

Thermoid®

Made in U.S.A.



HOSE PRODUCTS CATALOG

ABOUT THERMOID

Founded in 1883, Thermoid manufactures one of the broadest lines of industrial rubber products available anywhere in the world. Thermoid serves many diverse industries and markets and works with customers to source both standard and custom-designed products, ranging from multipurpose industrial hoses to conveyor belting. End users, OEMs and industrial distributors worldwide choose Thermoid products for their reliability, quality construction, durability and exceptional performance.

MANUFACTURING EXCELLENCE & SAFETY

Thermoid products are made in environmentally safe manufacturing facilities that operate under the guidance of ISO 9001 Quality Systems. All products are tested to meet or exceed stringent industry standards, and to ensure long-term operation and worker safety. A strong commitment to maintaining and improving the quality of product performance and customer service is inherent within our management policy and extends to every member of the company.

APPLICATION EXPERTISE

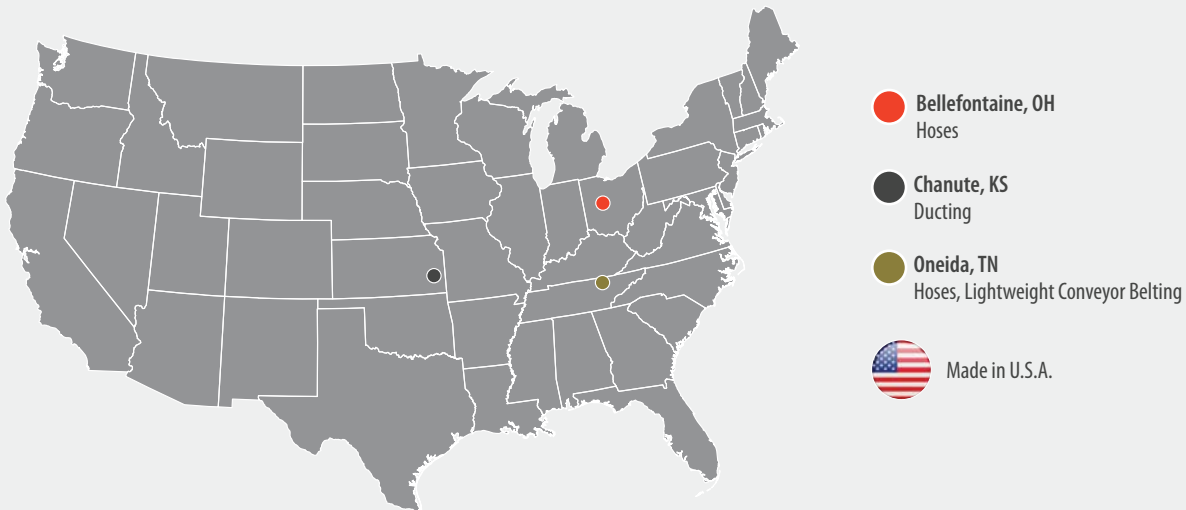
Our expert design and application engineers are available to assist our customers, product design engineers and OEMs, and provide innovative solutions for most demanding industrial markets, including:

- Aerospace/Aviation
- Agriculture
- Construction
- Defense/Military
- Material Handling
- Metal Processing
- Mining
- Petro-Chemical
- Power Generation
- Power Transmission
- Transportation & Utilities

Capable of sourcing nearly every type of standard, industrial rubber product required, Thermoid can also create an almost unlimited number of application-engineered rubber products, including:

- Automotive Aftermarket Hose & Accessories
- Conveyor Belting
- Ducting
- Hose Products (Automotive, Aviation, Bulk Transfer, Chemical, Industrial, Marine, Petroleum and more)

Thermoid provides innovative rubber products across a variety of markets. Our vision is to build lasting customer relationships and solutions to customers' most challenging problems. Thermoid products are manufactured in the US at three facilities.



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GENERAL HOSE INFORMATION

Thermoid is a leader in developing innovative hose product designs and manufacturing production techniques. 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.

THERMOID® BRAND ADVANTAGE

Thermoid uses two manufacturing processes Concure® and Thermocure to produce durable, top-quality hose products with value-added features.

Concure®

The Concure® continuous manufacturing process was invented, developed and patented by Thermoid 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. Benefits from Flex Strength hose products include:

Long Length Reels: More than 80% of our reels contain one length of hose, 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 and type. Private branding is available.

Thermocure

Thermoid uses Thermocure, its patented manufacturing process, to provide consistent I.D. and O.D., to make the hose easier to couple, and help its smooth cover provide added durability when dragging over rough surfaces. With this process, Thermoid has become a potent force in the PED, Fuel Oil Delivery and LP Gas markets with the Thermoid FOD hose and the Type 75 LP Gas hose. The Thermocure process gives these first class products, a showroom quality look.

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

The acronym "STAMPED" helps with the proper selection of hose to reduce the chance of a failure from a misapplication. Serious damage and/or injury may occur if a hose or fitting is used in an application other than what it is designed for. These questions can help increase the useful life of the hose and greatly reduce the chance of a problem.

S SIZE: I.D., O.D. and length.

T TEMPERATURE of the material conveyed and environmental.

A APPLICATION, the conditions of use.

M MATERIAL being conveyed, type and concentration.

P PRESSURE to which the assembly will be exposed.

E ENDS: style, type, orientation, attachment methods, etc.

D DELIVERY: testing, quality, packaging, and delivery requirements.

TECHNICAL INFORMATION

ARPM 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 time of exposure. Rubber compounds can be classified as to their degree of oil resistance based on their physical properties after exposure to a standard test fluid. In this ARPM classification, the rubber samples are immersed in IRM 903 oil at 100°C (212°F) for 70 hours (see ASTM Method D 471 for a detailed description of the oil and the testing procedure). As a guide to the user of hose in contact with oil, the oil resistance classes and a corresponding description are listed in the table to the right.

Physical Properties after Exposure to Oil		
Oil Resistance Class	Maximum Volume Change	Tensile Strength Retained
Class A (High oil resistance)	+25%	80%
Class B (Medium oil resistance)	+65%	50%
Class C (Limited oil resistance)	+100%	40%

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

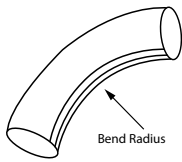
HOSE RESISTANCE CHARACTERISTICS REFERENCE

Thermoid has developed a quick reference system for identifying hose resistance characteristics within certain environmental conditions and physical properties. The chart below lists a number of specific conditions, each of which has been assigned a specific symbol to represent it. These symbols will be displayed for each hose product in this catalog to identify the various long-term, environmental resistance levels of that product.

For complete information on hose resistance characteristics and service performance in specific applications and/or environments, please consult your area Thermoid sales representative and review the product specification information and Chemical Resistance Tables listed on our website at www.thermoid.com.

