This hose is good for hot (up to +200°F) or cold water. The SBR tube of this hose resists water absorption. The gray SBR cover is smooth, thick, soft and resilient. This compound is resistant to the usual chemicals, acids, scuffing and abrasions. Paper Mill Type 1788 hose is available with a lightweight, flexible end which reduces damage when accidentally dropped. Maximum flexibility is provided by the multiple plies of reinforcement.



Resistance:



Branding:

Thermoid HBD Industries
Type 1788 Paper Mill
Made In USA

- Cover Color: Gray
- Oil Resistance: Limited
- Construction:

Tube: SBR

Cover: SBR

Reinforcement: Multiple plies of medium weight fabric
- Temperature Range: -40°F to +160°F
-40°C to +71°C
- Packaging: 50 ft. lengths

1 End Tapered

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
21284434502	3/4	19.05	1.31	33.34	3	150	1.03	n/a	n/a	0.35	0.52
21284435502	1	25.40	1.47	37.31	4	150	1.03	n/a	n/a	0.49	0.73
21284436502	1-1/4	31.75	1.75	44.45	4	150	1.03	n/a	n/a	0.64	0.95
21284437502▲	1-1/2	38.10	2.00	50.80	4	125	0.86	n/a	n/a	0.74	1.10

▲ = Make To Order (MTO)
n/a = Not Applicable

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

CASCADE PAPER MILL

Cascade Paper Mill hose is designed for those applications where there is hot water (+200°F) wash-up paper and pulp mills and other processing mills. The SBR tube is resistant to water absorption. The 2-ply or 4-ply reinforcement is a feature that allows this hose to work unencumbered at 150 psi, no matter what size hose is being used.

**Resistance:****Branding:**

Thermoid HBD Industries
Cascade Paper Mill Washdown WP
Made In USA

Cover Color:	Gray
Oil Resistance:	Limited
Construction:	
Tube:	SBR, 1/8" thick for 2-ply and 3/32" thick for 4-ply
Cover:	SBR
Reinforcement:	Multiple plies of polyester cord
Temperature Range:	-40°F to +160°F -40°C to +71°C
Packaging:	Tapered end – 50 ft. Straight end – 50 ft. to 100 ft. Tapered end – one end only Other colors available, 1200 ft. minimum

Product Number	Nominal I.D.		Nominal O.D.		Spirals/ Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17828030502	3/4	19.05	1.16	29.36	2	150	1.03	n/a	n/a	0.34	0.51
17828031502	1	25.40	1.41	35.71	2	150	1.03	n/a	n/a	0.43	0.64
17828032502	1-1/4	31.75	1.75	44.45	2	150	1.03	n/a	n/a	0.66	0.98
17828033502	1-1/2	38.10	2.00	50.80	2	150	1.03	n/a	n/a	0.74	1.10
17828034502▲	2	50.80	2.50	63.50	2	150	1.03	n/a	n/a	0.92	1.37
17828035502▲	2-1/2	63.50	3.03	76.96	2	150	1.03	n/a	n/a	1.29	1.92
17828001502▲	3/4	19.05	1.16	29.36	4	150	1.03	n/a	n/a	0.38	0.57
17828002502	1	25.40	1.41	35.71	4	150	1.03	n/a	n/a	0.56	0.83
17828000502	1-1/4	31.75	1.75	44.45	4	150	1.03	n/a	n/a	0.69	1.03
17828003502▲	1-1/2	38.10	2.00	50.80	4	150	1.03	n/a	n/a	0.80	1.19
17828004502▲	2	50.80	2.50	63.50	4	150	1.03	n/a	n/a	0.96	1.43
17828005502▲	2-1/2	63.50	3.03	76.96	4	150	1.03	n/a	n/a	1.35	2.01

▲ = Make To Order (MTO)

n/a = Not Applicable

Product information is subject to change. For full details, visit our website or contact Customer Service.

BF-10 PVC WATER DISCHARGE – BLUE

The BF-10 is a lightweight and economical PVC water discharge hose for open end service in mining, construction, agricultural and industrial applications. This PVC construction allows this hose to be easy to handle, won't absorb water or cake with mud.



Cover Color:	Blue
Oil Resistance:	Medium
Construction:	
Tube:	PVC, co-extruded
Cover:	PVC, co-extruded
Reinforcement:	Polyester
Temperature Range:	-5°F to +130°F -21°C to +54°C
Packaging:	300 ft. maximum
Couplings:	Common long or short shank and quick acting with bands or clamps

Product Number	Nominal I.D.		Nominal Wall Thickness		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
19051003002▲	1	25.40	0.06	1.52	n/a	110	0.76	n/a	n/a	0.09	0.13
19051253002	1-1/4	31.75	0.06	1.52	n/a	80	0.55	n/a	n/a	0.12	0.18
19051503002	1-1/2	38.10	0.06	1.52	n/a	70	0.48	n/a	n/a	0.17	0.25
19052003002	2	50.80	0.06	1.52	n/a	65	0.45	n/a	n/a	0.22	0.33
19052503002▲	2-1/2	63.50	0.06	1.52	n/a	55	0.38	n/a	n/a	0.25	0.37
19053003002	3	76.20	0.06	1.52	n/a	55	0.38	n/a	n/a	0.31	0.46
19054003002	4	101.60	0.06	1.52	n/a	50	0.34	n/a	n/a	0.44	0.65
19056003002▲	6	152.40	0.06	1.52	n/a	35	0.24	n/a	n/a	0.73	1.09

▲ = Make To Order (MTO)

n/a = Not Applicable



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

PVC WATER DISCHARGE STANDARD DUTY BLUE

PVC Water Discharge Standard Duty Blue hose is an economical, standard duty water hose. This hose will not rot or mildew. Also, this hose is resistant to oils and grease and rolls flat for easy storage. It can be used in open end discharge service for water, sewage and mine acid water. This hose features a PVC construction which makes this hose lightweight and easy to handle. It won't absorb water or cake with mud.



Resistance:



Branding:

Thermoid/HBD Industries, Inc.-
Standard PVC, I.D.,
Made In USA

Cover Color:	Blue
Oil Resistance:	Medium
Construction:	
Tube:	PVC
Cover:	PVC
Reinforcement:	2 spiral plies and one longitudinal ply of polyester fiber
Temperature Range:	0°F to +150°F -18°C to +66°C
Packaging:	300 ft. maximum
Couplings:	Shank type, quick acting

Product Number	Nominal I.D. (inches) (mm)	Nominal Wall Thickness (inches) (mm)	Plies *	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
19021503002	1-1/2 38.10	0.06 1.52	2 S + 1 L	75 0.52	n/a n/a	0.15 0.22
19022003002	2 50.80	0.06 1.52	2 S + 1 L	75 0.52	n/a n/a	0.23 0.34
19023003002	3 76.20	0.06 1.52	2 S + 1 L	50 0.34	n/a n/a	0.37 0.55
19024003002	4 101.60	0.06 1.52	2 S + 1 L	50 0.34	n/a n/a	0.53 0.79
19026003002▲	6 152.40	0.06 1.52	2 S + 1 L	40 0.28	n/a n/a	1.10 1.64

* 2 S + 1 L = 2 spiral plies plus one longitudinal ply of polyester fiber.

▲ = Make To Order (MTO)

n/a = Not Applicable

TRANSPORTER® WATER DISCHARGE

Transporter Water Discharge hose is ideal for irrigation and construction applications. This hose is extremely lightweight, flexible and easy to handle. This hose features an EPDM tube and cover which is resistant to water absorption, heat and sunlight. Regardless of the I.D., the synthetic cord reinforcement allows this hose to work at a constant working pressure of a 100 psi.



Resistance:



Branding:

Thermoid HBD Industries
Transporter Water Discharge
Made In USA

Cover Color:	Black
Oil Resistance:	Limited
Construction:	
Tube:	EPDM
Cover:	EPDM
Reinforcement:	Synthetic cord
Temperature Range:	-40°F to +180°F -40°C to +82°C
Packaging:	100 ft. maximum

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
17825015002▲	1-1/2 38.10	1.72 43.66	2	100 0.69	n/a n/a	0.30 0.45
17825020002▲	2 50.80	2.22 56.36	2	100 0.69	n/a n/a	0.40 0.60
17825030002▲	3 76.20	3.22 81.76	2	100 0.69	n/a n/a	0.60 0.89
17825040002▲	4 101.40	4.22 107.16	2	100 0.69	n/a n/a	0.90 1.34
17825060002▲	6 152.40	6.34 161.13	4	100 0.69	n/a n/a	2.00 2.98

▲ = Make To Order (MTO)

n/a = Not Applicable

Product information is subject to change. For full details, visit our website or contact Customer Service.

WD-150 WATER DISCHARGE

WD-150 is the heavy-duty water discharge hose suitable for construction sites, work boats and mines where abrasion resistance and higher working pressures are required. This hose features a reinforcement of two to four plies of polyester cord, depending on the I.D., that allows this hose to work at a constant working pressure of 150 psi irregardless of hose I.D. The EPDM tube and cover offer excellent heat resistance.



Resistance:
  
Branding:
Thermoid/HBD Industries Water Discharge 150 PSI WP Made In USA

- Cover Color:

Oil Resistance:

Construction:

Tube:

Cover:

Reinforcement:

Temperature Range:

Packaging:
- Black

Limited

EPDM

EPDM

Heavy plies of polyester cord in sizes
1" to 4" I.D. – 2 plies
5" and 6" I.D. – 4 plies

-40°F to +180°F
-40°C to +82°C

100 ft. maximum

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17826010002▲	1	25.40	1.28	32.54	2	150	1.03	n/a	n/a	0.27	0.40
17826012502▲	1-1/4	31.75	1.53	38.89	2	150	1.03	n/a	n/a	0.32	0.48
17826015002▲	1-1/2	38.10	1.78	53.18	2	150	1.03	n/a	n/a	0.38	0.57
17826020002▲	2	50.80	2.28	57.94	2	150	1.03	n/a	n/a	0.56	0.83
17826025002▲	2-1/2	63.50	2.80	71.04	2	150	1.03	n/a	n/a	0.70	1.04
17826030002▲	3	76.20	3.28	83.34	2	150	1.03	n/a	n/a	0.76	1.13
17826040002▲	4	101.60	4.31	109.54	2	150	1.03	n/a	n/a	1.13	1.68
17826050002▲	5	127.00	5.50	139.70	4	150	1.03	n/a	n/a	2.45	3.65
17826060002▲	6	152.40	6.50	165.10	4	150	1.03	n/a	n/a	2.77	4.12

▲ = Make To Order (MTO)
n/a = Not Applicable

TRANSPORTER® WATER SUCTION & DISCHARGE

Transporter Water Suction and Discharge hose is designed for contractors and agricultural applications. This hose features an EPDM tube and cover construction which allows this hose to be smooth, tough, non-porous, heat and abrasion resistant. This construction, plus the reinforcement of a wire inserted helical wire in synthetic cord, makes this hose lightweight, flexible and easy to handle. This hose is rated at **full vacuum**.



Resistance:



Branding:

Thermoid HBD Industries
Transporter Water Suction &
Discharge Hose WP Made In USA

Cover Color:	Black
Oil Resistance:	Limited
Construction:	
Tube:	EPDM
Cover:	EPDM
Reinforcement:	Synthetic cord with spiral wire helix(es) wire inserted
Temperature Range:	-40°F to +180°F -40°C to +82°C
Packaging:	100 ft. maximum

Product Number	Nominal I.D.		Nominal O.D.		Plies	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
17834010002▲	1	25.40	1.44	36.51	2	200	1.38	2.50	63.50	0.50	0.74
17834012502▲	1-1/4	31.75	1.69	42.86	2	200	1.38	3.00	76.20	0.60	0.89
17834015002	1-1/2	38.10	1.94	49.21	2	200	1.38	4.00	101.60	0.70	1.04
17834020002	2	50.80	2.44	61.91	2	150	1.03	6.00	152.40	0.90	1.34
17834025002▲	2-1/2	63.50	3.00	76.20	2	150	1.03	8.50	215.90	1.30	1.93
17834030002	3	76.20	3.56	90.49	2	150	1.03	11.00	279.40	1.80	2.68
17834040002	4	101.60	4.63	117.48	2	150	1.03	14.00	355.60	2.60	3.87
17830600002▲	6	152.40	6.67	169.47	2	100	0.69	30.00	762.00	4.10	6.10

▲ = Make To Order (MTO)

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

Product information is subject to change. For full details, visit our website or contact Customer Service.

PAPER MACHINE SUCTION BOX

Paper Machine Suction Box hose was specifically designed to serve as a connector on paper machines. This hose features a corrugated CR tube and cover which is resistant to oil, abrasions, weathering and ozone. Paper Machine Suction Box hose is rated at **full vacuum**.



Resistance:



Branding:

Thermoid HBD Industries

Cover Color:	Black
Oil Resistance:	Medium
Construction:	
Tube:	CR, corrugated
Cover:	CR, corrugated
Reinforcement:	Multiple plies of synthetic fabric with spiral wire helix(es)
Temperature Range:	-40°F to +180°F -40°C to +82°C
Packaging:	Minimum 12" and maximum 120" lengths available on all sizes. \$250.00 minimum order
Ends:	2" soft cuff with capped ends

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
11484045502▲	4-1/2 114.30	5.31 134.94	2	n/a n/a	4.50 114.30	3.90 5.80
11484050502▲	5 127.00	5.81 147.64	2	n/a n/a	5.00 127.00	4.20 6.25
11484060502▲	6 152.40	6.81 173.04	2	n/a n/a	6.00 152.40	4.90 7.29
11484070502▲	6-5/8 168.28	7.44 188.91	2	n/a n/a	6.63 168.28	6.10 9.08
11484080502▲	8 203.20	8.81 223.84	2	n/a n/a	8.00 203.20	6.20 9.23
11484090502▲	8-5/8 219.08	9.44 239.71	2	n/a n/a	8.63 219.08	6.60 9.82
11484100502▲	10 254.00	10.81 274.64	2	n/a n/a	10.00 254.00	8.90 13.25
11484108502▲	10-3/4 273.05	11.56 293.69	2	n/a n/a	10.75 273.05	9.40 13.99
11484120502▲	12 304.80	12.88 327.03	3	n/a n/a	12.00 304.80	11.00 16.37
11484128502▲	12-3/4 323.85	13.63 346.08	3	n/a n/a	12.75 323.85	11.30 16.82
11484140502▲	14 355.60	14.94 379.41	3	n/a n/a	14.00 355.60	14.20 21.13
11484160502▲	16 406.40	16.94 430.21	3	n/a n/a	16.00 406.40	15.90 23.66
11484180502▲	18 457.20	19.00 482.60	3	n/a n/a	18.00 457.20	17.70 26.34

▲ = Make To Order (MTO)

*All sizes are rated at full vacuum

RADIAL FLEX® STANDARD DUTY GREEN

This is a standard duty, multipurpose PVC hose which applications include industrial, chemical, construction, farm and mining. This a **full vacuum** rated hose. Radial Flex Standard Duty Green hose is recommended for use between 0°F to +150°F. Outside these limits, rubber hose is recommended.



Resistance:



Branding:

None

Cover Color:	Green
Oil Resistance:	Limited
Construction:	
Tube:	PVC
Cover:	PVC
Reinforcement:	Helical PVC rod
Temperature Range:	0°F to +150°F -18°C to +66°C
Packaging:	Coils, 100 ft. maximum – 1" to 4" I.D. 40 ft. maximum – 6" I.D.

70 Degrees F 150 Degrees F

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
19121001002	1 25.40	1.13 28.58	n/a	100 0.69	25 0.17	3.00 76.20	0.25 0.37
19121501002▲	1-1/2 38.10	1.78 45.21	n/a	90 0.62	25 0.17	4.00 101.60	0.39 0.58
19122001002	2 50.80	2.29 58.17	n/a	90 0.62	25 0.17	5.00 127.00	0.57 0.85
19122501002▲	2-1/2 63.50	2.90 73.66	n/a	100 0.69	25 0.17	6.00 152.40	1.00 1.49
19123001002	3 76.20	3.42 86.87	n/a	90 0.62	20 0.14	7.00 177.80	1.16 1.73
19124001002	4 101.60	4.52 114.81	n/a	75 0.52	20 0.14	10.00 254.00	1.82 2.71
19126001002▲	6 152.40	6.70 170.18	n/a	50 0.34	n/a n/a	16.00 406.40	3.09 4.60

▲ = Make To Order (MTO)

n/a = Not Applicable

RADIAL FLEX® CONTRACTORS

Radial Flex Contractors hose is recommended for water, light chemicals in mining, construction and forming. This is a **full vacuum** rated hose. This hose is recommended for use between 0°F to +150°F. Outside these limits, rubber hose is recommended.

**Resistance:****Branding:**

None

Cover Color: Green
Oil Resistance: Medium
Construction:
 Tube: PVC
 Cover: PVC
 Reinforcement: Helical PVC rod
Temperature Range: 0°F to +150°F
 -18°C to +66°C
Packaging: Coils, 100 ft. maximum – 1-1/2" to 4" I.D.