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

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:

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

$r = \text{given bend radius of hose}$

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.

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 Thermoid in its product catalogs and on the Thermoid website (www.thermoid.com) and contact a 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 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: 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 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.

CHEMICAL HOSE WARNING

Do not use chemical hose at pressures or temperatures above those recommended by 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 & 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 or death.*

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 (Please also refer to Hose Test Methods later in this document).

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. 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.

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.

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.

Hose Test Methods

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 or death.*

The Association for Rubber Product Manufacturers (ARPM) recognizes, accepts and recommends the testing methods of the American Society for Testing and Materials (ASTM) (Please also refer to General Test and Inspection Procedures for Hose above).

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.

The ARPM 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 ARPM 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 or hose assembly, as specified in ASTM D380 or the applicable product standard. As the name implies, the hose is destroyed in the performance of the test and should be disposed of afterwards.

- a. Burst pressure is recorded as the pressure at which actual failure of the hose or hose assembly occurs by rupture, leakage or other malfunction.
- b. A hold test, as defined in ASTM D380, 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 pressure, 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 hydraulic hose, are made with original length measurements taken under a pressure of 0.07 MPa (10 psi). The specified 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 0.07 MPa (10 psi), except hydraulic hose, and that at the specified pressure times 100 divided by the length at 0.07 MPa (10 psi). Elongation occurs if the length of the hose under the specified pressure is greater than at a pressure of 0.07 MPa (10 psi). Contraction occurs if the length at the specified pressure is less than at 0.07 MPa (10

psi). In testing hydraulic hose, the maximum working pressure is applied to a hose at least 600 mm (24 inches) in length for 30 seconds and then released. Reference marks are applied on the hose 500 mm (20 inches) apart (original length). The hose is then repressurized to the maximum working pressure for 30 seconds and the reference marks are measured (final length). The percentage change in length is the difference between the final and original lengths, divided by the original length, times 100.

% Length Change Formula:

$$\% \text{ Length Change} = \left(\frac{L_p - L_o}{L_o} \right) \times 100$$

Where:

L_o = Original measured length at 0.07 MPa (10 psi)

L_p = Pressurized measured length at the specific pressure

- c. Percent change in outside diameter (OD) or circumference is the difference between the outside diameter or circumference at 0.07 MPa (10 psi) and that obtained under the specified pressure, times 100, divided by the outside diameter or circumference at 0.07 MPa (10 psi). Expansion occurs if the measurement at the specified pressure is greater than at 0.07 MPa (10 psi). Contraction occurs if the measurement at the specified pressure is less than at 0.07 MPa (10 psi).

% OD Change Formula:

$$\% \text{ OD Change} = \left(\frac{\Phi_p - \Phi_o}{\Phi_o} \right) \times 100$$

Where:

Φ_o = Original measured OD (outside diameter) at 0.07 MPa (10 psi)

Φ_p = Pressurized measured OD (outside diameter) at specified pressure

- d. Warp is the maximum deviation from a straight line drawn from fitting to fitting. First, a measurement is taken at 0.07 MPa (10 psi) and then again at the specified pressure. The difference between the two is the warp and is reported to the nearest 5 mm (0.25 inch). 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 0.07 MPa (10 psi) and at the specified pressure is reported to the nearest 5 mm (0.25 inch). 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 0.07 MPa (10 psi) and a second reading at the specified pressure. The difference, in degrees between the 0.07 MPa (10 psi) base and that at the specified 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 the hose a clockwise turning is right twist and counterclockwise is left twist.
- g. Kink test applies to woven jacket fire hose only and is a measure of the ability of hose to withstand a momentary pressure while the hose is bent back sharply on itself at a point approximately 460 mm (18 inches) from one end. Test is made at pressures ranging from 62% of the specified pressure on sizes 76 mm (3 inches) and 89 mm (3.5 inches) to 87% on sizes under 76 mm (3 inches).
- 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:

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

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

- f. I.D.
- g. O.D.
- h. Length (state whether overall length or length excluding couplings)
- i. Tolerance limitations (if normal ARPM 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

- f. Intermittent or continuous service
- g. Indoor and outdoor use
- h. Movement and geometry of use
- i. Flexibility – Minimum bend radius
- j. 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

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
ARPM	Association for Rubber Product Manufacturers
SAE	Society of Automotive Engineers
TFI	The Fertilizer Institute
UL	Underwriters Laboratories

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

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
XNBR	Carboxylated Nitrile Rubber	Carboxylated Acrylonitrile Butadiene Rubber

AIR/MULTIPURPOSE HOSES

VALU FLEX®/GS

Available in Red, Black, Green, Yellow and Blue

Valu Flex®/GS is one of the most versatile general service air and water hoses available today. Valu Flex hoses are lightweight, flexible, and resists abrasion, heat and ozone, making them useful in various applications. Valu Flex hoses, stocked in 200 and 300 PSI, are available in special orders in a wide variety of sizes and colors with color coding for safety and operational improvement.

Not recommended as a steam hose or where oil is present.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Abrasion Heat Ozone Weathering

BRANDING: Thermoid Valu Flex/GS Size
PSI WP Made In USA Month/Day/Year
Time Stamp

COVER COLOR: Red, Black, Green, Yellow
and Blue
• Allows for Color Coding

CONSTRUCTION

TUBE: EPDM, ARPM - Class C
• High Temperature Resistant

COVER: EPDM, ARPM - Class C
• Abrasion Resistant
• Ozone and Weather Resistant

REINFORCEMENT: Spiral Polyester Yarn
• Provides a Working Pressure to 200-300 psi
• Easier to Route Assemblies
• Easier to Coil and Handle
• Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -40°F to +212°F, -40°C to +100°C