70 Degrees F 150 Degrees F

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
19061501002▲	1-1/2 38.10	1.75 44.45	n/a	90 0.62	25 0.17	5.00 127.00	0.39 0.58
19062001002	2 50.80	2.31 58.74	n/a	90 0.62	25 0.17	7.00 177.80	0.57 0.85
19063001002	3 76.20	3.41 86.52	n/a	75 0.52	25 0.17	10.00 254.00	0.94 1.40
19064001002▲	4 101.60	4.47 113.51	n/a	60 0.41	25 0.17	14.00 355.60	1.48 2.20

▲ = Make To Order (MTO)

n/a = Not Applicable

RADIAL FLEX® STANDARD DUTY CLEAR

Radial Flex Standard Duty Clear hose is designed for those industrial applications where maximum visibility is needed. The clear PVC wall with the white helix(es) allows detection of blockage or other problems. Like the other Radial Flex hoses, it is recommended that this hose be used in temperatures between 0°F to +150°F. Outside these limits, rubber hose is recommended. This hose is rated at **full vacuum**.

**Resistance:****Branding:**

None

Cover Color: Clear
Oil Resistance: Medium
Construction:
 Tube: PVC
 Cover: PVC
 Reinforcement: Helical PVC rod
Temperature Range: 0°F to +150°F
 -18°C to +66°C
Packaging: Coils, 100 ft. maximum – 1-1/2" to 4" I.D.

70 Degrees F 150 Degrees F

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
19141501002	1-1/2 38.10	1.80 45.72	n/a	90 0.62	25 0.17	4.00 101.60	0.39 0.58
19142001002	2 50.80	2.34 59.44	n/a	90 0.62	25 0.17	5.00 127.00	0.57 0.85
19142501002▲	2-1/2 63.50	2.91 73.91	n/a	100 0.69	25 0.17	6.00 152.40	1.00 1.49
19143001002	3 76.20	3.46 87.88	n/a	90 0.62	25 0.17	7.00 177.80	1.16 1.73
19144001002▲	4 101.60	4.50 114.30	n/a	75 0.52	20 0.14	10.00 254.00	1.82 2.71

▲ = Make To Order (MTO)

n/a = Not Applicable



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
 For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

RADIAL FLEX® STANDARD DUTY CLEAR CORRUGATED

This hose has the same applications as the Radial Flex Standard Duty Clear hose. The corrugated construction with the clear wall and white PVC helix(es) gives this hose added flexibility and a smooth tube for an unrestricted flow. This hose is recommended for use between 0°F to +150°F. Outside these limits, rubber hose is recommended. This hose is rated at **full vacuum**.

	Resistance:
	
	Branding:
None	

Cover Color: Clear
Oil Resistance: Medium
Construction:
Tube: PVC
Cover: PVC
Reinforcement: Helical PVC rod
Temperature Range: 0°F to +150°F
 -18°C to +66°C
Packaging: Coils, 100 ft. maximum – 1-1/2" to 4" I.D.


70 Degrees F 150 Degrees F

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
19171501002▲	1-1/2 38.10	1.73 43.94	n/a	55 0.38	15 0.10	4.00 101.60	0.31 0.46
19172001002▲	2 50.80	2.28 57.91	n/a	50 0.34	15 0.10	5.00 127.00	0.48 0.71
19172501002▲	2-1/2 63.50	2.81 71.37	n/a	45 0.31	12.5 0.09	6.00 152.40	0.67 1.00
19173001002▲	3 76.20	3.30 83.82	n/a	40 0.28	12.5 0.09	7.00 177.60	0.84 1.25
19174001002▲	4 101.60	4.46 113.28	n/a	35 0.24	10 0.07	10.00 254.00	1.63 2.43

▲ = Make To Order (MTO)
 n/a = Not Applicable

RADIAL FLEX® EXTRA HEAVY DUTY GREEN

Radial Flex Extra Heavy Duty Green hose is ideal for most industrial, chemical transfer, construction, farm and mining applications. Good for conveying liquids and slurries. This hose is rated at full vacuum. The PVC construction is extremely tough, abrasion resistant and won't collapse under full vacuum. This hose is recommended for use between 0°F to +150°F. Good for full vacuum within these limits. Outside these limits, rubber hose is recommended. Non-fading green color.

	Resistance:
	
	Branding:
None	

Cover Color: Green
Oil Resistance: Medium
Construction:
Tube: PVC
Cover: PVC
Reinforcement: Helical PVC rod
Temperature Range: 0°F to +150°F
 -18°C to +66°C
Packaging: Coils, 100 ft. maximum – 1-1/2" to 4" I.D.
 40 ft. maximum – 5" to 6" I.D.

70 Degrees F 150 Degrees F

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
19011501002▲	1-1/2 38.10	1.89 48.01	n/a	150 1.03	65 0.45	7.00 177.80	0.54 0.80
19012001002	2 50.80	2.39 60.71	n/a	130 0.90	55 0.38	8.00 203.20	0.81 1.21
19012501002▲	2-1/2 63.50	2.94 74.68	n/a	106 0.73	50 0.34	10.00 254.00	1.13 1.68
19013001002	3 76.20	3.45 87.63	n/a	100 0.69	45 0.31	12.00 304.80	1.35 2.01
19013501002▲	3-1/2 88.90	4.09 103.89	n/a	75 0.52	35 0.24	15.00 381.00	1.75 2.60
19014001002▲	4 101.60	4.60 116.84	n/a	75 0.52	30 0.21	17.00 431.80	2.22 3.30
19015001002▲	5 127.00	5.65 143.51	n/a	75 0.52	20 0.14	24.00 609.60	2.83 4.21

* Sizes 1-1/2" I.D. to 4" I.D. 100 ft. per coil, sizes 5" I.D. to 6" I.D. 40 ft. per coil
 ▲ = Make To Order (MTO)
 n/a = Not Applicable

RADIAL FLEX® HEAVY DUTY YELLOW

Radial Flex Heavy Duty Yellow hose is for construction farm and mining applications where the durability and ruggedness of Radial Flex® Green is not required. This hose is designed to handle irrigation and suction applications. This hose is rated at **full vacuum**. All sizes can take full vacuum without collapsing. Radial Flex Yellow hose is non-fading and recommended for use between 0°F to +150°F. This hose good for full vacuum within these limits. Outside these limits, rubber hose is recommended.



Resistance:



Branding:

None

Cover Color: Yellow
Oil Resistance: Medium
Construction:
 Tube: PVC
 Cover: PVC
 Reinforcement: Helical PVC rod
Temperature Range: 0°F to +150°F
 -18°C to +66°C
Packaging: Coils, 100 ft. maximum – 1" to 4" I.D.
 40 ft. maximum – 6" I.D.

70 Degrees F 150 Degrees F

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
19041001002▲	1 25.40	1.27 32.26	n/a	140 0.96	40 0.28	4.00 101.60	0.28 0.42
19041501002▲	1-1/2 38.10	1.84 46.74	n/a	120 0.83	40 0.28	6.00 152.40	0.47 0.70
19042001002▲	2 50.80	2.37 60.20	n/a	100 0.69	35 0.24	7.00 177.80	0.68 1.01
19042501002▲	2-1/2 63.50	2.90 73.66	n/a	100 0.69	35 0.24	8.00 203.20	1.00 1.49
19043001002▲	3 76.20	3.43 87.12	n/a	90 0.62	30 0.21	10.00 254.00	1.18 1.76
19043501002▲	3-1/2 88.90	4.03 102.36	n/a	75 0.52	25 0.17	12.00 304.80	1.45 2.16
19044001002▲	4 101.60	4.52 114.81	n/a	75 0.52	25 0.17	14.00 355.60	1.82 2.71

* Size 6" I.D. is 40 ft. to a coil, all other sizes are 100 ft. to a coil

▲ = Make To Order (MTO)

n/a = Not Applicable

RADIAL FLEX® STANDARD DUTY CORRUGATED GREEN

This is a standard duty, multipurpose PVC hose which applications include are industrial, chemical, construction, farm and mining. This is a **full vacuum** rated hose. Radial Flex Standard Duty Corrugated Green hose is recommended for use between 0°F to +150°F. Outside these limits, rubber hose is recommended. The corrugated construction makes this the lightest and most flexible Radial Flex hose.



Resistance:



Branding:

None

Cover Color: Green
Oil Resistance: Medium
Construction:
 Tube: PVC
 Cover: PVC
 Reinforcement: Helical PVC rod
Temperature Range: 0°F to +150°F
 -18°C to +66°C
Packaging: Coils, 100 ft. maximum – 1-1/2" to 4" I.D.

70 Degrees F 150 Degrees F

Product Number	Nominal I.D. (inches) (mm)	Nominal O.D. (inches) (mm)	Plies	Working Pressure (psi) (Mpa)	Working Pressure (psi) (Mpa)	Min. Bend Radius (inches) (mm)	Weight (lb/ft) (Kg/m)
19151501002	1-1/2 38.10	1.73 43.94	n/a	55 0.38	15 0.10	4.00 101.60	0.31 0.46
19152001002▲	2 50.80	2.28 57.91	n/a	50 0.34	15 0.10	5.00 127.00	0.48 0.71
19152501002▲	2-1/2 63.50	2.81 71.37	n/a	45 0.31	12.5 0.09	6.00 152.40	0.67 1.00
19153001002▲	3 76.20	3.30 83.82	n/a	40 0.28	12.5 0.09	7.00 177.80	0.84 1.25
19154001002▲	4 101.60	4.46 113.28	n/a	35 0.24	10 0.07	10.00 254.00	1.63 2.43

▲ = Make To Order (MTO)

n/a = Not Applicable

Product information is subject to change. For full details, visit our website or contact Customer Service.

DARI-PREEN CREAMERY

Dari-Preen is designed for washdown service in creameries, dairies, packing houses, canneries and food processing plants. It features an EPDM tube and cover. Color coded white to indicate washdown service and cleanliness. Its tough cover resists scuffing and cracking. Dari-Preen handles hot water up to 200°F at 50 psi and it is rated for working pressures up to 250 psi on 1/2" I.D.

	Resistance:
	 
	Branding:
Size WP Dari-Preen Made In USA	

Cover Color:	White
Oil Resistance:	Limited
Construction:	
Tube:	EPDM
Cover:	EPDM
Reinforcement:	Spiral polyester yarn
Temperature Range:	-40°F to +180°F -40°C to +82°C
Packaging:	Reels, †50 ft. length – 1 per carton

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00544808400	1/2	12.70	0.91	23.02	4	250	1.72	3.00	76.20	0.29	0.43
00544812400	3/4	19.05	1.25	31.75	4	200	1.38	4.50	114.30	0.50	0.74
00544812450†	3/4	19.05	1.25	31.75	4	200	1.38	4.50	114.30	0.50	0.74

SANI-WHITE™ WASHDOWN

Sani-White Washdown hose is recommended for open-end washdown service in food processing plants where service is not too severe, such as dairies, canneries, packing houses and bottling plants. This hose features a SBR tube that is heat resistant and stands up to the action of hot water and steam. It also resists saturated steam pressure to 40 psi (287°F) in open end service. Sani-White Washdown hose is available in tapered and straight ends. The white NBR/PVC cover resists oil, grease and cleaning compounds.

	Resistance:
	  
	Branding:
Thermoid HBD Industries Sani-White Washdown Made In USA	

Cover Color:	White
Oil Resistance:	Limited
Construction:	
Tube:	SBR
Cover:	NBR/PVC
Reinforcement:	Plies of strong fabric
Temperature Range:	-20°F to +160°F -29°C to +71°C
Packaging:	Tapered end – 50 ft. lengths Will not cut tapered ends Minimum run – 1200 ft. per size.

Straight End

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
21284460502▲	1/2	12.70	0.94	23.81	3	150	1.03	n/a	n/a	0.25	0.37
21284461502	3/4	19.05	1.16	29.37	3	125	0.86	n/a	n/a	0.33	0.49
21284462502▲	1	25.40	1.47	37.31	4	100	0.69	n/a	n/a	0.46	0.68

▲ = Make To Order (MTO)

n/a = Not Applicable

Tapered End

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Plies	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
21284465502▲	3/4	19.05	1.16	29.37	3	125	0.86	n/a	n/a	0.33	0.49

▲ = Make To Order (MTO)

n/a = Not Applicable

ALARM® BOOSTER – Thermocure

Thermoid's Alarm Booster hose is a high quality all-purpose fire engine booster hose product. Built to take rugged treatment, this hose has a red, NBR/PVC cover that resists abrasion while providing a smooth surface for easy handling, making it the driver's choice. This hose is engineered to be dimensionally stable and will not flatten or crush reels. The SBR/Nitrile tube is reinforced with multiple spiral aramid yarns. This hose is designed to provide a constant working pressure up to 800 psi for maximum safety. Alarm Booster hose is available in three sizes. It can also be ordered in coupled lengths, complete with factory-installed, reattachable, chrome-plated aluminum NST spanner hole couplings.

**Resistance:****Branding:**

Thermoid Alarm Booster
Size WP Made In USA

Cover Color:	Red
Oil Resistance:	Medium, high
Construction:	
Tube:	NBR/PVC, RMA Class A
Cover:	NBR/PVC, RMA Class A, 1-1/2" I.D. EPDM
Reinforcement:	2-spiral aramid yarn
Temperature Range:	-20°F to +190°F, 1-1/2" I.D. -40°F to +190°F -29°C to +88°C, 1-1/2" I.D. -40°C to +88°C
Packaging:	Reels, coupled lengths available on a make-to-order basis

Product Number	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22212482662	3/4	19.05	1.19	30.16	2	800	5.51	4.50	114.30	0.41	0.61
22214642662	1	25.40	1.50	38.10	2	800	5.51	7.00	177.80	0.51	0.76
00142524301	1-1/2	38.10	2.00	50.80	4	250	1.72	10.50	266.70	0.71	1.06

* Reattachable chrome-plated aluminum NST spanner hole couplings available to fit 3/4" and 1" I.D.

Consult coupling manufacturers for specific coupling recommendations/attachment procedures.



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

Product information is subject to change. For full details, visit our website or contact Customer Service.

TULINE WELDING, GRADE R

Flex Strength® Tuline Welding hose is lightweight, flexible and available from stock in a wide range of sizes. The hoses come in two popular grades, R and T. Both grades come in single line and tuline styles, with or without corrugated covers. Each of these styles and grades features multi-spiral construction for maximum kink resistance. They have a specially designed cover with multi-ventilated pores that enhance welder safety by dispersing permeating gases. All Thermoid Flex Strength Welding hose meets or exceeds the requirements of RMA and the Compressed Gas Association. These hoses are manufactured to a 4-1 safety factor. The air mandrel cure eliminates clogged nozzles, assures a non-contaminated tube and promotes an even flow of gas to the nozzles.



Resistance:



Branding:

Red #495 Size, Grade R Acetylene Only Std. Duty KX WP 200 PSI
RMA 1P-7-2008 (Date)
Green #501

Grade R
Cover Color: Red, Green
Oil Resistance: Limited - (Acetylene Only)
Construction:
 Tube: EPDM
 Cover: EPDM
 Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +180°F
 -40°C to +82°C
Packaging: Reels, Cut and coupled lengths



Resistance:



Branding:

Red #495 Size, Grade R Acetylene Only Std. Duty KX WP 200 PSI
RMA 1P-7-2008 (Date)
Green #501

Grade R
Cover Color: Red, Green
Oil Resistance: Limited - (Acetylene Only)
Construction:
 Tube: EPDM
 Cover: EPDM
 Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +180°F
 -40°C to +82°C
Packaging: Reels, Cut and coupled lengths



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

TULINE WELDING, GRADE R

Red is for acetylene use only, and where cover must resist abrasion, weather and ozone.

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00521403200	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.15	0.22
00521404200	1/4	6.35	0.53	13.49	2	200	1.38	1.50	38.10	0.21	0.32
00521405200▲	5/16	7.94	0.59	15.08	2	200	1.38	2.00	50.80	0.25	0.37
00521406200	3/8	9.53	0.66	16.67	2	200	1.38	2.25	57.15	0.28	0.41

▲ = Make To Order (MTO)

TULINE WELDING, GRADE R – Cut & Coupled (B&B)

Product Number	Nominal I.D. (inches) (mm)		Lengths (feet) (meters)	
00521403215▲	3/16	4.76	12.50	3.81
00521403225	3/16	4.76	25.00	7.62
00521403249	3/16	4.76	50.00	15.24
00521403291	3/16	4.76	100.00	30.48
00521484212▲	1/4	6.35	12.50	3.81
00521484225	1/4	6.35	25.00	7.62
00521484250	1/4	6.35	50.00	15.24
00521484290	1/4	6.35	100.00	30.48
00521405226▲	5/16	7.94	25.00	7.62
00521405252	5/16	7.94	50.00	15.24
00521405291▲	5/16	7.94	100.00	30.48
00521406226▲	3/8	9.53	25.00	7.62
00521406251▲	3/8	9.53	50.00	15.24
00521406290▲	3/8	9.53	100.00	30.48



All lengths packaged 5 per box except 100 ft. lengths are packaged 1 per box.

▲ = Make To Order (MTO)

SINGLE LINE CORRUGATED WELDING, GRADE R, TYPE S

Red or Green. Red is for acetylene use only, and where cover must resist abrasion, weather and ozone.

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
Green											
00521803205	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.08	0.12
00521804205	1/4	6.35	0.53	13.49	2	200	1.38	1.50	38.10	0.11	0.16
00521804405	1/4	6.35	0.59	15.08	4	200	1.38	1.50	38.10	0.14	0.21
00521805400▲	5/16	7.94	0.66	16.69	4	200	1.38	2.00	50.80	0.16	0.24
00521806400	3/8	9.53	0.72	18.26	4	200	1.38	2.25	57.15	0.18	0.27
Red											
00521903205	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.08	0.12
00521904205	1/4	6.35	0.53	13.49	2	200	1.38	1.50	38.10	0.11	0.16
00521904405	1/4	6.35	0.59	15.08	4	200	1.38	1.50	38.10	0.14	0.21
00521905400	5/16	7.94	0.66	16.69	4	200	1.38	2.00	50.80	0.16	0.24
00521906400	3/8	9.53	0.72	18.26	4	200	1.38	2.25	57.15	0.18	0.27

▲ = Make To Order (MTO)

Product information is subject to change. For full details, visit our website or contact Customer Service.

TULINE WELDING, GRADE T

Flex Strength® Tuline Welding hose is lightweight, flexible and available from stock in a wide range of sizes. The hoses come in two popular grades, T and R. Both grades come in single line and tuline styles, with or without corrugated covers. Each of these styles and grades features multi-spiral construction for maximum kink resistance. They have a specially designed cover with multi-ventilated pores that enhance welder safety by dispersing permeating gases. All Thermoid Flex Strength Welding hose meets or exceeds the requirements of RMA and the Compressed Gas Association. These hoses are manufactured to a 4-1 safety factor. The air mandrel cure eliminates clogged nozzles, assures a non-contaminated tube and promotes an even flow of gas to the nozzles.



Resistance:



Branding:

Red #512 Size, Grade T Fuel Gas
Std. Duty KX WP 200 PSI RMA
1P-7-2008 (Date)
Green #501

Grade T
Cover Color: Red, Green
Fuel Resistance: Medium - High - (All Fuel Gases)
Construction:
Tube: Polychloroprene (CR)
Cover: NBR/PVC
Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +180°F
-40°C to +82°C
Packaging: Reels, Cut and coupled lengths



Resistance:



Branding:

Red #512 Size, Grade T Fuel Gas
Std. Duty KX WP 200 PSI RMA
1P-7-2008 (Date)
Green #501

Grade T
Cover Color: Red, Green
Fuel Resistance: Medium - High - (All Fuel Gases)
Construction:
Tube: Polychloroprene (CR)
Cover: NBR/PVC
Reinforcement: Spiral polyester yarn
Temperature Range: -40°F to +180°F
-40°C to +82°C
Packaging: Reels, Cut and coupled lengths



For Hose and Hose Coupling Guide Information, see catalog pages 32 and 33.
For Made to Order Hose, Customer Order Form, see catalog page 137.

TULINE WELDING, GRADE T

For use with all fuel gases, and where a flame and oil resistant tube and cover are required.

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
00521503200▲	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.17	0.25
00521504200	1/4	6.35	0.53	13.49	2	200	1.38	1.50	38.10	0.24	0.36
00521505200▲	5/16	7.94	0.59	15.08	2	200	1.38	2.00	50.80	0.27	0.40
00521506200	3/8	9.53	0.66	16.67	2	200	1.38	2.25	57.15	0.31	0.46

▲ = Make To Order (MTO)

TULINE WELDING, GRADE T – Cut & Coupled (B&B)

Product Number	Nominal I.D. (inches) (mm)		Lengths (feet) (meters)	
00521583250▲	3/16	4.76	50.00	15.24
00521584212▲	1/4	6.35	12.50	3.81
00521584225▲	1/4	6.35	25.00	7.62
00521584250	1/4	6.35	50.00	15.24
00521584290	1/4	6.35	100.00	30.48
00521585250▲	5/16	7.94	50.00	15.24
00521586250▲	3/8	9.53	50.00	15.24
00521586290▲	3/8	9.53	100.00	30.48



▲ = Make To Order (MTO)

SINGLE LINE CORRUGATED WELDING, GRADE T

Red or Green. Red is used with all fuel gases, and where a flame and oil resistant tube and cover are required.

Product Number	Nominal I.D. (inches) (mm)		Nominal O.D. (inches) (mm)		Reinforcement Spirals	Working Pressure (psi) (Mpa)		Min. Bend Radius (inches) (mm)		Weight (lb/ft) (Kg/m)	
Green											
00523803205▲	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.08	0.12
00523804405	1/4	6.35	0.59	15.08	4	200	1.38	1.50	38.10	0.15	0.22
00523805400▲	5/16	7.94	0.59	15.08	2	200	1.38	2.00	50.80	0.14	0.21
00523806400▲	3/8	9.53	0.72	18.26	4	200	1.38	2.25	57.15	0.20	0.30
Red											
00523903205▲	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.08	0.12
00523904405	1/4	6.35	0.59	15.08	4	200	1.38	1.50	38.10	0.15	0.22
00523905400▲	5/16	7.94	0.59	15.08	2	200	1.38	2.00	50.80	0.14	0.21
00523906400▲	3/8	9.53	0.72	18.26	4	200	1.38	2.25	57.15	0.20	0.30

▲ = Make To Order (MTO)



WELDING HOSE TECHNICAL INFORMATION

PRECAUTIONS IN THE USE OF WELDING HOSE

WARNING: The use of certain fuel gases may damage welding hose and lead to fires and explosions.

FOREWORD:

This bulletin is issued to alert dealers and users of welding hose that special hose may be necessary for use with certain fuel gases.

SCOPE:

This bulletin relates to welding hose manufactured in conformance to RMA/CGA specification or to welding hose conforming to individual manufacturer or user specifications.

CAUTION:

The fuel gases listed below are recorded to alert welding hose users to a potential hazard with these or similar gases. It should be noted that no condemnation of any of the gases listed is intended. The purpose is to advise against the use of hose that may not be designed for a particular gas or pressure. A user of any fuel gas is urged to relate the type of gas along with the expected working pressure (regulator setting) to the hose manufacturer for a specific hose recommendation.

ALERT LISTING:

These and similar fuel gases may damage some grades or types of welding hose:

APACHE, FLAMEX, MAPP, PROPANE, PROPYLENE.

Use of the indicated or similar fuel gases at regulator settings above 40 psi may be particularly hazardous.

Users are also alerted against the use of ACETYLENE at any pressure above 15 psi.

IN-SERVICE CAUTION:

The user is first cautioned to shut off the gas at the torch and then at the regulator or supply source when the torch will not be used for periods in excess of 30 minutes, in order to limit permeation of gas through the hose wall.

The user is further cautioned not to shut off the fuel gas at the regulator or supply source first as a flashback may result and thereby damage the hose.

Adequate ventilation must be provided in confined areas where fuel gas is being used to prevent the accumulation or concentration of gas that could be explosive or otherwise harmful to personnel.

BACKGROUND INFORMATION:

The RMA/CGA specification for welding hose, as originally promulgated, considered welding hose that would be used to convey the then common fuel gas, acetylene, at the recommended low pressure (15 psi). Several grades were described, the variance between grades relating to a difference in their resistance to deterioration in the presence of oil, or to their resistance to destruction by flame, or both. No differentiation was made for a variance in performance resulting from exposure to the fuel gas itself. It had been determined that acetylene, when conveyed under the low pressures common to its recommended use, had little effect on hose, regardless of its composition or construction.

In recent years, there have been developed or adopted a number of fuel gases based on specific hydrocarbons or mixtures of hydrocarbons. It is known that these special fuel gases have a different effect on rubber compounds than does acetylene. The precise effect on all the many and varying hose compounds and constructions of the many manufacturers has not been determined for all the known special fuel gases.

The effect of any material being conveyed in a hose on the rubber compounds used in the hose can be measured by one or several test procedures. In the case of fuel gases, the test procedures most applicable would be designed to measure a change of the physical properties after exposure to the fuel gas including tensile, elongation, hardness and volume.

A characteristic of rubber hose that is significant in its use as welding hose is a phenomenon known as permeation. Any gas confined in the bore of a hose exhibits a tendency to pass through the tube wall and subsequently through the reinforcement and cover to the environment. Each gas has its own specific characteristic tendency to permeate. Each rubber compound exhibits specific resistance to permeation. The rate of permeation increases with higher temperature. To minimize the permeation of fuel gas through the hose wall it is logical to design the tube compound for the lowest possible permeation rate. The problem in the case of welding hose results from the variety of gases now encountered, the varying pressures used in service, and the varying temperatures to be found in the work place. The need to ventilate the work place is evident, both for maintaining the lowest practical temperature and to dissipate the permeating gas, however slight, to prevent buildup to concentrations that are either explosive or dangerous for breathing by workmen.

Some rubber compounds are known to have low permeation rates with several fuel gases but no specific rule can be laid down to predict overall performance. Thus, it becomes advisable to check the characteristic of each hose construction with each gas under actual or simulated service conditions to qualify it for use.

CAUTION:

Users of welding hose are urged to communicate their service conditions to the hose manufacturer and obtain the best recommendation of the manufacturer for a hose suitable for those conditions.

* Reprinted with permission from the Rubber Manufacturers Association (RMA) Hose Handbook, RMA/IP-2/2003.



Thermoid® MADE TO ORDER HOSE PRODUCTS

The hose products shown below are made to order and available in varying I.D. sizes and lengths for specific industrial uses and special applications:

Acid Suction and Discharge
 Atlas Acid Discharge
 Atlas Acid Suction and Discharge
 Black Racer OS & D
 Bottom Loading
 Chemical and Solvent (Smooth Bore)—UHMW
 Polyethylene lining
 Commander Acid Discharge
 Commander Acid Suction & Discharge
 Convertapipe
 Dredging Sleeves
 Elephant Truck
 Fire Extinguisher – UL92
 Fish Suction
 Flexlock Connectors
 Flexlock Ends
 Flexseal Connectors
 Flexseal Ends
 Flightmaster Aircraft Refueling
 Flightmaster Jac Risor
 Fuel Transfer 150
 HY-FLEX 200, 275 and 300 HY-FLEX
 HY-FLEX Grade C—Rotary, Vibrator, Drilling
 & Decoker
 Industrial Ducting
 Leaf Collector
 Mud Pump Suction
 Nylair 44
 Paper Machine Suction Box
 Pile Driver Steam
 Radial Flex—Air Ducting (Blue)
 Radial Flex Heavy Duty Yellow

Radial Flex Standard Duty Clear Corrugated
 Safetyflex
 Safetyflex Water Jetting
 Sand & Cement Discharge
 Sand Suction
 Slim Hole Rotary
 Submarine
 Superlite HI-FLO CO-AX
 Superlite HI-FLO WHIP
 Superlite Q CO-AX
 Superlite QV (Venturi)
 Superlite Q WHIP
 Superlite V (Venturi)
 Tankmaster 200 (Smooth Bore)
 Tankmaster Hot Asphalt
 Tankmaster LPG/Propane
 Tankmaster K200 OS & D
 Tankmaster 200/225—FKM lining
 Tankmaster Oil Discharge
 Transporter Chemical V
 Transporter L.W. Corrugated Tank Truck
 Transporter X.L.W. Corrugated Tank Truck
 Transporter Plaster & Concrete
 Type 101 – Material Handling
 Type 102 – Material Handling
 Type 103 – Exhaust
 Type 105 – Collector
 Type 120 – Food
 Type 95 – Food
 Type 96 – Food
 Washing Machine Inlet
 2015 Heavy Wall 1/4" Coolant SAE 20R1

For complete product specifications on these products, please review the **Thermoid Industrial Rubber Products Catalog: HBD/THB/C/E/O/S-19674**, view product information on line at **www.hbdthermiod.com** or contact your area HBD/Thermoid Sales Representative for assistance.

For current product pricing on these specific products, contact your Customer Service Department at **800-438-2312**. For assistance in determining best hose product for your application, complete the **Thermoid Customer Made to Order Hose** form on the following page and fax it to **704/633-3880**.

Hose information is subject to change. For full details, visit our website or contact Customer Service.

Thermoid® CUSTOMER MADE TO ORDER HOSE FORM**Customer Information:**

Company: _____ Fax: _____

Contact: _____ E-Mail: _____

Address: _____ P.O. #: _____

Phone: _____ Terms: _____

Size ID _____ OC _____ Overall length _____ Tolerance _____**Temperature (°F/°C)** Materials Conveyed _____ Environmental Temperature
Min. _____ Max. _____ Min. _____ Max. _____**Application** Type: _____**Material Conveyed****Material/Media** Internal _____ External _____
Media _____ Environment _____**Pressure** Max. Working Pressure _____ PSI/kPA Spikes _____ Vacuum _____
_____ PSI/kPA _____ PSI/kPA _____ Hg/kPA**Threads/Bolts****Ends**

End	Style/ Material	Size	Hole Alignment	Orientation	Attachment Methods	Capped
1	_____	_____	_____	_____	_____	Y N
2	_____	_____	_____	_____	_____	Y N

Quantity Required: _____ Date Required: _____

Package Type: _____



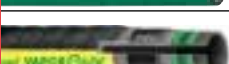




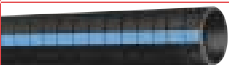


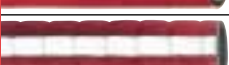
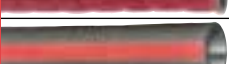
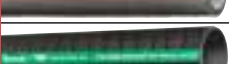
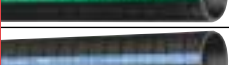




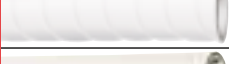
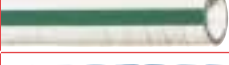



Delivery Pick Up Date: _____ Ship Via: _____

Testing Required: Y N Type: _____

Certification Required: Y N Type: _____

Special Requirements: __________

BULK TRANSFER/TRANSPORTER® HOSE PRODUCT REFERENCE

		NAME	I.D. (in.)	TUBE	COVER	COLOR	APPLICATION DATA
Chemical		ULTRA-CHEM	1-6	UHMWPE	EPDM	Green w/Yellow Stripe	Handles 98% of all common industrial chemicals in pressure, gravity flow and suction service
		MULTI-CHEM	1-4	XLPE	EPDM	Green/Black w/Orange Stripe	Extreme versatility, resists 95% of all industrial chemicals
		VAPOR-LOC BIO-FUELS	1-4	NBR, RMA Class A	Smooth-NBR/PVC Corrugated-CR, MSHA	Black w/Yellow Stripe	Vapor barrier system hose built to prevent fuelvapor loss. Prevents 99% of fuel vapor from escaping. For transfer of petroleum based products.
		CHEMICAL H	1-4	1/16" CSM	CR	Yellow w/Red Stripe	Designed primarily for the handling of inorganic acids, alcohols, and highly corrosive chemicals
		CHEMICAL B	1-4	IIR	EPDM	Brown	General purpose chemical hose for handling strong and oxidizing acids, esters, ketones and alcohols
Petroleum		CHEMICAL V	1½-4	FKM	NBR/PVC	Orange	Handles a wide range of moderate and oxidizing chemicals, and aromatic solvents such as benzene, toluene and chlorinated hydrocarbons
		EBONITE L.T.	1½-4	NBR/ECO	NBR	Black w/Blue Stripe	Extremely flexible, lightweight, sub-zero (to -65°F) corrugated drop hose
		EBONITE	1-4	NBR	NBR/PVC	Black w/White Stripe	Frequently used to replace plastic drop hose; exceptional flexibility and lightweight
		RED/BLACK TANK TRUCK	Red-1½-4 Black-1-4	NBR	NBR/PVC	Red/Black	For transfer of petroleum based products where strength, lightweight and flexibility are required
		FLEX-DEVIL	2-4	NBR	CR	Red	For use in the transfer of gasoline, petroleum based products and a wide range of oils and chemicals
		TYPE 924 PETROLEUM TRANSFER	1-4	NBR	NBR/PVC	Black w/Red Stripe	Handles most hydrocarbons, fats, etc., along with hydraulic fluid and a wide range of chemicals
		GP FRAC HOSE	3-4	NBR/SBR	SBR/EPDM	Black w/Green Stripe	Handles 98% water and sand mixtures, crude oil and oil slurries for Frac Tank Connections
		OILFIELD FRACTURING	3-4	Special, High Abrasion Resistance Compound	Special, High Abrasion Resistance Compound	Black	Handles 98% water and sand mixtures, crude oil and oil slurries for Frac Tank Connections
		OIL FIELD VACUUM	1½-4	NBR/SBR	SBR/EPDM	Black	Designed for crude oil transfer; lightweight and flexible
		FUEL TRANSFER	2-4	NBR	NBR/PVC	Black	Handles gasoline fuel oil delivery applications
Liquid Food		GRAY SHADOW	1½-4	NBR White FDA	NBR/PVC	Gray	Handles wide variety of liquids, including oily edibles
		FOOD SUCTION	1½-4	NBR White FDA	NBR/PVC	White	FDA acceptable for handling liquid food products including oily edible materials
		FOOD DISCHARGE	2-4	NBR White FDA	NBR/PVC	White w/Green Stripe	Same as Transporter Food Suction except for discharge service only
Material Handling		MATERIAL SUCTION	1½-4	3/16" NR White FDA	SBR	Blue	Handles a wide variety of materials: mild acids; dry materials such as sand, limestone and fertilizers; dry foods such as grain, flour and sugar
		MATERIAL DISCHARGE	2-4	3/16" NR White FDA	SBR	Blue w/Yellow Stripe	Same as Transporter Material Suction except for discharge service only
		HOT TAR & ASPHALT	1½-4	CR	CR	Black	For hot petroleum based products such as asphalt
		TYPE 120 DRY CEMENT/MATERIAL	4	1/8", 3/16", 1/4" Available SBR/NR	SBR/EPDM	Black	Transfer of dry cement and other mildly abrasive materials
		HOT AIR BLOWER	2½-4	EPDM	EPDM	Brown	For conveying hot air from compressor to trailer on dry bulk material trucks

CHEMICAL RESISTANCE CHART

This chart is designed to help you select the correct hose or hoses to conduct the many types of materials found in industry. It should be used only as a guide because the ability of a particular tube compound to resist a material depends on many variables—temperature, concentration, pressure, velocity, duration of exposure, aeration, stability of the fluid, etc. The special variations in elastomer types and their compounding for specific service conditions play an important part in the service life of the hose.