PACKAGING: Reels or ±50 ft. Lengths – 1 Per Carton (¾" I.D. Only)
• 300-700 ft. Reels Depending on I.D.
• Over 80% One Piece Reels
• Less Scrap
• Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
RED												
00114504200	700	¼	6.35	0.49	12.45	2	200	1.38	1.50	38.10	0.08	0.12
00114504400	700	¼	6.35	0.50	15.75	2	300	2.07	1.50	38.10	0.08	0.12
00114505200	700	⅝	7.94	0.58	14.73	2	200	1.38	2.00	50.80	0.09	0.13
00114505400	700	⅝	7.94	0.58	15.75	2	300	2.07	2.00	50.80	0.09	0.13
00114506200	700	¾	9.53	0.69	17.53	2	200	1.38	2.25	57.15	0.15	0.22
00114506400	700	¾	9.53	0.69	17.53	2	300	2.07	2.25	57.15	0.15	0.22
00114508200	700	½	12.70	0.81	20.64	4	200	1.38	3.00	76.20	0.25	0.37
00114508400	700	½	12.70	0.84	21.43	4	300	2.07	3.00	76.20	0.25	0.37
00114510200	700	⅝	15.88	0.93	23.62	4	200	1.38	3.75	95.25	0.30	0.45
00114510400	700	⅝	15.88	1.00	25.40	4	300	2.07	3.75	95.25	0.30	0.45
00114512200	700	¾	19.05	1.15	29.21	4	200	1.38	4.50	114.30	0.38	0.57
00114512400	700	¾	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.41	0.61
00114516300	700	1	25.40	1.37	34.80	4	200	1.38	7.00	177.80	0.51	0.76
00114516400	700	1	25.40	1.43	36.20	4	300	1.38	7.00	177.80	0.51	0.76
00114520200	550	1-¼	31.75	1.75	44.45	4	200	1.38	8.75	222.25	0.81	1.21
00114524200	400	1-½	38.10	2.00	50.80	4	200	1.38	10.50	266.70	0.89	1.34
00114532200	300	2	50.80	2.55	64.77	4	200	1.38	14.00	355.60	1.28	1.90
RED	50 ft. Lengths											
00114506251	1 per carton	¾	9.53	0.69	17.53	2	200	1.38	2.25	57.15	0.15	0.22
00114506451	1 per carton	¾	9.53	0.69	17.53	2	300	2.07	2.25	57.15	0.15	0.22
00114512251	1 per carton	¾	19.05	1.15	29.21	4	200	1.38	4.50	114.30	0.38	0.57
00114512255	28 per pallet	¾	19.05	1.15	29.21	4	200	1.38	4.50	114.30	0.38	0.57
00114512451	1 per carton	¾	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.41	0.61
00114512454	28 per pallet	¾	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.41	0.61

VALU FLEX®/GS *continued*

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
BLACK	Reels (ft.)											
00114603200	700	3/16	4.76	0.44	11.11	2	200	1.38	N/A	N/A	0.07	0.11
00114604200	700	1/4	6.35	0.49	12.45	2	200	1.38	1.50	38.10	0.08	0.12
00114604400	700	1/4	6.35	0.50	15.75	2	300	2.07	1.50	38.10	0.08	0.12
00114605200	700	5/16	7.94	0.58	14.73	2	200	1.38	2.00	50.80	0.09	0.13
00114605400	700	5/16	7.94	0.58	15.75	2	300	2.07	2.00	50.80	0.09	0.13
00114606200	700	3/8	9.53	0.69	17.53	2	200	1.38	2.25	57.15	0.15	0.22
00114606400	700	3/8	9.53	0.69	17.53	2	300	2.07	2.25	57.15	0.15	0.22
00114608200	700	1/2	12.70	0.81	20.64	4	200	1.38	3.00	76.20	0.24	0.36
00114608400	700	1/2	12.70	0.84	21.43	4	300	2.07	3.00	76.20	0.24	0.36
00114610200	700	5/8	15.88	0.93	23.62	4	200	1.38	3.75	95.25	0.29	0.43
00114610400	700	5/8	15.88	1.00	25.40	4	300	2.07	3.75	95.25	0.29	0.43
00114612200	700	3/4	19.05	1.15	29.21	4	200	1.38	4.50	114.30	0.36	0.54
00114612400	700	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.40	0.60
00114616200	700	1	25.40	1.37	34.8	4	200	1.38	7.00	177.80	0.49	0.73
00114616400	700	1	25.40	1.43	36.32	4	300	2.07	7.00	177.80	0.49	0.73
00114620200	550	1-1/4	31.75	1.75	44.45	4	200	1.03	8.75	222.25	0.79	1.18
00114624200	400	1-1/2	38.10	2.00	50.80	4	200	1.03	10.50	266.70	0.90	1.34
00114632200	300	2	50.80	2.55	64.77	4	200	1.03	14.00	355.60	1.08	1.61
BLACK	50 ft. Lengths											
00114612454	1 per carton	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.40	0.60
GREEN	Reels (ft.)											
00114806400	700	3/8	9.53	0.69	17.53	2	300	2.07	2.25	57.15	0.15	0.22
00114808400	700	1/2	12.70	0.84	21.34	4	300	2.07	3.00	76.20	0.25	0.37
00114812400	700	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.41	0.61
00114816400	700	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.54	0.80
GREEN	50 ft. Lengths											
00114812454	28 per pallet	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.41	0.61
YELLOW	Reels (ft.)											
00114906400	700	3/8	9.53	0.69	17.53	2	300	2.07	2.25	57.15	0.15	0.22
00114908400	700	1/2	12.70	0.84	21.34	4	300	2.07	3.00	76.20	0.24	0.36
00114912400	700	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.37	0.55
00114916400	700	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.54	0.80
YELLOW	50 ft. Lengths											
00114912452	28 per pallet	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.37	0.55
BLUE	Reels (ft.)											
00115006400	700	3/8	9.53	0.69	17.53	2	300	2.07	2.25	57.15	0.15	0.22
00115008400	700	1/2	12.70	0.84	21.43	4	300	2.07	3.00	76.20	0.25	0.37
00115012400	700	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.37	0.55
00115016400	700	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.54	0.80
BLUE	50 ft. Lengths											
00115012454	1 per carton	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.37	0.55

DARI-PREEN CREAMERY

The Dari-Preen Creamery hose is designed for washdown service in creameries, dairies, packing houses, canneries and food processing plants. It features an EPDM tube and cover that resists scuffing and cracking and is color coded white to indicate washdown service and cleanliness. Dari-Preen handles hot water up to 212°F at 50 PSI, and is rated for working pressures up to 250 PSI on ½" I.D.

This product is not to be used as steam hose.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Size WP Dari-Preen Made In USA Month/Day/Year Time Stamp

COVER COLOR: White
 • Color Indicates Washdown Service and/or Cleanliness

CONSTRUCTION

- TUBE:** EPDM, ARPM - Class C
- Heat Resistant
 - Can Handle Hot Water to +200°F, +93°C at 50 psi
- COVER:** EPDM, ARPM - Class C
- Heat Resistant
 - Abrasion Resistant
 - Aging Resistant
 - Weather Resistant
 - Non-marking Cover
- REINFORCEMENT:** 4 -Spiral Polyester Yarn
- Provides a Working Pressure to 200-250 psi
 - More Flexible than Braid Reinforced Hose
 - Easier to Route Assemblies
 - Easier to Coil and Handle
 - Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -40°F to +212°F, -40°C to +100°C

- PACKAGING:** Reels or 50 ft. Lengths – 1 Per Carton
- 700 ft. Reels
 - Over 80% One Piece Reels
 - Less Scrap
 - Most Footage per Reel vs. Competition

- PRESSURELESS CURE SYSTEM**
- Minimal Cast (Natural Curvature of the Hose)
 - Extends the Life of the Rubber Compounds

- AIR MANDREL MANUFACTURING PROCESS**
- No Internal Contamination of the Inside Diameter Due to the Lubricant
 - Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00544808400	700	½	12.70	0.91	23.02	4	250	1.72	3.00	76.20	0.29	0.43
00544812400	700	¾	19.05	1.25	31.75	4	200	1.38	4.50	114.30	0.50	0.74
50 ft. Lengths												
00544812450	1 per carton	¾	19.05	1.25	31.75	4	200	1.38	4.50	114.30	0.50	0.74

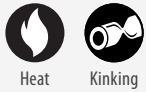
WASHING MACHINE DRAIN

The flexible, easy to use and kink resistant Washing Machine Drain hose makes it ideal for curves and bends. This hose is specifically designed to withstand the heat and service life requirements needed for washing machine applications both in domestic and commercial use.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Heat Kinking

BRANDING: None

COVER COLOR: Black

CONSTRUCTION

TUBE: EPDM, ARPM - Class C

- Heat Resistant
- Handles Applications in Both the Domestic and Commercial Markets

COVER: EPDM, ARPM - Class C

- Heat Resistant
- Ozone Resistant

REINFORCEMENT: 2-Spiral Polyester Yarn

- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -40°F to +200°F, -40°C to +93°C

- Hose Will Remain Flexible Even Under Extreme Temperatures

PACKAGING: 50 ft. Lengths – 1 Per Carton

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	50 ft. Lengths	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00548614250	1 per carton	7/8	22.23	1.25	31.75	2	37	0.25	5.25	133.35	0.37	0.55

DURA-RED™

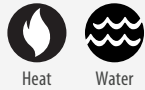
Dura-Red™ is a premium non-conductive multipurpose hose that withstands oil mist, air, water and mild chemicals. This hose meets a minimum of 1,000,000 ohms per inch resistance when tested with a 1,000-volt D.C. megger. It features 4-spiral, 300 PSI construction ideal to handle harsh applications.

This product is not for use with steam or fuels.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Heat

Water

BRANDING: Thermoid Dura-Red™ Non-Conductive Size PSI WP Made In USA Month/Day/Year Time Stamp

COVER COLOR: Red

CONSTRUCTION:

Non-Conductive

- Safety Assurance

TUBE:

EPDM, ARPM - Class C

- High Temperature Resistant

COVER:

EPDM, ARPM - Class C

- Water Resistant
- Heat Resistant
- Ozone Resistant

REINFORCEMENT:

4-Spiral Polyester Yarn

- Provides a Working Pressure to 300 psi
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque
- More Flexible than Braid Reinforced Hose

TEMPERATURE RANGE:

-40°F to +200°F, -40°C to +93°C

- Still Flexible Even at Extreme Temperatures

PACKAGING:

- 700 ft. Reels
- Over 80% One Piece Reels
- Less Scrap
- Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00275506400	700	3/8	9.53	0.71	18.03	4	300	2.07	2.25	57.15	0.18	0.27
00275508400	700	1/2	12.70	0.84	21.34	4	300	2.07	3.00	76.20	0.25	0.37
00275512400	700	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.38	0.57
00275516400	700	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.51	0.76

GREEN GP/OXYGEN

The Green GP/Oxygen hose is designed to handle the harsh, abusive conditions found in steel producing and oil refinery environments. The green cover follows the color coding for oxygen in mills.

Not recommended for fuel or air breathing applications.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Size 300# W.P. -GP/OXYGEN
MADE IN USA Date and Time Stamp

COVER COLOR: Green
• Allows for Color Coding

CONSTRUCTION

TUBE: Nitrile Blend, ARPM - Class B

COVER: Nitrile Blend, ARPM - Class B
• Abrasion Resistant
• Weather Resistant
• Ozone Resistant

REINFORCEMENT: 4-Spiral Polyester Yarn
• Provides a Working Pressure to 300 psi
• More Flexible than Braid Reinforced Hose
• Easier to Route Assemblies
• Easier to Coil and Handle
• Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -20°F to +180°F, -29°C to +82°C

PACKAGING: Reels
• 700 ft. Reels
• Over 80% One Piece Reels
• Less Scrap
• Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM
• Minimal Cast (Natural Curvature of the Hose)
• Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS
• No Internal Contamination of the Inside Diameter Due to the Lubricant
• Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius	
	Reels (ft.)	inches	mm	inches	mm		psi	Mpa	inches	mm
00336606400	700	3/8	9.53	0.71	22.23	4	300	2.07	2.25	57.15
00336608400	700	1/2	12.70	0.94	23.81	4	300	2.07	3.00	76.20
00336612400	700	3/4	19.05	1.16	29.37	4	300	2.07	4.50	114.30

MAXECON™/GP

Maxecon™ is a versatile red, general-purpose air and water service hose used across all industries. It is designed to be durable and flexible, making it ideal for uses in mining, steel and petroleum applications. It is non-conductive and offers dependable, long-lasting performance with two working pressures in varying sizes.

Not recommended for fuel applications.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Thermoid Maxecon /GP Non-Conductive Size PSI WP Made In USA Month/Day/Year Time Stamp

COVER COLOR: Red

CONSTRUCTION:

Non-Conductive

- Safety Assurance

TUBE:

Nitrile, ARPM - Class A

COVER:

Nitrile, ARPM - Class B

- Abrasion Resistant
- Weather Resistant
- Ozone Resistant

REINFORCEMENT:

2- or 4-Spiral Polyester Yarn

- Provides a Working Pressure to 250-300 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque
- Kink Resistant

TEMPERATURE RANGE: -20°F to +160°F or +200°F (Intermittent) -29°C to +93°C or +82°C (Intermittent)

PACKAGING:

- 400-700 ft. Reels Depending on I.D.
- Over 80% One Piece Reels
- Less Scrap
- Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00336504300	700	¼	6.35	0.50	12.70	2	250	1.72	1.50	38.10	0.08	0.12
00336504400	700	¼	6.35	0.62	15.75	4	300	2.07	1.50	38.10	0.13	0.19
00336506300	700	⅜	9.53	0.69	17.53	4	250	1.72	2.25	57.15	0.17	0.25
00336506400	700	⅜	9.53	0.69	17.53	4	300	2.07	2.25	57.15	0.17	0.25
00336508300	700	½	12.70	0.84	21.34	4	250	1.72	3.00	76.20	0.24	0.36
00336508400	700	½	12.70	0.84	21.34	4	300	2.07	3.00	76.20	0.24	0.36
00336510400	700	⅝	15.88	1.00	25.40	4	300	2.07	3.75	95.25	0.28	0.42
00336512300	700	¾	19.05	1.15	29.21	4	250	1.72	4.50	114.30	0.36	0.54
00336512400	700	¾	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.40	0.60
00336516300	700	1	25.40	1.43	36.20	4	250	1.72	7.00	177.80	0.49	0.73
00336516400	700	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.58	0.86
00336520300	550	1-¼	31.75	1.78	45.24	4	250	1.72	8.75	222.25	0.78	1.16
00336524300	400	1-½	38.10	2.03	51.59	4	250	1.72	10.50	266.70	0.90	1.34
50 ft. Lengths												
00336512451	1 per carton	¾	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.40	0.60
00336512454	28 per pallet	¾	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.40	0.60

VERSICON™

Versicon™ is designed to meet demanding work environments found in shipyards, steel processing automotive plants and construction industries, as well as aluminum reduction and other applications where a high degree of electrical non-conductivity is required. Its spiral polyester reinforcing yarn retains strength and flexibility even in extreme temperatures, and its Nitrile, Class A tube and synthetic cover are ideal for conveying oil, diesel, kerosene, fuel oil and other petroleum-based products while resisting oil, solvents, cracking, abrasion and ozone. Versicon hose meets a minimum of 1,000,000 ohms per inch resistance when tested with a 1,000-volt D.C. megger.