WARNING: The following data has been compiled from generally available sources and should not be relied upon without consulting and following the hose manufacturer's specific chemical recommendations. Neglecting to do so might result in failure of the hose to fulfill its intended purpose, and may result in possible damage to property and serious bodily injury.

Refer to additional information and warnings on pages 2, 28-32, 137 and 148.

If you have any questions about the suitability of a hose for a particular service, contact HBD Industries' Customer Service Department, 800/438-2312, for a recommendation.

The most commonly used chemicals, materials, oil, solvents, etc., are listed here. Ratings are for concentrated or saturated solutions at room temperature (70°F) unless otherwise specified. The rating code indicates the degree or range of serviceability for each style of hose listed under the group headings.

RATING CODE:

- A – Excellent.** Suitable for continuous service.

B – Good. Generally suitable for continuous service and for intermittent service.

C – Fair or Conditional. NOT recommended for continuous service, but generally suitable for intermittent service.

D – Unsatisfactory. Not Recommended.
1. Anhydrous Ammonia Hose Only

2. FDA Tube Required

3. Use Butane-Propane Hose Only

4. (See HCL 37%)

5. Contact HBD Technical

These ratings are to be used only as a guide.

As a guide to the user of hose in contact with oil, the oil resistance classes and corresponding description are listed.

PHYSICAL PROPERTIES AFTER EXPOSURE TO OIL

	Volume Change Maximum	Tensile Strength Retained
Class A (High oil resistance)	+25%	80%
Class B (Medium-High oil resistance)	+65%	50%
Class C (Medium oil resistance)	+100%	40%

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE*	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Acetal	C	C	B	D	C	C	C	D	D	B		B
Acetaldehyde	C	D	A	D	C	C	A	D	D	A		A
Acetamide	C	C	A	B	B	B	A	C	B	A		A
Acetate Solvents	C	D	C	D	D	D	C	D	D	A	B	A
Acetic Acid, 10%	D	D	B	D	C	B	B	B	C	A	A	A
Acetic Acid, 30%	D	D	B	B	C	B	B	C	C	A	A	A
Acetic Acid, 50%	D	D	B	C	C	D	B	C	D	B	A	B
Acetic Acid, Glacial	D	D	B	D	C	D	D	D	D	B	A	B
Acetic Anhydride	D	D	B	D	D	B	B	D	D	B	A	B
Acetic Ester (Ethyl Acetate)	D	D	B	D	D	D	B	D	D	A	B	A
Acetic Ether (Ethyl Acetate)	D	D	B	D	D	C	B	D	D	A	B	A
Acetic Oxide (Acetic Anhydride)	D	D	C	D	D	B	B	D	D	A	A	A
Acetone	B	B	A	D	C	C	A	D	D	A	A	A
Acetophenone	C	D	A	D	D	D	A	D	D	B		B
Acetyl Acetone	D	D	B	D	D	D	A	D	D	A	B	A
Acetyl Chloride	D	D	C	D	D	D	C	D	B	B	A	B
Acetylene	A	A	A	A	C	C	B	B	A	A		A
Acrylonitrile	B	D	D	D	D	D	D	D	D	B	A	B
Air	A	A	A	A	A	A	A	A	A	A	A	A
Alcohols, Aliphatic	A	B	A	A	A	A	A	A	C	A	A	A
Alcohols, Aromatic	C	D	D	C	C	D	D	B	A	A	C	A
Alk-Tri (Trichloroethylene)	D	D	D	D	D	D	D	B	A	D	A	D
Allyl Alcohol	A	B	A	A	A	A	A	A	B	A	A	A
Allyl Bromide	D	D	D	D	D	D	D	D	B	B	A	B
Allyl Chloride	D	D	D	D	D	D	D	B	B	B	A	B
Alum (Ammonium Potassium Sulfate)	A	A	A	A	A	A	A	A	A	A	A	A
Aluminum Acetate	A	C	B	B	B	B	B	B	C	A	A	A
Aluminum Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Aluminum Fluoride	A	A	A	A	A	A	A	A	A	A	A	A
Aluminum Hydroxide	A	A	A	A	A	A	A	A	A	A	A	A
Aluminum Phosphate	A	A	A	A	A	A	A	A	A	A	A	A
Aluminum Nitrate	A	A	A	A	A	A	A	A	A	A	A	A
Aluminum Sulfate	B	A	A	A	A	A	A	A	A	A	A	A
Ammonia, Anhydrous	A	C	A	B	A	B	A	C	D	A	A	A
Ammonia, Liquid	B	B	A	A	A	A	A	C	A	A	A	A
Ammonia, in Water	B	B	B	B	B	B	A	B	B	A	A	A
Ammonia, Gas (Cold)	Anhydrous Ammonia Hose Only											1
Ammonia, Gas (150°F)	Anhydrous Ammonia Hose Only											1
Ammonium Carbonate	A	A	A	C	A	A	A	A	A	A		A
Ammonium Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Ammonium Hydroxide	B	B	A	B	B	A	B	B	B	A	A	A
Ammonium Metaphosphate	A	A	A	A	A	A	A	A	A	A	A	A
Ammonium Nitrate	B	A	A	A	A	A	A	A	A	A	A	A
Ammonium Nitrite	A	A	A	A	A	A	A	A	A	A	A	A
Ammonium Persulfate	A	D	A	D	A	A	B	C	A			A
Ammonium Phosphate	A	A	A	A	A	A	A	A	A	A	A	A
Ammonium Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Ammonium Sulfide	A	A	A	A	A	A	A	A	A	A	A	A

These ratings are to be used only as a guide.

* Trademark of DuPont.

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Ammonium Sulfite	A	A	A	A	A	A	A	A	A	A	A	A
Ammonium Thiocyanate	A	A	A	A	A	A	A	A	A	A	A	A
Ammonium Thiosulfate	A	A	A	A	A	A	A	A	A	A	A	A
Amyl Acetate	C	D	B	D	D	D	B	D	D	D	C	D
Amyl Acetone	D	D	B	D	D	D	B	D	D	A		A
Amyl Alcohol	A	A	A	A	A	A	A	B	A	A	A	A
Amylamine	C	B	B	C	D	C	D	C	D	A	B	A
Amyl Borate	D	D	D	A	C	C	D	C	A	A		A
Amyl Chloride	D	D	D	D	D	D	D	D	A	A	C	A
Amyl Chloronaphthalene	D	D	D	B	D	D	D	C	A	A		A
Amyl Naphthalene	D	D	D	D	D	D	D	C	A	A		A
Amyl Oleate	D	D	B	D	D	D	B	C	C	A		A
Amyl Phenol	D	D	D	D	D	D	D	C	A	A		A
Anethole	D	D	D	D	D	D	D	D	B	B	D	B
Aniline	D	D	B	D	C	C	B	D	B	B	B	B
Aniline Dyes	C	C	B	C	C	C	D	B	C	B	A	A
Aniline Hydrochloride	A	C	C	C	D	D	B	C	B	A		A
Animal Fats	D	D	B	A	B	B	B	A	A	A	A	A
Animal Grease	D	D	C	B	B	C	B	B	A	A	B	A
Animal Oils	D	D	B	A	D	D	C	B	A	A	A	A
Ansul Ether	D	D	C	C	D	D	C	D	D	A		A
Antifreeze (Ethylene Glycol)	A	A	A	A	A	A	A	A	A	A	A	A
Antimony Trichloride	D	D	A	B	B	B	B	C	A	A		B
Antimony Pentachloride	D	D	C	D	D	D	C	C	A	B		B
Aqua Regia	D	D	D	D	D	C	C	D	B	D	B	B
Aromatic Hydrocarbons	D	D	D	C	D	D	D	B	A	A	C	A
Arguad	A	A	A	A	A	A	A	A	A	A		A
Arsenic Acid	A	A	A	A	A	A	A	A	A	A	A	A
Arsenic Chloride	D	D	D	C	A	D	B	C	D	D		D
Arsenic Trichloride	D	D	D	C	A	D	B	C	D	D		D
Asphalt	D	D	D	A	B	D	B	A	A	B		B
Astm #1 Oil	D	D	D	A	A	B	D	A	A	A	A	A
Astm #2 Oil	D	D	D	A	B	C	D	A	A	A	A	A
Astm #3 Oil	D	D	D	A	B	C	D	A	A	A	A	A
Aviation Gasoline	D	D	D	A	C	D	D	A	A	A	B	A
Barium Carbonate	A	A	A	A	A	A	A	A	A	A	A	A
Barium Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Barium Hydroxide	A	A	A	A	A	A	A	A	A	A	A	A
Barium Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Barium Sulfide	A	A	A	A	A	A	A	A	A	A	A	A
Beer	(F.D.A. Tube Required)											2
Beet Sugar Liquors	A	A	A	A	A	A	A	A	A	A	A	A
Benzaldehyde	D	D	B	D	D	D	B	D	D	A	C	A
Benzene (Benzol)	D	D	D	C	D	D	D	C	A	A	C	A
Benzene Sulfonic Acid	D	D	D	C	A	A	C	B	A	A		A
Benzine Solvent (Ligroin)	D	D	D	A	B	D	D	B	A	A		A
Benzoic Acid	B	D	A	D	A	B	B	C	A	A	A	A
Benzoic Aldehyde	D	D	D	D	D	D	D	C	D	A		A
Benzotrithloride	D	D	D	D	D	D	D	D	B	B	D	B

Product information is subject to change. For full details, visit our website or contact Customer Service.

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Benzoyl Chloride	D	D	D	D	D	D	D	D	B	B	D	B
Benzyl Acetate	D	D	B	D	D	B	B	D	D	A	A	A
Benzyl Alcohol	B	B	B	D	B	B	B	D	A	A	A	A
Benzyl Chloride	D	D	C	D	D	D	D	D	A	A	D	A
Bichromate of Soda (Sodium Dichromate)	D	D	A	D	B	B	C	C	A	A	A	A
Black Sulfate Liquor	B	B	A	B	A	B	A	A	A	A		A
Blast Furnace Gas	D	D	C	C	B	B	C	C	A	A		A
Bleach Solutions	D	D	B	D	D	C	B	D	B	B	A	B
Borax	B	B	A	B	A	A	A	A	A	A	A	A
Bordeaux Mixture	B	B	A	A	A	A	A	A	A	A		A
Boric Acid	A	A	A	A	A	A	A	A	A	A	A	A
Brandy	(F.D.A. Tube Required)											2
Brine	A	A	A	A	A	A	A	B	A	A	A	A
Bromine	D	D	D	D	D	C	D	D	C	D		D
Bromine Water	D	D	C	C	B	A	C	C	A	A		A
Bromobenzene	D	D	D	D	D	D	D	D	B	C	D	C
Bunker Oil	D	D	D	A	B	D	D	A	A	A	A	A
Butanol (Butyl Alcohol)	A	A	A	B	A	A	A	A	A	A	A	A
Butadiene	D	D	D	D	C	B	D	D	A	C		C
Butane	Use Butane—Propane Hose Only											3
Butter (Non F.D.A.)	C	C	A	A	B	A	B	A	A	A	A	A
Butyl Acetate	D	D	B	D	D	D	C	D	D	A	B	A
Butyl Acrylate	D	D	D	D	D	D	D	D	D	B	B	B
Butylamine	B	C	C	C	D	C	C	C	D	A	B	A
Butyl Benzene	D	D	D	D	D	D	D	D	A	A	C	A
Butyl Bromide	D	D	D	D	D	D	D	D	B	B	C	B
Butyl Butyrate	D	D	C	D	D	D	B	C	C	B	C	B
Butyl Carbitol	D	D	A	B	B	B	A	A	A	A	A	A
Butyl Cellosolve	D	D	A	B	B	B	A	A	D	A	B	A
Butyl Chloride	D	D	C	D	D	D	D	C	A	B	C	B
Butyl Ether	D	D	C	B	B	B	C	B	D	A	A	A
Butyl Ethyl Acetaldehyde	D	D	C	D	D	D	D	C	D	A		A
Butyl Ethyl Ether	D	D	C	D	D	B	C	C	C	A	A	A
Butyl Oleate	D	D	B	D	D	D	B	C	A	A		A
Butyl Phthalate	D	D	C	D	D	D	C	C	C	A	C	A
Butyl Stearate	D	D	C	B	D	D	C	C	A	A	B	A
Butyraldehyde	C	D	D	D	D	D	D	D	D	A	B	A
Butyric Acid	C	D	C	C	C	B	C	B	C	A	A	A
Butyric Anhydride	C	D	C	C	D	B	C	B	C	A		A
Calcium Acetate	C	D	A	D	D	D	A	C	D	A	B	A
Calcium Bisulfate	A	A	A	A	A	A	A	A	A	A	A	A
Calcium Bisulfite	C	A	B	A	A	A	C	A	A	A	A	A
Calcium Carbonate	A	A	A	A	A	A	A	A	A	A	A	A
Calcium Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Calcium Hydroxide	A	B	A	B	A	B	A	A	C	A	A	A
Calcium Hypochlorite	D	D	B	D	D	C	B	C	A	B	A	B
Calcium Nitrate	A	A	A	A	A	A	A	A	A	A	A	A
Calcium Sulfate	A	A	A	A	A	A	A	A	A	A	A	A

These ratings are to be used only as a guide.

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Calcium Sulfide	A	A	A	A	A	A	A	A	A	A	A	A
Calcium Sulfite	A	A	A	A	A	A	A	A	A	A	A	A
Caliche Liquor (Crude Sodium Nitrate)	A	A	A	C	B	A	A	A	A	A	A	A
Cane Sugar Liquors (Non F.D.A.)	A	A	A	A	A	A	A	A	A	A	A	A
Carbitol	D	D	A	B	B	B	B	C	A	A	A	A
Carbitol Acetate	D	D	B	D	D	D	B	C	D	A		A
Carbolic Acid (Phenol)	D	D	B	D	C	C	C	D	A	A	A	A
Carbon Bisulfide (See Carbon Disulfide)												
Carbon Dioxide	A	A	A	A	A	A	A	A	A	A	A	A
Carbon Disulfide	D	D	D	D	D	D	D	D	A	A	C	C
Carbonic Acid	A	A	A	A	A	A	A	A	A	A	A	A
Carbon Monoxide	A	A	A	A	A	A	A	A	A	A	A	A
Carbon Tetrachloride	D	D	B	C	D	D	B	D	A	C	C	C
Carbon Tetrafluoride	D	D	D	C	D	D	D	C	A	C		C
Castor Oil	C	D	B	A	B	C	B	A	A	A	A	A
Caustic Potash (Potassium Hydroxide)	A	B	A	A	B	A	A	A	C	A	A	A
Caustic Soda (Sodium Hydroxide)	A	B	A	B	B	B	A	A	C	A	A	A
Cellosolve	D	D	B	B	A	B	B	B	C	A	A	A
Cellulose Acetate	C	D	B	D	C	C	B	C	D	B		B
Cellulube	C	D	B	D	D	D	A	D	C	A		A
China Wood Oil (Tung Oil)	D	D	B	A	B	B	B	B	A	A	A	A
Chlorine Dioxide	D	D	D	D	D	C	D	D	A	B		B
Chlorine Gas (Dry)	C	C	C	C	D	B	C	B	A	B		B
Chlorine, Water Solns. (2%)	C	D	C	D	D	B	C	C	A	A		A
Chloroacetic Acid	B	D	C	D	D	D	C	D	C	A		D
Chloroacetone	D	D	B	D	D	B	D	D	D	A	D	A
Chlorobenzene	D	D	D	D	D	D	D	D	A	B	D	B
Chlorobutane	D	D	D	D	D	D	D	D	A	B	C	B
Chlorobutadiene	D	D	D	D	D	D	D	D	A	B		B
Chloroform	D	D	D	D	D	D	D	D	A	B	C	B
Chlorinated Hydrocarbons	D	D	D	D	D	D	D	D	A	B	D	B
Chloropentane	D	D	D	D	C	D	D	C	A	A	C	A
Chlorophenol	D	D	D	D	D	D	D	D	B	B	C	B
Chloropropanone	D	D	C	D	D	D	C	D	D	A	D	A
Chlorosulfonic Acid	D	D	D	D	D	C	D	C	D	B		B
Chlorothene (Trichloroethane)	D	D	D	D	D	D	D	C	A	B	C	B
Chlorotoluene	D	D	D	D	D	D	D	D	A	B	B	B
Chromic Acid	D	D	D	D	D	A	C	C	A	A	A	A
Citric Acid	A	A	A	B	B	A	A	A	A	A	A	A
Coal Oil	D	D	D	A	B	D	D	B	A	A	A	A
Coal Tar	D	D	D	A	B	B	B	A	A	A	A	A
Coal Tar Naptha	D	D	D	C	C	D	D	C	A	A	A	A
Cobalt Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Coconut Oil	D	D	B	A	B	B	A	A	A	A	A	A
Cod Liver Oil	D	D	A	A	B	B	A	A	A	A	A	A

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Coke Oven Gas	D	D	C	D	D	B	D	C	A	A	A	A
Copper Arsenate	A	A	A	A	A	A	A	A	A	A	A	A
Copper Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Copper Cyanide	A	A	A	A	A	A	A	A	A	A	A	A
Copper Nitrate	A	A	A	A	A	A	A	A	A	A	A	A
Copper Nitrite	A	A	A	A	A	A	A	A	A	A	A	A
Copper Sulfate	C	A	A	A	A	A	A	A	A	A	A	A
Copper Sulfide	C	A	A	A	A	A	A	A	A	A	A	A
Corn Oil	D	D	B	A	B	B	B	A	A	A	A	A
Cottonseed Oil	D	D	A	A	B	B	A	A	A	A	A	A
Creosote (Wood)	D	D	D	B	C	C	D	B	A	A	A	A
Creosote (Coal Tar)	D	D	D	B	C	C	D	B	A	A	A	A
Cresols	D	D	D	C	C	C	D	C	A	A	A	A
Cresylic Acid	D	D	D	C	C	C	D	C	A	A	A	A
Crotonaldehyde	D	D	A	D	D	D	C	D	A	A	A	A
Crude Oil	D	D	D	A	C	D	D	A	A	A	A	A
Cumene	D	D	D	C	C	D	D	C	A	A	C	A
Cupric Carbonate	C	C	A	B	B	B	A	B	A	A	A	A
Cupric Chloride	C	C	A	A	B	A	A	B	A	A	A	A
Cupric Nitrate	C	C	A	A	B	A	A	B	A	A	A	A
Cupric Nitrite	C	C	A	A	B	A	A	B	A	A	A	A
Cupric Sulfate	C	B	A	A	B	B	A	A	A	A	A	A
Cyclohexane	D	D	D	B	D	D	D	B	A	A	A	A
Cyclohexanone	D	D	D	D	D	D	D	D	C	A	C	A
Cyclohexanol	D	D	D	B	B	D	D	B	B	A	A	A
Cyclopentane	D	D	D	C	D	D	D	B	A	A	C	A
P-Cymene	D	D	D	C	D	D	D	B	A	A	C	A
DDT In Kerosene	D	D	D	A	B	C	D	A	A	A	A	A
Decaline	D	D	D	D	D	D	D	D	A	A	C	A
Decane	D	D	D	B	D	D	D	B	A	A	A	A
Detergent Solutions	B	B	A	A	B	A	A	A	A	A	A	A
Diacetone Alcohol	D	D	A	D	B	B	B	D	D	A	A	A
Diamylamine	B	C	A	B	A	C	C	B	B	A	A	A
Dibenzyl Ether	D	D	B	D	D	D	D	D	C	A	C	A
Dibenzyl Sebacate	C	D	B	D	D	D	B	D	B	A	A	A
Dibromobenzene	D	D	D	D	D	D	D	D	A	B	B	B
Dibutylamine	B	C	C	B	A	C	B	B	D	A	A	A
Dibutylether	D	D	D	D	D	D	B	C	C	A	A	A
Dibutylphthalate	D	D	B	D	D	D	A	D	D	A	C	A
Dibutyl Sebacate	D	D	B	D	D	D	B	D	B	B	B	B
Dicalcium Phosphate	A	A	A	A	A	A	A	A	A	A	A	A
Dichloroacetic Acid	D	D	C	D	D	D	C	D	C	A	B	A
P-Dichlorobenzene	D	D	D	D	D	D	D	D	A	A	D	B
Dichlorobutane	D	D	D	D	D	D	D	D	A	A	C	A
Dichloroisopropyl Ether	D	D	C	D	D	D	C	D	C	A	A	A
Dicyclohexylamine	D	D	D	D	D	B	D	D	A	B	B	B
Dichlorodifluoromethane (Freon 12)	D	D	D	A	B	D	D	B	A	A	A	A
Dichloroethane	D	D	C	D	D	D	D	D	A	A	C	C

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	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Dichloroethylene	D	D	C	D	D	D	D	D	A	A	B	A
Dichloroethyl Ether	D	D	D	D	D	D	D	D	C	A	B	A
Dichlorohexane	D	D	D	D	D	D	D	D	A	A	C	A
Dichloromethane	D	D	D	D	D	D	D	D	A	A	C	A
Dichloropentane	D	D	D	D	D	D	D	D	A	A	C	A
Dieldrin In Xylene	D	D	D	D	D	D	D	D	A	A	A	A
Dieldrin In Xylene And Water Spray	D	D	D	B	B	D	D	B	A	A	A	A
Diesel Oil	D	D	D	A	B	C	D	A	A	A	A	A
Diethanolamine	B	C	B	B	B	C	C	B	B	A	A	A
Diethylamine	B	C	B	B	B	C	C	B	D	A	B	A
Diethyl Benzene	D	D	D	D	D	D	D	D	A	A	C	A
Diethyl Ether	D	D	D	B	C	D	D	D	D	A	A	A
Diethylene Dioxide	D	D	B	D	D	D	B	C	D	A	B	A
Diethylene Glycol	A	A	A	A	A	A	A	A	A	A	A	A
Diethylenetriamine	B	B	A	B	C	C	A	B	C	A	A	A
Diethyl Oxalate	C	D	C	D	D	D	A	D	C	A	A	A
Diethyl Phthalate	D	D	A	D	D	D	C	D	C	A	B	A
Diethyl Sebacate	D	D	A	D	D	D	C	D	B	A	B	A
Diethyl Sulfate	D	D	B	D	D	D	B	D	A	A	A	A
Diethyl Triamine	B	C	A	B	B	C	B	B	C	A	A	A
Dihydroxyethyl Amine	B	C	A	B	B	C	B	B	C	A	A	A
Dihydroxyethyl Ether	A	A	A	A	B	A	B	A	A	A	A	A
Diisobutylene	D	D	D	A	B	D	D	A	A	A	C	A
Diisobutyl Ketone	D	D	B	D	D	D	B	D	D	A	A	A
Diisodecyl Adipate	D	D	A	D	D	C	A	D	C	A	A	A
Diisodecyl Phthalate	D	D	A	D	D	C	A	D	C	A	A	A
Diisooctyl Adipate	D	D	A	D	D	D	A	D	C	A	A	A
Diisooctyl Phthalate	D	D	A	D	D	C	A	D	C	A	A	A
Diisopropanol Amine	B	C	A	B	D	C	A	B	C	A	A	A
Diisopropyl Benzene	D	D	D	C	D	D	D	C	A	A	A	A
Diisopropyl Ether	D	D	D	B	D	D	D	B	B	A	A	A
Diisopropyl Ketone	D	D	A	D	D	D	A	D	D	A	C	A
Dilauryl Ether	D	D	D	C	D	C	D	D	C	A	A	A
Dimethylamine	B	C	A	B	B	C	A	B	C	A	A	A
Dimethyl Benzene	D	D	D	D	D	D	D	D	A	A	D	A
Dimethylaniline	D	D	D	D	D	D	C	D	D	B	C	B
Dimethylformamide (DMF)	C	C	C	D	C	C	C	D	D	A	A	A
Dimethyl Ketone (Acetone)	B	C	A	D	C	C	A	D	D	A	A	A
Dimethyl Phthalate	D	D	A	D	D	D	B	D	C	A	A	A
Dimethyl Sulfate	D	D	B	D	D	D	D	D	D	A	A	A
Dimethyl Sulfide	D	D	C	D	D	D	D	D	C	B	B	B
Dinitrobenzene	D	D	C	D	C	D	C	D	A	A	A	A
Dinitrotoluene	D	D	D	D	D	D	D	D	B	A	A	A
Diocetyl Adipate (DOA)	D	D	A	D	D	D	B	D	C	A	C	A
Diocetylamine	B	B	A	B	D	C	B	B	C	A	A	A
Diocetyl Phthalate (DOP)	D	D	B	D	D	D	B	B	A	A	C	A
Diocetyl Sebacate (DOS)	D	D	B	D	D	D	B	D	B	A	C	A
Dioxane	D	D	B	D	D	D	B	D	D	A	B	A

Product information is subject to change. For full details, visit our website or contact Customer Service.

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Dioxolane	D	D	C	D	D	D	B	D	C	A	B	A
Dipentene (Limonene)	D	D	D	C	D	D	D	C	A	A	B	A
Diphenyl (Biphenyl)	D	D	D	D	D	D	D	D	A	A		A
Diphenyl Oxide (Phenyl Ether)	D	D	D	D	D	C	D	D	A	A		A
Dipropylene Glycol	A	A	A	A	A	A	A	A	A	A	A	A
Dipropyl Ketone	D	D	B	D	D	D	B	D	D	A	C	A
Dipropylamine	B	B	A	B	B	C	A	B	C	A	B	A
Disodium Phosphate	A	A	A	A	A	A	A	A	A	A	A	A
Divinyl Benzene	D	D	D	D	D	D	D	D	A	A	D	A
D.M.P. (Dimethyl Phenols)	D	D	D	D	D	D	D	D	D	C	A	C
Dodecyl Benzene	D	D	D	D	D	D	D	D	A	A		A
Dodecyl Toluene	D	D	D	D	D	D	D	D	A	A		A
Dowfume W 40, 100%	D	D	D	D	C	C	C	D	C	B		B
Dow-Per (Perchloroethylene)	D	D	D	C	D	D	D	C	A	A	C	A
Dowtherm Oil, A and E	D	D	D	D	D	C	D	D	A	A	C	A
Dowtherm S.R.I.	A	A	A	A	A	A	A	A	A	A		A
Dry Cleaning Fluids	D	D	D	C	D	D	D	C	A	B		B
Epichlorohydrin	D	D	C	D	D	C	B	D	D	B		B
Ethanol (Ethyl Alcohol)	A	A	A	A	A	A	A	A	C	A	A	A
Ethanolamine	B	C	B	B	B	C	B	B	D	A	A	A
Ethers	D	D	C	D	D	C	D	D	C	A	A	A
Ethyl Acetate	D	D	B	D	D	C	B	D	D	A	B	A
Ethyl Acetoacetate	D	D	B	D	D	D	B	D	D	A	A	A
Ethyl Acrylate	D	D	C	D	D	D	D	D	D	B	B	B
Ethyl Benzene	D	D	D	C	D	D	D	C	A	A	C	A
Ethyl Benzoate	D	D	B	B	C	C	B	B	C	A		A
Ethyl Butyl Alcohol	A	A	A	A	A	A	A	A	B	A	A	A
Ethyl Butyl Amine	B	C	A	B	B	C	B	B	B	A		A
Ethyl Butyl Ketone	D	D	B	D	D	D	B	D	D	A	C	A
Ethyl Cellulose	B	B	B	B	B	B	B	B	D	A		A
Ethyl Chloride	C	C	D	C	C	D	D	B	A	A		B
Ethyl Dichloride	D	D	D	D	D	D	D	D	B	B	C	B
Ethylene	D	D	D	A	B	C	D	A	A	A		A
Ethylene Bromide	D	D	D	D	D	D	D	D	A	B		B
Ethylene Chloride	D	D	D	D	D	D	D	D	A	B		B
Ethylene Diamine	B	C	A	B	A	C	A	A	D	A	A	A
Ethylene Dibromide	D	D	D	D	D	D	D	D	B	B	C	B
Ethylene Dichloride	D	D	D	D	D	D	D	D	B	B	C	B
Ethylene Glycol	A	A	A	A	A	A	A	A	A	A	A	A
Ethylene Oxide	D	D	C	D	D	D	C	D	D	C		C
Ethylene Trichloride (Trichloroethylene)	D	D	D	C	D	D	D	C	A	B	C	B
Ethyl Ether	D	D	D	C	D	D	D	B	D	A	A	D
Ethyl Formate	D	D	B	D	D	D	C	D	D	A	A	A
Ethyl Hexanol	A	A	A	A	A	A	A	A	B	A	A	A
Ethyl Methyl Ketone	C	D	B	D	D	D	B	D	D	A	C	A
Ethyl Oxalate	A	A	A	D	D	D	B	D	C	A	A	A
Ethyl Phthalate	D	D	A	D	D	D	B	D	C	A	B	A

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	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Ethyl Propyl Ether	D	D	D	D	D	D	D	D	C	A	A	A
Ethyl Propyl Ketone	D	D	B	D	D	D	B	D	D	A	C	A
Ethyl Silicate	C	C	A	A	A	A	A	A	A	A	A	A
Ethyl Sulfate	D	D	B	D	D	D	B	D	D	A		A
EX. TRI (Trichloroethylene)	D	D	D	C	D	D	D	C	A	B	C	B
Fatty Acids	D	D	D	B	B	B	C	A	A	A		A
Ferric Bromide	A	A	A	A	A	A	A	A	A	A	A	A
Ferric Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Ferric Nitrate	A	A	A	A	A	A	A	A	A	A	A	A
Ferric Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Ferrous Acetate	D	D	A	D	D	D	B	D	D	A		A
Ferrous Ammonium Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Ferrous Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Ferrous Hydroxide	B	C	A	B	A	B	A	A	C	A		A
Ferrous Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Fish Oil	D	D	A	A	A	A	A	A	A	A	A	A
Fluoroboric Acid	A	C	A	A	B	A	A	A	C	A	A	A
Fluorine	D	D	D	D	D	D	D	D	D	D		D
Fluosilicic Acid	B	B	A	B	B	A	B	C	A	A	A	A
Formaldehyde (Formalin)	C	C	A	B	B	B	B	B	A	A	A	A
Formamide	A	A	A	A	A	A	A	A	D	A		A
Formic Acid	B	B	A	C	C	C	C	C	D	B		B
Freon 11	D	D	D	A	B	A	D	A	A	A		A
Freon 12	D	D	D	B	C	D	C	A	B	B		B
Freon 13	A	A	A	A	A	A	A	A	A	A		A
Freon 21	D	D	D	D	B	D	D	B	D	A		A
Freon 22	D	D	A	D	A	D	A	A	D	A		A
Freon 31	B	B	A	D	A	B	A	D	D	A		A
Freon 32	A	A	A	A	A	A	A	A	C	A		A
Freon 112	D	D	D	B	B	B	D	B	A	A		A
Freon 113	C	B	D	A	A	A	D	A	B	A		A
Freon 114	A	A	A	A	A	A	A	A	B	A		A
Freon 115	A	A	A	A	A	A	A	A	B	A		A
Freon 142b	A	A	A	A	A	A	A	A	D	A		A
Freon 152a	A	A	A	A	A	C	A	A	D	A		A
Freon 218	A	A	A	A	A	A	A	A	A	A		A
Freon C316	A	A	A	A	A	A	A	A	A	A		A
Freon C318	A	A	A	A	A	A	A	A	A	A		A
Freon 13B1	A	A	A	A	A	A	A	A	A	A		A
Freon 114B2	D	C	D	B	A	A	D	B	B	A		A
Freon 502	A	A	A	B	A	A	A	B	B	A		A
Freon TF	C	B	A	A	A	A	A	A	A	A		A
Freon T-WD602	C	B	A	A	B	B	B	B	A	A		A
Freon TMC	B	C	B	B	B	B	B	B	A	A		A
Freon T-P35	A	A	A	A	A	A	A	A	A	A		A
Freon TA	A	A	A	A	A	A	A	A	C	A		A
Freon TC	D	B	A	A	A	A	B	A	A	A		A
Freon MF	D	B	D	A	C	B	D	A	A	A		A
Freon BF	D	D	D	B	B	B	D	B	A	A		A
Fuel Oil	D	D	D	A	B	C	D	A	A	A		A