Not recommended for a variety of unleaded gasoline.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Thermoid Versicon Non-Conductive Size WP Made In USA Month/Day/Year Time Stamp

COVER COLOR: Red
• Allows for Color Coding

CONSTRUCTION:

- Non-Conductive
- Safety Assurance
- TUBE:** Nitrile, ARPM - Class A
- Capable of Handling Oil & Fuel Oil, Diesel, Kerosene and Gasoline

COVER:

- Nitrile Blend, ARPM - Class A
- Weather Resistant
- Ozone Resistant
- Cracking Resistant
- Abrasion Resistant
- REINFORCEMENT:** 4-Spiral Polyester Yarn
- Provides a Working Pressure to 300 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE:

- -20°F to +180°F, -29°C to +82°C
- PACKAGING:** Reels
- 400-700 ft. Reels Depending on I.D.
- Over 80% One Piece Reels
- Less Scrap
- Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00447504400	700	¼	6.35	0.62	15.75	4	300	2.07	1.50	38.10	0.16	0.24
00447506400	700	⅜	9.53	0.71	18.03	4	300	2.07	2.25	57.15	0.18	0.27
00447508400	700	½	12.70	0.84	21.34	4	300	2.07	3.00	76.20	0.25	0.37
00447512400	700	¾	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.42	0.62
00447516400	700	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.63	0.94
00447520300	550	1-¼	31.75	1.78	45.24	4	250	1.72	8.75	222.25	0.81	1.21
00447524300	400	1-½	38.10	2.03	51.59	4	250	1.72	10.50	266.70	0.95	1.41

MAXECON™ PLUS

Maxecon™ Plus can be used to convey oil, fuel oil, diesel, kerosene and other petroleum derived products in mining, steel and petroleum industrial applications. It features a durable oil and solvent resistant brown cover resistant to abrasion, weathering and ozone. Maxecon meets a minimum of 1,000,000 ohms per inch resistance when tested with a 1,000-volt D.C. megger.

Not recommended for a variety of unleaded gasoline.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Thermoid Versicon/Maxecon Plus Non-Conductive Size WP Made In USA Month/Day/Year Time Stamp

COVER COLOR: Brown
• Allows for Color Coding

CONSTRUCTION:

- Non-Conductive
- Safety Assurance
- TUBE:** Nitrile, ARPM - Class A
- Capable of Handling Oil & Fuel Oil, Diesel, Kerosene and Gasoline

COVER:

- Nitrile Blend, ARPM - Class A
- Abrasion Resistant
- Weather Resistant
- Ozone Resistant

REINFORCEMENT:

- 4-Spiral Polyester Yarn
- Provides a Working Pressure to 300 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE:

- -20°F to +180°F, -29°C to +82°C
- PACKAGING:** Reels
- 700 ft. Reels
- Over 80% One Piece Reels
- Less Scrap
- Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00447404400	700	¼	6.35	0.59	15.78	4	300	2.07	1.50	38.10	0.14	0.28
00447406400	700	⅜	9.53	0.71	18.03	4	300	2.07	2.25	57.15	0.18	0.27
00447408400	700	½	12.70	0.87	22.10	4	300	2.07	3.00	76.20	0.25	0.54
00447412400	700	¾	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.42	0.62
00447416400	700	1	25.40	1.43	36.20	4	300	2.07	7.00	177.80	0.61	0.91

GOLDENAIR®

The Goldenair® is the quality general purpose, non-conductive hose designed for air, petroleum products and nitrogen service. Ideal for the harsh conditions found in steel mills, shipyards, foundries, auto plants and construction sites, Goldenair® resists weathering, ozone and abrasion. It provides a working pressure up to 350 PSI in ¾" size and is kink resistant. Goldenair hose meets a minimum of 1,000,000 ohms per inch resistance when tested with a 1,000-volt D.C. megger.

Not recommended for a variety of unleaded gasoline.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Thermoid Versicon/Goldenair Non-Conductive Size PSI WP Made In USA (For Nitrogen Use) Month/Day/Year Time Stamp

COVER COLOR: Yellow
• Allows for Color Coding

CONSTRUCTION:

- Non-Conductive
- Safety Assurance
- TUBE:** Nitrile, ARPM - Class A
- Capable of Handling Air, Nitrogen and Petroleum Products

COVER:

- Nitrile Blend, ARPM - Class A
- Weather Resistant
- Ozone Resistant
- Abrasion Resistant

REINFORCEMENT:

- 4-Spiral Polyester Yarn
- Provides a Working Pressure to 350 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE:

- -20°F to +180°F, -29°C to +82°C
- PACKAGING:** Reels
- 700 ft. Reels
- Over 80% One Piece Reels
- Less Scrap
- Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00447312600	700	¾	19.05	1.15	29.21	4	350	2.41	4.50	114.3	0.38	0.57

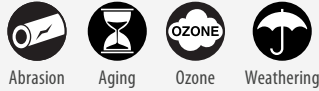
AIR POWER™ JACKHAMMER

This durable, rugged hose is designed to tackle jackhammer applications. It features a 4-spiral construction that reduces hose kink and handles heat, ozone and weather cracking. This lightweight and flexible hose comes standard with crimped steel fittings.



Representative image photos see BRANDING below for product stamp.

RESISTANCE



Abrasion Aging Ozone Weathering

BRANDING: Thermoid Air Power 3/4" Made In USA Month/Day/Year Time Stamp

COVER COLOR: Red, Yellow

CONSTRUCTION

TUBE: EPDM, ARPM - Class C

- Ozone Resistant
- Temperature Resistant

COVER: EPDM, ARPM - Class C

- Cracking Resistant
- Abrasion Resistant
- Weather Resistant
- Ozone Resistant

REINFORCEMENT: 4-Spiral Polyester Yarn

- Provides a Working Pressure to 200 psi
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -40°F to +212°F, -40°C to +100°C

PACKAGING: 50 ft. Lengths – 28 Per Pallet

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	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)
RED		50 ft. Lengths										
00114562258	28 per pallet	3/4	19.05	1.15	29.21	4	200	1.38	4.50	114.30	0.38	0.57
00114562458	28 per pallet	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.41	0.61
00114566358	20 per pallet	1	25.40	1.37	34.80	4	200	1.38	7.00	177.80	0.51	0.76
YELLOW		50 ft. Lengths										
00114962458	28 per pallet	3/4	19.05	1.15	29.21	4	300	2.07	4.50	114.30	0.41	0.61

BLACK HEAVY-DUTY WATER HOSE

Available in Contractors Rod Brass GHT and Hybrid Spun Brass GHT Fittings

Designed for professional grade contractor use, this Black Heavy-duty Water hose is engineered to remain flexible even in extreme temperatures. It is coupled (male x female) with crush resistant octagonal nut rod brass garden hose couplings and brass ferrules. Kink resistant, Black Heavy-duty Water hose features an EPDM tube and cover with multi-spiral reinforcement that is heat, ozone and sunlight resistant, and has a maximum working pressure of 150 PSI.



RESISTANCE



BRANDING: None

COVER COLOR: Black

CONSTRUCTION

TUBE: EPDM, ARPM - Class C

- Heat Resistant
- Ozone Resistant

COVER: EPDM, ARPM - Class C

- Ozone Resistant
- Weathering Resistant
- Heat Resistant
- Abrasion Resistant

REINFORCEMENT: Spiral Polyester Yarn

- Provides a Working Pressure to 150 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque
- Kink, Crush Resistant

TEMPERATURE RANGE: -40°F to +180°F, -40°C to +82°C

- Still Flexible Even in Extreme Temperatures

PACKAGING: 50 ft. Lengths – 5 Per Carton

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	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)
BLACK HEAVY-DUTY CONTRACTORS WATER HOSE COUPLED WITH ROD BRASS												
25 ft. Lengths												
00512180726	63 per pallet	¾	19.05	1.04	26.42	2	150	1.03	4.50	114.30	0.24	0.36
50 ft. Lengths												
00512180768	35 per pallet	¾	15.88	0.94	23.81	2	150	1.03	3.75	95.25	0.23	0.34
00512180771	5 per carton	¾	19.05	1.04	26.42	2	150	1.03	4.50	114.30	0.24	0.36
00512180772	28 per pallet	¾	19.05	1.04	26.42	2	150	1.03	4.50	114.30	0.24	0.36
100 ft. Lengths												
00512180779	16 per pallet	¾	19.05	1.04	26.42	2	150	1.03	4.50	114.30	0.24	0.36
BLACK HEAVY-DUTY WATER HOSE COUPLED WITH HYBRID SPUN BRASS												
50 ft. Lengths												
00512281248	35 per pallet	¾	15.88	0.94	23.81	2	150	1.03	3.75	95.25	0.23	0.34
00512281250	28 per pallet	¾	19.05	1.04	26.42	2	150	1.03	4.50	114.30	0.24	0.36
Reels (ft.)												
00512281299	700	¾	19.05	1.04	26.42	2	150	1.03	4.50	114.30	0.24	0.36

RED AIR TOOL COUPLED

This tough, versatile factory coupled air hose is specifically designed to stand up to the harsh working conditions found at construction sites and industrial environments. Red Air Tool Coupled hose can be cut to lengths and is coupled with male x male fittings with 1/4" NPT threads.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Thermoid Air Power Size WP 4
SP Made In USA Month/Day/Year Time Stamp

COVER COLOR: Red

CONSTRUCTION

TUBE: EPDM, ARPM - Class C

- Ozone Resistant
- Temperature Resistant

COVER: EPDM, ARPM - Class C

- Ozone Resistant
- Weathering Resistant
- Aging Resistant
- Abrasion Resistant

REINFORCEMENT: 2 or 4-Spiral Polyester Yarn

- Provides a Working Pressure to 200-300 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque
- Greater Flexibility for Ease of Handling

TEMPERATURE RANGE: -40°F to +212°F, -40°C to +100°C

- Hose Remains Flexible Even in Extreme Temperatures

PACKAGING: Contact Customer Service

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Length	
		(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(feet)	(meters)
25 ft. Coupled 1/4" MxM NPT										
00114587624	120 per pallet	3/8	9.53	0.71	18.03	2	300	2.07	25.00	7.62
50 ft. Coupled 1/4" MxM NPT										
00114586654	88 per pallet	3/8	9.53	0.68	17.27	2	200	1.38	50.00	15.25
00114587654	80 per pallet	3/8	9.53	0.71	18.03	2	300	2.07	50.00	15.25

FLEX-LOC™ PUSH-ON

Available Black, Blue, Gray, Red, Green or Yellow

Flex-Loc™ Push-on is an extremely flexible hose with 250 PSI working pressure that is designed for safe and reliable performance in demanding and harsh working conditions. It allows push-on fittings to be inserted into place easily and quickly without the need for special crimping tools. Its tube and cover make it effective for industrial, warehouse and other applications where a convenient push-on hose fitting could be used.

Not recommended for unleaded gasoline.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Size WP Flex-Loc Made In USA
Month/Day/Year Time Stamp

COVER COLOR: Black, Blue, Gray, Red,
Green, Yellow
• Allows for Color Coding

CONSTRUCTION

- TUBE:** Nitrile, ARPM - Class A
COVER: Nitrile Blend, ARPM - Class A
REINFORCEMENT: 4-Spiral Polyester Yarn
- Easier to Route Assemblies
 - Easier to Coil and Handle
 - Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque
 - Grips the Fitting from the Inside

TEMPERATURE RANGE: -20°F to +180°F, -29°C to +82°C

- PACKAGING:** Reels 700 ft. or 250 ft.
- Over 80% One Piece Reels
 - Less Scrap
 - Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

PUSH-ON HOSE CONSTRUCTION

- Allows the Fittings to be Inserted into Place Easily
- No Special Crimping Equipment Required
- Not Recommended for Fuel Line Applications