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Fuel, ASTM A	D	D	D	A	A	C	D	A	A	A	A	A
Fuel, ASTM B	D	D	D	A	B	C	D	A	A	A	B	A
Fuel, ASTM C	D	D	D	B	C	D	D	B	A	B	C	B
Fumaric Acid	A	A	D	A	B	B	D	A	A	A	A	A
Furan	D	D	C	D	D	D	C	D	D	A	A	A
Furfural	D	D	B	D	C	B	B	D	D	A	A	A
Furfuryl Alcohol	D	D	C	D	C	C	C	D	D	A	A	A
Gallic Acid	A	A	B	B	B	B	B	B	B	A	A	A
Gasoline, Reg	D	D	D	A	A	C	D	A	A	A	B	A
Gasoline, Hi-Test	D	D	D	A	B	D	D	A	A	A	A	A
Gasoline, Lead Free	D	D	D	B	B	D	D	A	A	A	A	A
Gelatin	A	A	A	A	A	A	A	A	A	A	A	A
Gluconic Acid	D	D	C	C	C	B	C	C	A	A	A	A
Glucose	A	A	A	A	A	A	A	A	A	A	A	A
Glue	A	A	A	A	A	A	A	A	A	A	A	A
Glycerine (Glycerol)	A	A	A	A	A	A	A	A	A	A	A	A
Glycols	A	A	A	A	A	A	A	A	A	A	A	A
Grease	D	D	D	A	B	C	D	A	A	A	A	A
Green Sulfate Liquor	A	A	A	A	B	A	A	A	B	A	A	A
Halowax Oil	D	D	D	D	D	D	D	D	A	A	A	A
Heptachlor in Petroleum Solvents	D	D	D	B	B	D	D	B	A	A	A	A
Heptachlor in Petroleum Solvents, Water Spray	D	D	D	B	B	D	D	B	A	A	A	A
Heptanal (Heptaldehyde)	D	D	D	D	D	D	B	D	D	A	C	A
Heptane	D	D	D	A	A	B	D	A	A	A	A	A
Heptane Carboxylic Acid	D	D	C	C	B	B	C	A	A	A	A	A
Hexaldehyde	D	D	B	D	B	C	B	D	D	A	A	A
Hexane	D	D	D	A	A	C	D	A	A	A	A	A
Hexene	D	D	D	B	B	C	D	B	A	A	A	A
Hexanol (Hexyl Alcohol)	A	A	A	A	A	A	A	A	A	A	A	A
Hexylamine	B	C	B	B	B	C	B	B	D	A	B	A
Hexylene	D	D	D	A	B	D	C	A	A	B	B	B
Hexylene Glycol	A	A	A	A	A	A	A	A	A	A	A	A
Hexyl Methyl Ketone	D	D	B	D	D	D	B	D	D	A	C	A
Hi-Tri (Trichloroethylene)	D	D	D	C	D	D	D	C	A	B	C	B
Hydraulic Fluid (Petroleum)	D	D	D	A	B	B	D	A	A	A	A	A
Hydraulic Fluid (Phosphate Ester Base)	D	D	A	D	D	D	A	D	D	A	A	A
Hydraulic Fluid (Poly Alkylene Glycol Base)	B	B	A	A	A	A	A	A	A	A	A	A
Hydrobromic Acid	A	D	A	D	C	A	B	C	A	A	A	A
Hydrochloric Acid, 37%	A	B	A	C	C	A	B	D	A	A	A	A
Hydrochloric Acid, 50%	A	C	B	D	D	A	C	D	A	A	A	A
Hydrochloric Acid, 100%	B	C	C	D	D	B	C	D	C	A	A	A
Hydrocyanic Acid	B	C	A	B	C	A	B	C	B	A	A	A
Hydrofluoric Acid	B	D	B	D	C	A	B	D	B	A	A	A
Hydrofluosilic Acid	A	D	A	D	C	A	B	C	B	A	A	A
Hydrogen Gas	B	B	A	A	A	A	B	A	A	A	A	A
Hydrogen Peroxide, 3%	A	B	A	B	C	A	B	B	A	A	A	A
Hydrogen Peroxide, 10%	D	D	C	D	C	C	C	C	A	A	A	A

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	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Hydrogen Peroxide, 30%	D	D	D	D	D	D	C	D	A	A	A	A
Hydrogen Peroxide, 90%	D	D	D	D	D	D	C	D	B	B	A	B
Hydrogen Sulfide	D	D	A	D	A	B	A	C	A	A	A	A
Hydroquinone	B	B	B	D	D	C	B	D	D	A	A	A
Hypochlorous Acid	B	B	B	D	B	A	B	B	A	A	A	A
Ink Oil (Linseed Oil Base)	D	D	B	B	B	B	B	A	A	A	A	A
Insulating Oil	D	D	D	A	B	D	D	A	A	A	A	A
Iodine	D	D	D	D	D	C	D	D	C	A	A	A
Iron Acetate	D	D	A	D	D	D	B	D	D	A	A	A
Iron Hydroxide	C	C	A	B	A	B	B	B	C	A	A	A
Iron Salts	A	A	A	A	A	A	A	A	A	A	A	A
Iron Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Iron Sulfide	A	A	A	A	A	A	A	A	A	A	A	A
Isoamyl Acetate	D	D	A	D	D	D	B	D	D	A	C	A
Isoamyl Alcohol	A	A	A	A	A	A	A	A	A	A	A	B
Isoamyl Bromide	D	D	D	D	D	D	D	B	B	C	B	B
Isoamyl Butyrate	D	D	C	D	D	D	C	D	D	B	B	B
Isoamyl Chloride	D	D	C	D	D	D	D	D	B	B	C	B
Isoamyl Ether	D	D	D	D	D	D	D	D	D	A	A	A
Isoamyl Phthalate	D	D	A	D	D	D	B	D	C	A	C	A
Isobutane	D	D	D	A	A	D	D	A	A	A	A	A
Isobutanol (Isobutyl Alcohol)	A	A	A	A	A	A	A	A	A	A	A	A
Isobutyl Acetate	D	D	A	D	D	D	B	D	D	A	B	A
Isobutyl Aldehyde	C	D	B	D	D	C	B	D	D	A	B	A
Isobutyl Amine	B	C	B	D	D	C	B	D	D	A	B	A
Isobutyl Bromide	D	D	D	D	D	D	D	D	B	B	C	B
Isobutyl Carbinol	A	A	A	A	B	A	A	A	B	A	A	A
Isobutyl Chloride	D	D	D	D	D	D	D	D	B	B	C	B
Isobutylene	D	D	D	A	D	D	D	B	A	A	A	A
Isobutyl Ether	D	D	D	D	D	D	D	D	D	A	A	A
Isocyanates	C	D	B	D	D	C	B	C	C	B	B	B
Isooctane	D	D	D	A	A	B	D	A	A	A	A	A
Isopentane	D	D	D	A	A	D	D	A	A	B	A	B
Isopropyl Amine	B	C	A	B	A	C	B	B	D	A	A	A
Isopropyl Acetate	D	D	A	D	D	C	B	D	D	A	B	A
Isopropyl Alcohol (Iso-propanol)	A	A	A	A	A	A	B	A	B	B	A	B
Isopropyl Amine	B	D	B	C	A	C	B	C	D	A	A	A
Isopropyl Benzene	D	D	D	D	D	D	D	D	A	A	C	A
Isopropyl Chloride	D	D	D	D	D	D	D	D	B	B	C	B
Isopropyl Ether	D	D	D	C	D	C	D	C	D	A	A	A
Isopropyl Toluene	D	D	D	D	D	D	D	D	D	A	C	A
Jet Fuels (JP 1-JP 6)	D	D	D	A	B	C	D	A	A	A	A	A
Kerosene	D	D	D	A	B	C	D	A	A	A	A	A
Ketones	B	B	B	D	D	D	B	D	D	A	C	A
Lactic Acid	B	B	B	A	A	A	B	A	A	A	A	A
Lacquers	D	D	D	D	D	D	D	D	D	A	A	A
Lacquer Solvents	D	D	D	D	D	D	D	D	D	A	A	A
Lard	D	D	D	A	B	D	C	A	A	A	A	A
Lauryl Alcohol	A	A	A	A	A	A	A	A	B	A	A	A

Product information is subject to change. For full details, visit our website or contact Customer Service.

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Lead Acetate	D	D	A	C	C	D	B	B	C	A	A	A
Lead Nitrate	A	A	A	A	A	A	A	A	A	A	A	A
Lead Sulfamate	B	B	A	B	A	B	A	B	A	A		A
Lead Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Ligroin	D	D	D	A	A	D	D	A	A	A		A
Lime Water	D	D	A	C	A	A	A	C	A	A	A	A
Linseed Oil	D	D	A	A	B	B	B	A	A	A	A	A
Lindol (Tricresyl Phosphate)	D	D	A	D	D	B	A	D	A	A	A	A
Liquid Soap	A	A	A	A	A	A	A	A	A	A	A	A
Liquified Petroleum Gas	D	D	D	A	B	B	D	A	A	A		A
Lubricating Oils	D	D	D	A	B	C	D	A	A	A	A	A
Lye (Sodium Hydroxide)	A	B	A	B	A	A	A	B	D	A	A	A
Magnesium Acetate	D	D	A	D	D	D	B	D	D	A	A	A
Magnesium Carbonate	A	A	A	A	A	A	A	A	A	A	A	A
Magnesium Chloride	A	A	A	A	A	A	B	A	A	A	A	A
Magnesium Hydrate	A	B	A	B	A	B	A	C	B	A		A
Magnesium Hydroxide	A	A	A	A	A	A	B	A	A	A	A	A
Magnesium Nitrate	A	A	A	A	A	A	A	A	A	A	A	A
Magnesium Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Malathion 50 in Aromatic Solvents	D	D	D	C	C	D	D	D	A	A		A
Malathion 50 in Aromatic Solvents, Water Spray	D	D	D	A	A	D	D	A	A	A		A
Maleic Acid	D	D	C	D	C	D	C	C	A	B		B
Maleic Anhydride	D	D	C	D	C	D	C	C	A	A		A
Malic Acid	A	B	D	B	C	B	D	C	A	A		A
Manganese Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Manganese Sulfide	C	A	A	A	B	A	B	C	A	A	A	A
Manganese Sulfite	C	A	A	A	B	A	B	C	A	A	A	A
Mercuric Chloride	B	B	B	C	C	B	C	A	A	A		A
Mercury	B	B	A	A	B	A	A	A	A	A	A	A
Methane	D	D	D	A	B	B	D	A	A	A	A	A
Methyl Acetate	C	D	B	D	D	D	B	D	D	A	A	A
Methyl Acrylate	C	D	B	D	C	D	B	D	D	A		A
Methacrylic Acid	D	D	B	D	B	C	B	D	B	A		A
Methyl Alcohol (Methanol)	A	A	A	A	A	A	A	B	C	A	A	A
Methyl Benzene (Toluene)	D	D	D	D	D	D	D	D	A	A	C	A
Methyl Bromide	D	D	B	B	D	D	B	C	A	A		A
Methyl Butyl Ketone	D	D	B	D	D	D	B	D	D	A	C	A
Methyl Cellosolve	D	D	B	C	B	C	B	C	D	A	A	A
Methyl Chloride	D	D	D	C	D	D	D	C	B	B		C
Methyl Cyclohexane	D	D	D	D	D	D	D	C	B	B	B	B
Methylene Bromide	D	D	D	D	D	D	D	D	B	B	C	C
Methylene Chloride	D	D	D	D	D	D	D	D	B	A	C	B
Methyl Ethyl Ketone (MEK)	B	D	B	D	D	D	B	D	D	A	C	A
Methyl Formate	C	C	B	D	B	C	B	D	C	B		B
Methyl Hexanol	A	A	A	A	A	A	A	A	B	A		A
Methyl Hexyl Ketone	D	D	B	D	D	D	B	D	D	A	C	A
Methyl Isobutyl Carbinol	B	C	A	B	B	B	A	C	B	A	A	A
Methyl Isobutyl Ketone (MIBK)	D	D	B	D	D	D	B	D	D	A	C	A

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	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Methyl Isopropyl Ketone	D	D	B	D	D	D	B	D	D	A	C	A
Methyl Propyl Ether	D	D	D	D	D	D	D	D	D	A		A
Methyl Propyl Ketone	D	D	B	D	D	D	B	D	D	A	C	A
Methyl Methacrylate	D	D	D	D	D	B	D	D	D	B	C	B
Methyl Salicylate	D	D	B	D	D	D	B	D	C	B		B
Mineral Oil	D	D	D	A	B	B	D	A	A	A		A
Mineral Spirits	D	D	D	A	B	D	D	A	A	A		A
Monochlorobenzene	D	D	D	D	D	D	D	D	A	A		A
Monochlorodifluoromethane (Freon 22)	D	D	A	D	A	D	A	A	D	A		A
Monoethanolamine	B	C	B	C	B	B	B	C	D	A		A
Monomethylether	B	B	A	A	A	C	A	A	C	A		A
Monovinyl Acetate	D	D	B	D	D	C	C	C	A	A		A
Motor Oil	D	D	D	A	A	D	D	A	A	A		A
Muriatic Acid	(See HCL 37%)											4
Naphtha	D	D	D	A	B	D	D	A	A	A		A
Napthalene	D	D	D	D	D	D	D	D	A	A		A
Napthenic Acid	D	D	D	C	D	D	D	C	A	A		A
Natural Gas	Contact HBD Tech.											5
Neatsfoot Oil	D	D	B	A	B	B	B	A	A	A		A
Neu-Tri (Trichloroethylene)	D	D	D	C	D	D	D	C	A	B	C	B
Nickel Acetate	D	D	A	D	D	D	B	D	D	A		A
Nickel Chloride	A	A	A	A	A	A	A	A	A	A		A
Nickel Nitrate	A	A	A	A	A	A	A	A	A	A		A
Nickel Plating Solution	A	D	B	B	C	B	B	B	A	A		A
Nickel Sulfate	A	A	A	A	A	A	A	A	A	A		A
Niter Cake	A	A	A	A	A	A	A	A	A	A		A
Nitric Acid, 10%	D	D	B	D	C	B	B	D	A	A		A
Nitric Acid, 20%	D	D	B	D	D	B	C	D	A	A		A
Nitric Acid, 30%	D	D	B	D	D	C	C	D	A	B	C	B
Nitric Acid, 30-70%	D	D	C	D	D	D	D	D	C	C	D	C
Nitric Acid, Red Fuming	D	D	D	D	D	D	D	D	D	D	D	D
Nitrobenzene	D	D	D	D	D	D	D	D	D	B	C	A
Nitrogen Gas	A	A	A	A	A	A	A	A	A	A		A
Nitrogen Tetraoxide	D	D	D	D	D	D	D	D	D	D		D
Nitromethane	B	B	B	D	C	C	B	C	D	A		A
Nitropropane	C	C	A	D	C	C	B	C	D	A		A
Nitrous Oxide	A	A	A	A	A	A	A	A	A	A		A
Octadecanoic Acid	D	D	B	A	B	D	C	A	C	A		A
Octane	D	D	D	A	B	D	D	A	A	B		A
Octanol (Octyl Alcohol)	B	B	B	B	A	B	B	A	A	A		A
Octyl Acetate	D	D	A	D	D	D	B	D	D	A	C	A
Octyl Amine	C	C	B	C	B	C	B	C	D	A	B	A
Octyl Carbinol	A	A	A	A	A	A	A	A	B	A		A
Octylene Glycol	A	A	A	A	A	A	A	A	A	A		A
Oil, Petroleum	D	D	D	A	A	C	D	A	A	A		A
Oil, Astm #1	D	D	D	A	A	B	D	A	A	A		A
Oil, Astm #2	D	D	D	A	A	C	D	A	A	A		A
Oil, Astm #3	D	D	A	B	C	D	A	A	A	A		A
Oleic Acid	D	D	B	B	C	C	B	B	C	A		A

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Oleum (Fuming Sulfuric Acid)	D	D	D	D	D	D	D	D	D	D	D	D
Olive Oil (Non F.D.A.)	D	D	B	A	B	B	B	B	A	A		A
Orthodichlorobenzene	D	D	D	D	D	D	D	D	A	B		B
Oxalic Acid	C	C	A	C	B	B	A	C	C	A		B
Oxygen, Cold	B	B	A	B	B	B	B	B	A	A		A
Oxygen, Hot	D	D	D	D	D	D	D	D	B	A		A
Ozone	D	C	B	D	B	A	A	A	A	A		A
Paint Thinner (Duco)	D	D	D	D	D	D	D	D	C	A		A
Palmitic Acid	D	D	B	A	B	B	B	B	A	B		A
Palm Oil	D	D	A	A	B	B	B	A	A	A		A
Papermaker's Alum	A	A	A	A	A	A	A	A	A	A		A
Paradichlorobenzene	D	D	D	D	D	D	D	D	A	B		D
Paraffin	D	D	D	A	A	D	D	A	A	D		D
Paraformaldehyde	D	D	B	B	B	B	B	B	C	A		A
Peanut Oil	D	D	C	A	B	B	D	A	A	A		A
Pentane	D	D	D	A	A	B	D	A	A	A		C
Perchloroethylene	D	D	D	D	D	D	D	C	A	B		C
Perchloric Acid	B	B	B	D	A	A	B	C	A	A		A
Petrolatum	D	D	D	A	A	C	D	A	A	A		A
Petroleum, Crude	D	D	D	A	B	D	D	A	A	A		A
Petroleum Ether (Naphtha)	D	D	D	A	A	D	D	A	A	A		A
Petroleum Oils	D	D	D	A	A	C	D	A	A	A		A
Phenol	C	C	B	D	C	C	C	C	A	A		A
Phenolsulfonic Acid	D	D	C	D	C	D	C	C	A	B		A
Phenyl Chloride	D	D	D	D	D	D	D	D	A	A		D
Phenylhydrazine	C	D	B	D	D	C	C	D	A	A		A
Phorone	D	D	A	D	D	D	B	D	C	A		A
Phosphate Esters	D	D	A	D	D	D	A	D	C	A		A
Phosphoric Acid, 10%	A	A	A	A	A	A	A	A	A	A		A
Phosphoric Acid, 10-85%	C	C	A	C	B	A	A	C	A	A		A
Phosphorous Trichloride	D	D	A	D	D	D	A	C	A	A		A
Pickling Solution	C	C	C	C	C	C	C	C	B	A		A
Picric Acid, Molten	C	C	C	C	C	B	C	C	C	D		D
Picric Acid, Water Soln.	A	C	A	B	B	A	B	B	C	A		A
Pinene	D	D	D	A	D	D	D	D	A	A		B
Pine Oil	D	D	D	C	C	D	D	C	B	A		B
Piperidine	D	D	D	D	D	D	D	D	D	B		B
Pitch	D	D	D	B	B	C	D	B	C	A		A
Plating Solutions, Chrome	D	D	A	B	B	C	A	B	A	A		A
Plating Solutions, Others	A	A	A	B	B	C	A	B	B	A		A
Polyvinyl Acetate Emulsion (PVA)	C	C	A	C	B	B	A	C	C	A		A
Polyethylene Glycol	A	A	A	A	A	A	A	A	A	A		A
Polypropylene Glycol	A	A	A	A	A	A	A	A	A	A		A
Potassium Acetate	D	D	A	D	D	D	B	D	D	A		A
Potassium Bicarbonate	A	A	A	A	A	A	A	A	A	A		A
Potassium Bisulfate	A	A	A	A	A	A	A	A	A	A		A
Potassium Bisulfite	A	A	A	A	A	A	A	A	A	A		A
Potassium Carbonate	A	A	A	A	A	A	A	A	A	A		A
Potassium Chloride	A	A	A	A	A	A	A	A	A	A		A
Potassium Chromate	D	D	A	D	C	C	B	C	A	B		B

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	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Potassium Cyanide	A	A	A	A	A	A	A	A	A	A		A
Potassium Dichromate	D	D	A	D	B	C	B	C	A	A		A
Potassium Hydrate	A	B	A	B	B	B	A	B	C	A		A
Potassium Hydroxide	A	A	A	A	B	A	A	A	D	A		A
Potassium Nitrate	A	A	A	A	A	A	A	A	A	A		A
Potassium Permanganate	D	D	A	D	D	D	A	D	A	A		A
Potassium Silicate	A	A	A	A	A	A	A	A	A	A		A
Potassium Sulfate	A	A	A	A	A	A	A	A	A	A		A
Potassium Sulfide	A	A	A	A	A	A	A	A	A	A		A
Potassium Sulfite	A	A	A	A	A	A	A	A	A	A		A
Producer Gas	D	D	D	A	B	B	D	A	A	A		A
Propane Gas	Use Butane-Propane Hose Only											3
Propanediol	A	A	A	A	B	A	A	A	A	A		A
Propyl Acetate	D	D	B	D	D	D	B	D	D	A		B
Propyl Alcohol (Propanol)	A	A	A	A	A	A	A	A	A	A		A
Propyl Aldehyde	C	D	B	D	D	D	B	D	D	A		A
Propyl Chloride	D	D	C	D	C	D	C	C	B	B		C
Propylene Diamine	B	B	A	B	B	C	B	B	C	A		A
Propylene Dichloride	D	D	D	D	D	D	D	D	B	B		B
Propylene Glycol	A	A	A	A	A	A	A	A	A	A		A
Pydraul Hydraulic Fluids	D	D	B	D	D	D	B	D	C	B		B
Pyranol	D	D	D	C	D	D	D	C	A	A		A
Pyridine	D	D	B	D	D	B	B	D	D	A		A
Pyroligneous Acid	C	C	B	C	B	B	C	C	A	A		A
Pyrrole	C	B	B	D	D	D	C	D	C	A		A
Rape Seed Oil	D	D	A	B	B	B	B	A	A	B		A
Red Oil (Crude Oleic Acid)	D	D	B	B	B	B	B	B	A	A		A
Richfield A Weed Killer, 100%	D	D	D	D	D	D	D	D	C	B		B
Richfield B Weed Killer, 33%	D	D	B	B	B	C	D	C	C	B		B
Rosin Oil	D	D	D	A	A	B	D	A	A	A		A
Rotenone And Water	A	A	A	A	A	A	A	A	A	A		A
Rum	(F.D.A. Tube Required)											2
Sal Ammoniac (Ammonium Chloride)	A	A	A	A	A	A	A	A	A	A		A
Salicylic Acid	A	B	A	D	D	A	A	C	A	A		A
Salt Water (Sea Water)	A	A	A	A	A	A	A	A	A	A		A
Sewage	C	C	C	A	B	A	B	A	A	A		A
Silicate of Soda (Sodium Silicate)	A	A	A	A	A	A	A	A	A	A		A
Silicate Esters	D	D	D	B	A	A	D	C	A	A		A
Silicone Greases	A	A	A	A	A	A	A	A	A	A		A
Silicone Oils	A	A	A	A	A	A	A	A	A	A		A
Silver Nitrate	A	A	A	A	A	A	A	A	A	A		A
Skelly Solvent	D	D	D	A	B	C	D	A	A	A		A
Skydrol Hydraulic Fluids	D	D	A	D	D	D	A	D	D	A		B
Soap Solutions	A	A	A	A	A	A	A	A	A	A		A
Soda Ash (Sodium Carbonate)	A	A	A	A	A	A	A	A	A	A		A
Soda, Caustic (Sodium Hydroxide)	A	B	A	B	A	A	A	B	D	A		B
Soda, Lime	A	B	A	B	B	B	A	B	C	A		A
Soda Niter (Sodium Nitrate)	A	A	A	A	A	A	A	A	A	A		A

Product information is subject to change. For full details, visit our website or contact Customer Service.

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Sodium Acetate	D	D	A	D	D	D	B	D	D	A	A	A
Sodium Aluminate	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Bicarbonate	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Bisulfate	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Bisulfite	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Borate	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Carbonate	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Chromate	D	D	A	D	C	C	B	C	C	B	A	B
Sodium Cyanide	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Dichromate	D	D	A	D	C	C	B	C	C	A	A	A
Sodium Fluoride	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Hydroxide	A	B	A	B	A	A	A	B	D	A	A	A
Sodium Hypochlorite	C	D	B	D	D	C	B	C	A	B	A	B
Sodium Metaphosphate	A	A	A	A	B	B	A	A	A	A	A	A
Sodium Nitrate	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Nitrite	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Perborate	C	D	A	D	B	D	B	C	A	A		A
Sodium Peroxide	B	B	A	B	B	B	A	B	A	B		B
Sodium Phosphate	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Silicate	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Sulfate	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Sulfide	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Sulfite	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Thiosulfate	A	A	A	A	A	A	A	A	A	A	A	A
Soybean Oil	D	D	B	B	B	B	B	B	A	A	A	A
Stannic Chloride	A	A	B	A	A	A	A	A	A	A	A	A
Stannic Sulfide	A	A	A	A	A	A	A	A	A	A	A	A
Stannous Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Stannous Sulfide	A	A	A	A	A	A	A	A	A	A	A	A
Steam, under 300°F	Steam Hose Only											
Steam, over 300°F	Steam Hose Only											
Stearic Acid	D	D	B	A	B	B	C	B	A	A		A
Stoddards Solvent	D	D	D	A	C	D	D	A	A	A	A	A
Styrene	D	D	D	D	D	D	D	D	B	D	C	D
Sugar Solutions (Sucrose) (Non F.D.A.)	A	A	A	A	A	A	A	A	A	A	A	A
Sulfamic Acid	B	C	A	B	B	A	C	C	A	A	A	A
Sulfite Liquors	B	B	A	B	B	A	B	B	A	A		A
Sulfonic Acid	D	D	D	D	C	C	D	C	D	B		B
Sulfur (Molten)	D	D	B	C	C	C	C	B	A	D		D
Sulfur Chloride	D	D	D	D	D	B	D	C	A	B		B
Sulfur Dioxide	C	C	B	D	B	B	C	C	A	A		A
Sulfur Hexafluoride	A	A	A	A	A	A	A	A	A	A		A
Sulfur Trioxide	D	D	B	D	D	D	C	D	A	B		B
Sulfuric Acid, 25%	B	B	B	B	A	A	B	C	A	A	A	A
Sulfuric Acid, 25-50%	B	D	A	D	C	A	B	D	A	A	A	A
Sulfuric Acid, 50-93%	D	D	C	D	C	B	B	D	A	A	C	A
Sulfuric Acid, Fuming	D	D	D	D	D	D	D	D	D	D	D	D
Sulfurous Acid	B	C	B	C	B	A	B	C	A	A	A	A

These ratings are to be used only as a guide.

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Tall Oil	D	D	D	A	B	B	D	B	A	A		A
Tallow	D	D	D	A	A	D	D	A	A	A		A
Tannic Acid	A	B	A	C	B	B	A	C	A	A	A	A
Tar	D	D	D	B	B	D	D	B	A	D		D
Tartaric Acid	A	A	B	B	B	A	A	B	A	A	A	A
Terpineol	D	D	C	D	D	D	C	D	A	B	A	B
Tertiary Butyl Alcohol	A	A	A	A	A	A	A	A	A	A	A	A
Tetrachlorobenzene	D	D	D	D	D	D	D	D	B	B	D	B
Tetrachloroethane	D	D	D	D	D	D	D	D	A	B		B
Tetrachloroethylene	D	D	D	D	D	D	D	D	A	B	C	B
Tetraethylene Glycol	A	A	A	A	A	A	A	A	A	A		A
Tetrachloromethane	D	D	D	C	D	D	D	D	A	B		B
Tetrachloronaphthalene	D	D	D	D	D	D	D	D	B	B		B
Tetraethyl Lead	D	D	D	B	C	D	D	C	A	A		A
Tetrahydrofuran (THF)	D	D	D	D	D	D	D	D	D	A	C	A
Thionyl Chloride	D	D	D	D	D	D	D	D	B	A		A
Tin Chloride	A	A	A	A	A	A	A	A	A	A	A	A
Tin Tetrachloride	A	A	A	A	A	A	A	A	A	A	A	A
Titanium Tetrachloride	D	D	D	B	C	C	C	C	A	A	C	A
Toluene (Toluol)	D	D	D	D	D	D	D	D	A	A	C	A
Toluene Diisocyanate (TDI)	C	C	A	C	D	D	A	C	B	A		A
Toxaphene	D	D	D	B	B	D	D	B	A	A		A
Transformer Oils (Petroleum Base)	D	D	D	A	B	B	D	A	A	A	A	A
Transformer Oils (Chlorinated Phenyl Base Askerels)	D	D	D	D	D	D	D	D	A	B	A	B
Transmission Fluids, A	D	D	D	B	C	D	D	A	A	A		A
Transmission Fluids, B	D	D	D	C	D	D	D	C	A	A		A
Tricetin	A	B	A	B	B	B	A	B	D	A		A
Tributyl Amine	B	B	A	B	B	C	A	B	D	A	A	A
Tributyl Phosphate	D	D	B	D	D	D	B	D	D	A	C	A
Trichlorobenzene	D	D	D	D	D	D	D	D	B	B	D	B
Trichloroethane	D	D	D	D	D	D	D	D	A	A	C	A
Trichloroethylene	D	D	D	C	D	D	D	C	A	B	C	D
Trichloropropane	D	D	D	D	D	D	D	D	A	A	C	A
Tricresyl Phosphate (TCP)	D	D	A	D	D	D	B	D	B	A	A	A
Triethanolamine (TEA)	B	B	A	B	A	A	B	B	D	A	A	A
Triethylamine	B	B	B	B	A	A	B	B	B	A	A	A
Triethylene Glycol	A	A	A	A	A	A	A	A	A	A	A	A
Trinitrotoluene (TNT)	D	D	D	D	B	B	D	D	B	D		D
Triphenyl Phosphate	D	D	A	D	C	C	B	D	C	A		A
Trisodium Phosphate	A	A	A	A	A	A	A	A	A	A	A	A
Tung Oil	D	D	C	A	B	B	D	A	A	A	A	A
Turbine Oil	D	D	D	B	B	B	D	A	A	A		A
Turpentine	D	D	D	B	B	D	D	A	A	A	B	A
2, 4D With 10% Fuel Oil	D	D	D	A	A	D	D	A	A	A		A
Ucon Hydrolube Oils	D	D	A	A	B	D	A	A	A	A		A
Undecanol	A	A	A	A	A	A	A	A	B	A	A	A
Unsymmetrical Dimethyl- Hydrazine (UDMH)	D	D	A	D	D	A	A	D	D	C		C

	NATURAL RUBBER	SBR	BUTYL	NITRILE	NEOPRENE	HYPALON	EPDM	EPICHLOROHYDRIN	VITON	CROSSLINKED POLYETHYLENE	CPE	UHMW
Uran	B	C	B	B	B	A	B	B	C	A		A
Urea	A	C	A	C	A	C	A	C	C	A	A	A
Varnish	D	D	D	B	B	C	D	B	A	A		A
Vegetable Oils	D	D	A	A	B	B	A	A	A	A	A	A
Versilube	C	C	A	A	C	A	A	A	A	A	A	A
Vinegar	A	C	A	C	A	A	B	C	B	A	A	A
Vinyl Acetate	D	D	A	D	D	C	C	D	D	B	A	D
Vinyl Benzene	D	D	D	D	D	D	D	D	A	B	C	B
Vinyl Chloride (Monomer)	C	D	D	D	D	D	D	D	A	A		A
Vinyl Ether	D	D	D	D	D	C	C	D	D	A		A
Vinyl Toluene	D	D	D	D	D	D	D	D	A	B	C	B
Vinyl Trichloride	D	D	D	D	D	D	D	D	A	A	C	A
V.M.&P. Naptha	D	D	D	A	A	D	D	A	A	A	A	A
Water, Fresh (Non F.D.A.)	A	A	A	A	A	A	A	A	A	A	A	A
Water, Salt	A	A	A	B	A	A	A	C	A	A	A	A
Whiskey, Wines	(F.D.A Tube Required)											2
White Liquor	A	A	B	A	A	A	C	A	A	A		A
White Oil	D	D	D	A	B	D	D	A	A	A	A	A
Wood Alcohol (Methanol)	A	A	A	A	A	A	A	A	D	A	A	A
Xylene (Xylol)	D	D	D	D	D	D	D	D	A	C	D	C
Xylidine	D	D	D	D	D	D	D	D	C	B	C	B
Zeolites	B	A	C	C	A	A	A	A	A	A	A	A
Zinc Acetate	C	D	A	C	C	C	B	C	D	A		A
Zinc Carbonate	A	A	A	A	A	A	A	A	A	A	A	A
Zinc Chloride	A	A	A	A	A	A	B	B	A	A	D	A
Zinc Chromate	A	C	A	A	A	C	A	A	A	B		B
Zinc Sulfate	A	A	A	A	A	A	A	A	A	A	D	A

These ratings are to be used only as a guide.

WARNING

In any application there may be an inherent risk of bodily injury or property damage and user is responsible for proper use and implementation of adequate safety precautions. It is the responsibility of the buyer to advise user of proper instructions for safe use and/or precautions, proper coupling procedure and to warn user of consequences of failure to heed such instruction. Should a hose assembly fail during use with pressure, injurious and/or damaging chemicals, elevated temperature materials, explosives, or flammable materials, then serious bodily injury or destruction of property could result from impelled couplings, whipping hose, high pressure or high velocity discharge, chemical contact, high temperature materials, explosion, or fire.

In known high risk areas, it is recommended that hose inspections be performed at frequent intervals related to risk factor. Hose with obvious damage should be scrapped or tested before placing in use. These inspections should include tube condition, cover condition, leaking or slipped couplings, and proof test.

We have attempted to list some of the standard references below. This is a limited list, for specific details see standard itself.

- Federal Coast Guard Regulation on Dock Hose—Federal Register 12-21-72, Vol. 37, No. 346, Part II, Section 154.500, 155.800, 156.170.**
- NFPA 196 Standard for Fire Hose.**
- NFPA 198 Care and Maintenance of Fire Hose.**
- NFPA 407 Care and Maintenance of Aircraft Refueling.**
- RMA—Storage, Care, Maintenance.**
 - General
 - OS&D
 - LPG
 - Aircraft Ground Refueling
 - Motor Vehicle
 - Anhydrous Ammonia
 - Welding Hose
 - Steam
- RMA—Industry Hose Specs.**
 - Hydraulic Hose
 - RMA-CGA Welding
 - RMA-ANI Anhydrous Ammonia
 - RMA-LPG
 - OS&D
 - 300, 400, 600# Fire Hose
- ASTM-296 Fire Hose Spec.**

WARNING

Listing of hose products for conveying materials as mentioned in these charts is provided as a guide only. Materials not described or those outside of described conditions should be referred to your respective marketing or technical representative.

Blank spaces indicate unsatisfactory use.