Product Number 700 ft. Reels	Product Number 250 ft. Reels	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)
BLACK												
00338404300	00338404398	¼	6.35	0.50	12.70	2	250	1.72	1.50	38.10	0.09	0.13
00338406300	00338406398	⅜	9.53	0.63	15.88	2	250	1.72	2.25	57.15	0.12	0.18
00338408300	00338408398	½	12.70	0.75	19.05	2	250	1.72	3.00	76.20	0.16	0.24
00338410300	00338410398	⅝	15.88	0.91	23.02	2	250	1.72	3.75	95.25	0.22	0.33
00338412300	00338412398	¾	19.05	1.03	26.19	2	250	1.72	4.50	114.30	0.25	0.37
BLUE												
00338504300	00338504398	¼	6.35	0.50	12.70	2	250	1.72	1.50	38.10	0.09	0.13
00338506300	00338506398	⅜	9.53	0.63	15.88	2	250	1.72	2.25	57.15	0.12	0.18
00338508300	00338508398	½	12.70	0.75	19.05	2	250	1.72	3.00	76.20	0.16	0.24
GRAY												
00338604300	00338604398▲	¼	6.35	0.50	12.70	2	250	1.72	1.50	38.10	0.09	0.13
00338606300	00338606398▲	⅜	9.53	0.63	15.88	2	250	1.72	2.25	57.15	0.12	0.18
00338608300	00338608398▲	½	12.70	0.75	19.05	2	250	1.72	3.00	76.20	0.16	0.24
RED												
00338704300	00338704398▲	¼	6.35	0.50	12.70	2	250	1.72	1.50	38.10	0.09	0.13
00338706300	00338706398	⅜	9.53	0.63	15.88	2	250	1.72	2.25	57.15	0.12	0.18
00338708300	00338708398▲	½	12.70	0.75	19.05	2	250	1.72	3.00	76.20	0.16	0.24
GREEN												
00338804300	00338804398▲	¼	6.35	0.50	12.70	2	250	1.72	1.50	38.10	0.09	0.13
00338806300	00338806398▲	⅜	9.53	0.63	15.88	2	250	1.72	2.25	57.15	0.12	0.18
00338808300	00338808398▲	½	12.70	0.75	19.05	2	250	1.72	3.00	76.20	0.16	0.24
YELLOW												
00338904300	00338904398	¼	6.35	0.50	12.70	2	250	1.72	1.50	38.10	0.09	0.13
00338906300	00338906398▲	⅜	9.53	0.63	15.88	2	250	1.72	2.25	57.15	0.12	0.18
00338908300	00338908398▲	½	12.70	0.75	19.05	2	250	1.72	3.00	76.20	0.16	0.24

▲ = Make To Order (MTO)

FLEX-LOC™ 300 PUSH-ON

Available Black, Blue, Gray, Red, Green or Yellow

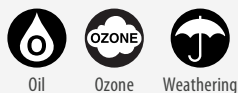
Flex-Loc™ 300 PSI is a premium hose designed specifically for use with robotic welders and industrial applications requiring an MSHA approved flame-resistant cover. It features excellent coupling retention and a superior hold created by a unique spiral angle design and aramid reinforcement that firmly grips the fitting under pressure.

Not recommended for unleaded gasoline.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Thermoid – Flex-Loc 300
Non-Conductive Size 300 PSI WP Made In
USA MSHA 1C Month/Day/Year Time Stamp

COVER COLOR: Black, Blue, Gray, Red,
Green, Yellow
• Allows for Color Coding

CONSTRUCTION: Non-Conductive

TUBE: Nitrile, ARPM - Class A

COVER: Nitrile Blend, ARPM - Class A

REINFORCEMENT: 2-Spiral Aramid

- Provides a Working Pressure to 300 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -30°F to +180°F, -34°C to +82°C

PACKAGING: Reels 700 ft. or 250 ft.

- Over 80% One Piece Reels
- Less Scrap

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

MOLDED COVER PROCESS

- Flame Retardant

Product Number	Product Number	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
700 ft. Reels	250 ft. Reels	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
BLACK												
00318404400	00318404498	¼	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318406400	00318406498	⅜	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318408400	00318408498	½	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
00318410400	00318410498	⅝	15.88	0.91	23.02	2	300	2.07	3.75	95.25	0.23	0.34
00318412400	00318412498	¾	19.05	1.03	26.19	2	300	2.07	4.50	114.30	0.26	0.39
BLUE												
00318504400▲		¼	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318506400▲		⅜	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318508400▲		½	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
GRAY												
00318604400▲		¼	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318606400		⅜	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318608400▲		½	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
RED												
00318704400▲		¼	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318706400▲		⅜	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318708400▲		½	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
GREEN												
00318804400▲		¼	6.35	0.50	12.70	2	300	2.07	1.50	38.10	0.10	0.15
00318806400▲		⅜	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19
00318808400▲		½	12.70	0.75	19.05	2	300	2.07	3.00	76.20	0.16	0.24
YELLOW												
00318906400▲		⅜	9.53	0.63	15.88	2	300	2.07	2.25	57.15	0.13	0.19

▲ = Make To Order (MTO)

HERCULES® II

Hercules® II a 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.

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 liquid transfer applications.



Representative image photo see BRANDING below for product stamp.

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

CONSTRUCTION:

- Non-Conductive
- Safety Assurance
- TUBE:** Nitrile, ARPM - Class A
- Capable of Handling Diesel, Kerosene and Gasoline
- Capable of Handling Water

COVER:

- XNBR, ARPM - Class A
- Abrasion Resistant
- Oil Resistant
- Other Petroleum Products Resistant

REINFORCEMENT:

- 4-Spiral Yarn
- Provides a Working Pressure to 500 psi
- More Flexible than Braid Reinforced Hose
- Easier to Coil and Handle

TEMPERATURE RANGE:

-40°F to +212°F, -40°C to +100°C

PACKAGING:

- Reels
- 300-700 ft. Reels Depending on I.D.

MOLDED COVER PROCESS

- MSHA Approved Cover

MULTIPURPOSE HOSE

- Ideal for Extra Heavy Duty Use in Pneumatics or the Transfer of Liquids that Include Solvents, Oils or Other Petroleum Products

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
45454168662	500-700*	¼	6.35	0.63	15.88	4	500	3.45	1.50	38.10	0.14	0.21
45454248662	500-700*	⅜	9.53	0.75	19.05	4	500	3.45	2.25	57.15	0.21	0.31
45454328662	500-700*	½	12.70	0.91	23.02	4	500	3.45	3.00	76.20	0.24	0.36
45454488662	500-700*	¾	19.05	1.19	30.16	4	500	3.45	4.50	114.30	0.36	0.54
45454648662	300-450*	1	25.40	1.50	38.10	4	500	3.45	7.00	177.80	0.51	0.76
00454520500	550	1-¼	31.75	1.75	44.45	4	500	3.45	8.75	222.25	0.71	1.04
00454524500	400	1-½	38.10	2.09	53.09	4	500	3.45	10.50	266.70	1.00	1.49
00454532400	300	2	50.80	2.64	67.06	4	500	3.45	16.00	406.40	1.41	2.08

*Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

HERCULES® 500 AND 1000 MULTIPURPOSE

Hercules® 500 and 1000 are highly versatile, durable, abrasion-resistant multipurpose hose engineered to withstand harsh conditions. Hercules 1000 is specifically designed for high pressure applications and extreme temperature environments. This hose is ideal for use in rock drilling, air hammer, water jetting applications, heavy construction, mining, quarry operations, transfer of petroleum or other solvent solutions and washdown operations.