Many materials listed here should be recognized by the user as hazardous due to their acidic, caustic, flammable or explosive characteristics, and proper precautions must be employed to assure safe use. It is the user's exclusive responsibility to develop appropriate techniques for the safe use of the hose product. Failure to take proper precautions could lead to serious bodily injury or property damage.

CAUTION

Product descriptions and specifications for products become dated. All product literature and information is subject to change, including the specifications outlined in this publication. For questions concerning any technical and/or product application information on the products contained in this catalog, please contact HBD/Thermoid, Inc. Customer Service Department at 800/543-8070 or log onto www.hbdthermoid.com.

Product information is subject to change. For full details, visit our website or contact Customer Service.

DECIMAL & METRIC EQUIVALENTS

64ths	32nds	16ths	8ths	Decimal	MM
1/64				0.01562	0.397
	1/32			0.03125	0.794
3/64				0.04688	1.191
		1/16		0.06250	1.588
5/64				0.07812	1.864
	3/32			0.09375	2.381
7/64				0.10938	2.778
			1/8	0.12500	3.175
9/64				0.14062	3.572
	5/32			0.15625	3.968
11/64				0.17188	4.365
		3/16		0.18750	4.753
13/64				0.20312	5.159
	7/32			0.21875	5.556
15/64				0.23438	5.953
			1/4	0.25000	6.350
17/64				0.26562	6.747
	9/32			0.28125	7.144
19/64				0.29688	7.541
		5/16		0.31250	7.938
21/64				0.32812	8.334
	11/32			0.34375	8.731
23/64				0.35938	9.128
			3/8	0.37500	9.525
25/64				0.39062	9.922
	13/32			0.40625	10.309
27/64				0.42188	10.716
		7/16		0.43750	11.113
29/64				0.45312	11.509
	15/32			0.46875	11.908
31/64				0.48438	12.303
			1/2	0.50000	12.700

64ths	32nds	16ths	8ths	Decimal	MM
33/64				0.51582	13.097
	17/32			0.53125	13.494
35/64				0.54688	13.891
		9/16		0.56250	14.288
37/64				0.57812	14.684
	19/32			0.59375	15.081
39/64				0.60938	15.478
			5/8	0.62500	15.875
41/64				0.64062	16.272
	21/32			0.65625	16.669
43/64				0.67188	17.066
		11/16		0.68750	17.463
45/64				0.70312	17.859
	23/32			0.71875	18.256
47/64				0.73438	18.653
			3/4	0.75000	19.050
49/64				0.76562	19.447
	25/32			0.78125	19.844
51/64				0.79688	20.241
		13/16		0.81250	20.638
53/64				0.82812	21.034
	27/32			0.84375	21.431
55/64				0.85938	21.823
			7/8	0.87500	22.225
57/64				0.89062	22.622
	29/32			0.90625	23.019
59/64				0.92188	23.415
		15/16		0.93750	23.813
61/64				0.95312	24.209
	31/32			0.96875	24.605
63/64				0.98438	25.003
			1	1.00000	25.400

CONVERSION FACTORS

To Convert	Into	Multiply By
Atmospheres	cms of mercury	76.0
atmospheres	ft. of water (at 4°C)	33.90
atmospheres	ln of mercury (at 0°C)	29.92
atmospheres	kgs/sq cm	1.0333
atmospheres	kgs/sq meter	10.332
atmospheres	pounds/sq in	14.70
Bar	newtons/sq m	10 ⁵
bar	atmospheres	0.9869
bar	at (tech.)	1.0197
bar	psi	14.504
Barrels—Oil	gals/oil	42
BT Units	kg—calories	0.2520
BTUs	ft—lbs	777.9
BTUs	hp—hrs	3.927 x 10 ⁻⁴
BTUs	kg—meters	107.5
BTUs	kw—hrs	2.928 x 10 ⁻⁴
BTU/Min	ft—lb/sec	12.86
BTU/min	hp	0.02356
BTU/min	kw	0.01757
BTU/min	watts	17.57
Centimeters	inches	0.3937
cm	meters	0.01
cm	mm	10
Cms Mercury	atm	0.01316
cms mercury	ft water	0.4461
cms mercury	kgs/sq meter	136.0
cms mercury	lbs/sq ft	27.85
cms mercury	lbs/sq in	0.1934
Cms/Second	ft/min	1.969
cms/sec	ft/sec	0.03281
cms/sec	km/hr	0.036
cms/sec	meter/min	0.6
cms/sec	miles/hr	0.02237
cms/sec	miles/min	3.728 x 10 ⁻⁴
Cms/Sec/Sec	ft/sec/sec	0.03281
Cubic Cms	cu ft	3.531 x 10 ⁻⁵
cu cms	cu in	3.102 x 10 ⁻²
cu cms	cu meters	10 ⁶
cu cms	cu yards	1.308 x 10 ⁻⁶
cu cms	gals	2.642 x 10 ⁻⁴
cu cms	liters	10 ⁻³
cu cms	pints (liq)	2.113 x 10 ⁻³
cu cms	quarts (liq)	1.057 x 10 ⁻³

To Convert	Into	Multiply By
Cubic Feet	cubic cms	2.832 x 10 ⁴
cu ft	cu inches	1728
cu ft	cu meters	0.02832
cu ft	cu yards	0.03704
cu ft	gals	7.48052
cu ft	liters	28.32
cu ft	pints (liq)	59.84
cu ft	quarts (liq)	29.92
Cubic Ft/min	cu cms/sec	472.0
cu ft/min	gals/sec	0.1247
cu ft/min	liters/sec	0.4720
cu ft/min	lbs water/min	62.43
cu ft/sec	gals/min	448.831
Cubic Inches	cc	16.39
cu ins	cu ft	5.787 x 10 ⁻⁴
cu ins	cu meters	1.639 x 10 ⁻⁵
cu ins	cu yards	2.143 x 10 ⁻⁵
cu ins	gals	4.329 x 10 ⁻³
cu ins	liters	1.639 x 10 ⁻²
cu ins	pints (liq)	0.03463
cu ins	quarts (liq)	0.01732
Cubic Meters	cc	10 ⁴
cu M	cu ft	35.31
cu M	cu inches	61.023
cu M	cu yards	1.308
cu M	gals	264.2
cu M	liters	10 ³
cu M	pints (liq)	2113
cu M	quarts (liq)	1057
Cubic Yards	cu cms	7.646 x 10 ⁵
cu yds	cu ft	27
cu yds	cu ins	46,656
cu yds	cu meters	0.7645
cu yds	gals	202.0
Decimeters	meters	0.1
Degrees (Angle)	minutes	60
degs (angle)	radians	0.01745
degs (angle)	secs	3600

Product information is subject to change. For full details, visit our website or contact Customer Service.

CONVERSION FACTORS

To Convert	Into	Multiply By
Degrees/Sec	radians/sec	0.01745
degs/sec	revs/min	0.1667
degs/sec	revs/sec	0.002778
Feet	cms	30.48
ft	ins	12
ft	meters	0.3048
ft	yds	1/3
Ft of Water	atms	0.02850
ft of w	ins mercury	0.8826
ft of w	kgs/sq cm	0.03048
ft of w	lbs/sq ft	62.32
ft of w	lbs/sq in	0.4328
Feet/Min	cm/sec	0.5080
ft/min	ft/sec	0.01667
ft/min	kms/hr	0.01829
ft/min	meters/min	0.3048
ft/min	miles/hr	0.01136
Ft/Sec/Sec	cms/sec/sec	30.48
ft/sec/sec	Meters/sec/sec	0.3048
Ft-Pounds	BTUs	1.286×10^{-3}
ft lbs	hp-hrs	5.050×10^{-7}
ft lbs	kg-calories	3.241×10^{-4}
ft lbs	kg-meters	0.1383
ft lbs	kw-hrs	3.766×10^{-7}
Ft-lbs/Min	BTUs/min	7.717×10^{-2}
ft-lbs/min	ft-lbs/sec	0.01667
ft-lbs/min	hp	3.030×10^{-5}
ft-lbs/min	kg-calories/min	3.241×10^{-3}
ft-lbs/min	kws	2.260×10^{-5}
Ft-lbs/Sec	BTUs/min	7.717×10^{-2}
ft-lbs/sec	hp	1.818×10^{-3}
ft-lbs/sec	kg-calories/min	1.945×10^{-2}
ft-lbs/sec	kws	1.356×10^{-3}
Gallons	ccs	3785
gals	cu ft	0.1337
gals	cu ins	231
gals	cu meters	3.785×10^{-3}
gals	liters	3.785
gals	pints (liq)	8
gals	quarts (liq)	4
Gallons, Imp	US gals	1.20095
gallons, US	Imp gals	0.83267
Gallons/Min	cu ft/sec	2.225×10^{-3}
gal/min	liters/sec	0.06308
gal/min	cu ft/hr	0.0208

To Convert	Into	Multiply By
Horse-Power	BTUs/min	42.44
hp	ft-lbs/min	33,000
hp	ft-lbs/sec	550
hp	hp (metric)	1.014
hp	kg-calories/min	10.70
hp	kws	0.7457
hp	watts	745.7
Hp-Hours	BTUs	2547
hp-hrs	ft-lbs	1.98×10^8
hp-hrs	kg-calories	641.7
hp-hrs	kg-meters	2.737×10^5
hp-hrs	kw-hrs	0.7457
Inches	cms	2.540
Ins Mercury	atms	0.002458
ins mercury	ft water	1.133
ins mercury	kgs/sq cm	0.03453
ins mercury	lbs/sq ft	70.73
ins mercury	lbs/sq in	0.4912
Ins of Water	atms	0.002458
ins of w	ft mercury	0.07355
ins of w	kgs/sq cm	0.002540
ins of w	lbs/sq ft	5.202
ins of w	lbs/sq in	0.03613
Kilograms	dynes	980,665
kgs	lbs	2.205
kgs	ton (short)	1.102×10^{-3}
kgs	grams	1000
Kgs/Sq Cm	atms	0.9678
kgs/sq cm	ft water	32.81
kgs/sq cm	ins mercury	28.96
kgs/sq cm	lbs/sq ft	2048
kgs/sq cm	lbs/sq in	14.22
Kilometers	cms	10^5
kms	ft	3281
kms	meters	10^3
kms	miles	0.6214
Kms/Hr	cms/sec	27.78
kms/hr	ft/min	54.68
kms/hr	ft/sec	0.9113
kms/hr	meters/min	16.87
kms/hr	miles/hr	0.6214
Kms/Hr/Sec	cms/sec/sec	27.78
kms/hr/sec	ft/sec/sec	0.9113
kms/hr/sec	meters/sec/sec	0.2778

CONVERSION FACTORS

To Convert	Into	Multiply By
Kilowatts	BTUs/min	56.92
kws	ft-lbs/min	4.425×10^4
kws	ft-lbs/sec	737.6
kws	hp	1.341
kws	kg-calories/min	14.34
kws	watts	10^3
Kilowatts-Hrs	BTUs	3415
kw-hrs	ft-lbs	2.655×10^6
kw-hrs	hp-hours	1.341
kw-hrs	kg-calories	860.5
kw-hrs	kg-meters	3.671×10^5
Liters	ccs	103
liters	cu ft	0.03531
liters	cu ins	51.02
liters	cu meters	10^{-2}
liters	gals	0.2642
liters	quarts (liq)	1.057
Liters/Min	gals/sec	4.403×10^{-3}
Meters	cms	100
meters	ft	3.281
meters	ins	39.37
meters	kms	10^3
meters	mms	10^3
meters/min	cms/sec	1.667
meters/min	ft/min	3.281
meters/min	ft/sec	0.05468
meters/min	kms/hr	0.06
meters/min	miles/hr	0.03728
Meters/Sec	ft/min	196.8
meters/sec	ft/sec	3281
meters/sec	kms/hr	3.6
meters/sec	kms/min	0.06
meters/sec	miles/hr	2.237
meters/sec	miles/min	0.03728
Micron	meters	10^{-8}
microns	in	39×10^{-6}
Miles/Hr	cms/sec	44.70
miles/hr	ft/min	88
miles/hr	ft/sec	1.467
miles/hr	kms/hr	1.609
miles/hr	meters/min	26.82
Millimeters	cms	0.1
mms	ins	0.0397
Minutes (Angle)	radians	2.909×10^{-4}

To Convert	Into	Multiply By
Newton	kgs	0.1020
Ounces	lbs	1.805
ozs	gram	28.349527
Ounces (Fluid)	cu in	1.805
ozs (fluid)	liters	0.02957
Pounds	ozs	16
lbs	tons (short)	0.005
lbs	newtons (N)	4.44
lbs	gram	453.5924
Lbs of Water	cu ft	0.01605
lbs of water	cu in	27.73
lbs of water	gals	0.1204
Lbs of Water/Min	cu ft/sec	2.679×10^{-4}
Pounds/Cu Ft	lbs/cu in	5.787×10^{-4}
Pounds/Cu In	lbs/cu ft	1728
Pounds/Sq In	atms	0.06804
lbs/sq in	ft water	2.311
lbs/sq in	in mercury	2.036
lbs/sq in	kgs/sq cm	0.07031
Radians	degrees	57.29578
Tons (Long)	kgs	1016
tons (long)	lbs	2240
tons (long)	tons (short)	1.12000
Tons (Short)	lbs	2000
tons (short)	kgs	907.18486
tons (short)	tons (long)	0.89287
tons (short)	tons (metric)	0.90718
Watts	BTUs/min	0.05682
watts	ft-lbs/min	44.26
watts	ft-lbs/sec	0.7376
watts	hp	1.341×10^{-3}
watts	kg-calories/min	0.01434
watts	kws	10
Watts/Hours	BTUs	3.415
watts/hours	ft-lbs	2655
watts/hours	hp-hrs	1.341×10^{-3}
watts/hours	kg-calories	0.8605
watts/hours	kg-meters	367.1
watts/hours	kw-hrs	10^{-3}

Product information is subject to change. For full details, visit our website or contact Customer Service.

TEMPERATURE CONVERSION

Look up reading in middle column (shaded). If in degrees Centigrade, read Farenheit equivalent in right-hand column; if in Farenheit degrees, read Centigrade equivalent in left-hand column. $^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$ $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times .5556$

C	^C F	F
-51	-60	-76
-46	-50	-58
-40	-40	-40
-34	-30	-22
-29	-20	-4
-23	-10	14
-17.8	0	32
-17.2	1	33.8
-16.7	2	35.6
-16.1	3	37.4
-15.6	4	39.2
-15.0	5	41.0
-14.4	6	42.8
-13.9	7	44.6
-13.3	8	45.4
-12.8	9	48.2
-12.2	10	50.0
-11.7	11	51.8
-11.1	12	53.6
-10.6	13	55.4
-10.0	14	57.2
-9.4	15	59.0
-8.9	16	60.8
-8.3	17	62.6
-7.8	18	64.4
-7.2	19	66.2
-6.7	20	68.0
-6.1	21	69.8
-5.6	22	71.6
-5.0	23	73.4
-4.4	24	75.2
-3.9	25	77.0
-3.3	26	78.8
-2.8	27	80.6
-2.2	28	82.4
-1.7	29	84.2
-1.1	30	86.0
-.6	31	87.7
0	32	89.6

C	^C F	F
.6	33	91.4
1.1	34	93.2
1.7	35	95.0
2.2	36	96.8
2.8	37	98.6
3.3	38	100.4
3.9	39	102.2
4.4	40	104.0
5.0	41	105.6
5.6	42	107.6
6.1	43	109.4
6.7	44	111.2
7.2	45	113.0
7.8	46	114.8
8.3	47	116.6
8.9	48	118.4
9.4	49	120.2
10.0	50	122.0
10.6	51	123.8
11.1	52	125.6
11.7	53	127.4
12.2	54	129.2
12.8	55	131.0
13.3	56	132.8
13.9	57	134.8
14.4	58	136.4
15.0	59	138.2
15.6	60	140.0
16.1	61	141.8
16.7	62	143.6
17.2	63	145.4
17.8	64	147.2
18.3	65	149.0
18.9	66	150.8
19.4	67	152.6
20.0	68	154.4
20.6	69	156.2
21.1	70	158.0
21.7	71	159.8

C	^C F	F
22.2	72	161.6
22.8	73	163.4
23.3	74	165.2
23.9	75	167.0
24.4	76	168.8
25.0	77	170.6
25.6	78	172.4
26.1	79	174.2
26.7	80	176.0
27.2	81	177.8
27.8	82	179.6
28.3	83	181.4
28.9	84	183.2
29.4	85	185.0
30.0	86	186.8
30.6	87	188.6
31.1	88	190.4
31.7	89	192.2
32.2	90	194.0
32.8	91	195.8
33.3	92	197.6
33.9	93	199.4
34.4	94	201.2
35.0	95	203.0
35.6	96	204.8
36.1	97	206.6
36.7	98	208.4
37.2	99	210.2
37.8	100	212.0
43	110	230
49	120	248
54	130	266
60	140	284
66	150	302
71	160	320
77	170	338
82	180	356

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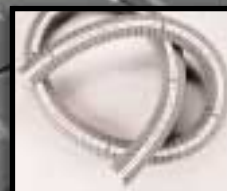
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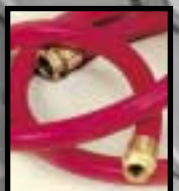
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