Representative image photos see BRANDING below for product stamp.

RESISTANCE



BRANDING: Thermoid Hercules Multipurpose
Hose Size I.D. 500 & 1000 PSI WP MSHA 1C-114/1
Made In USA Non-Conductive

COVER COLOR: Yellow

CONSTRUCTION:

Non-Conductive

- Safety Assurance

TUBE:

- Nitrile Blend, ARPM - Class A
- Capable of Handling Diesel, Kerosene and Gasoline
- Capable of Handling Bio-Diesel and Water

COVER:

- ARPM - Class A Caroxylated Nitrile Blend
- Abrasion Resistant
- Oil Resistant
- Other Petroleum Products Resistant

REINFORCEMENT:

- See Table Below
- Provides a Working Pressure to 500 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE:

-40°F to +212°F, -40°C to +100°C

PACKAGING:

- Reels
- 250-700 ft. Reels Depending on I.D.

MOLDED COVER PROCESS

- MSHA Approved Cover
- Yellow Showroom Quality Color
- Flame Resistant

MULTIPURPOSE HOSE

- Ideal for Extra Heavy Duty Use in Pneumatics or the Transfer of Liquids that Include Solvents, Oils or Other Petroleum Products
- Can be Used in a Wide Variety of Applications in Many Different Markets (Poultry, Construction, Mining, Quarry, Water Jetting)

Product Number	Packaging Reels (ft.)	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)
HERCULES 500												
22454168662	500-700*	¼	6.35	0.63	15.88	4-Spiral Polyester Yarn	500	3.45	1.50	38.10	0.14	0.21
22454248662	500-700*	⅜	9.53	0.75	19.05	4-Spiral Polyester Yarn	500	3.45	2.25	57.15	0.21	0.31
22454328662	500-700*	½	12.70	0.91	23.02	4-Spiral Polyester Yarn	500	3.45	3.00	76.20	0.24	0.36
22454488662	500-700*	¾	19.05	1.19	30.16	4-Spiral Polyester Yarn	500	3.45	4.50	114.30	0.36	0.54
22454648662	300-500*	1	25.40	1.50	38.10	4-Spiral Polyester Yarn	500	3.45	7.00	177.80	0.51	0.76
22454808662	300-450*	1-¼	31.75	1.75	44.45	4-Spiral Aramid Fiber	500	3.45	8.75	222.25	0.66	0.98
22454968662	250-350*	1-½	38.10	2.09	53.18	4-Spiral Aramid Fiber	500	3.45	10.50	266.70	0.70	1.04
HERCULES 1000												
22544328662	500-700*	½	12.70	0.94	23.81	4-Spiral Polyester Yarn	1000	6.89	3.00	76.20	0.24	0.36
22544488662	500-700*	¾	19.05	1.13	28.58	4-Spiral Aramid Fiber	1000	6.89	4.50	114.30	0.35	0.52
22544648662	300-500*	1	25.40	1.50	38.10	4-Spiral Aramid Fiber	1000	6.89	7.00	177.80	0.47	0.70

*Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

GLACIER™ MULTIPURPOSE

Glacier™ is a cold weather multipurpose hose specifically engineered for use in sub-zero applications while maintaining its kink-resistant flexibility and easy-reeling characteristics. Featuring an oil-resistant, synthetic rubber tube that is reinforced with a spiraled high tensile polyester yarn, Glacier™ provides a constant working pressure of 300 PSI and a 4:1 burst safety factor, capable of handling air, oil, gasoline, diesel, green fuels (biodiesel, biodiesel blends, ethanol, ethanol blends), kerosene, fuel oil and some chemicals. This hose comes standard with an embedded static wire.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Abrasion Oil

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

COVER COLOR: Black, Blue

CONSTRUCTION

TUBE: ECO, ARPM - Class A

- Capable of Handling Diesel, Kerosene and Gasoline
- Low Rating to -65°F, -54°C

COVER: ECO, ARPM - Class A

- Abrasion Resistant
- Easy to Reel Even at Extreme Cold Temperatures

REINFORCEMENT: 4-Spiral Polyester Yarn

- Provides a Working Pressure to 300 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -65°F to +180°F, -54°C to +82°C

- Still Flexible at Extreme Low Temperatures

PACKAGING: Reels

- 250-700 ft. Reels Depending on I.D.

MOLDED COVER PROCESS

- MSHA Approved Cover
- Blue Showroom Quality Color
- Dust Free

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22554166662▲	500-700*	¼	6.35	0.63	15.88	4	300	2.07	1.50	38.10	0.15	0.22
22554246662	500-700*	⅜	9.53	0.75	19.05	4	300	2.07	2.25	57.15	0.21	0.31
22554326662	500-700*	½	12.70	0.94	23.81	4	300	2.07	3.00	76.20	0.30	0.45
22554486662	500-700*	¾	19.05	1.25	31.75	4	300	2.07	4.50	114.30	0.39	0.58
22554646662	300-500*	1	25.40	1.50	38.10	4	300	2.07	7.00	177.80	0.49	0.73
22554806662	300-450*	1-¼	31.75	1.78	45.24	4	300	2.07	8.75	222.25	0.61	0.91
22554886662▲	300-450*	1-⅜	34.93	1.88	47.63	4	300	2.07	9.25	234.95	0.68	1.01
22554966662▲	250-350*	1-½	38.10	2.09	53.18	4	300	2.07	10.50	266.70	0.83	1.23

▲ = Make To Order (MTO) *Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

BLACK HEATER - STANDARD

Black Heater hose feature kink-resistant EPDM tube and covers that resist cracking and weather checking and withstands the abuse of corrosive additives, ozone and abrasion. The multi-spiral polyester in this hose is reinforced to maintain flexibility even in extreme temperatures.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Abrasion Coolant Ozone

BRANDING: 4709 Thermoid (Size) Heater Hose
Made In USA

COVER COLOR: Black

CONSTRUCTION

TUBE: EPDM, ARPM - Class C
• High Temperature Resistant

COVER: EPDM, ARPM - Class C
• High Temperature Resistant
• Cracking and Weathering Resistant

REINFORCEMENT: 2-Spiral Polyester Yarn
• Provides a Working Pressure Range from 25 to 35 psi, Depending on the I.D.
• Easier to Route Assemblies
• Easier to Coil and Handle
• Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque
• Maintains its Flexibility

TEMPERATURE RANGE: -40°F to +200°F, -40°C to +93°C
• Still Flexible even in Extreme Temperatures

PACKAGING: Reels, 50 ft. Lengths
• 700 ft. Reels
• Over 80% One Piece Reels
• Less Scrap
• Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM
• Minimal Cast (Natural Curvature of the Hose)
• Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS
• No Internal Contamination of the Inside Diameter Due to the Lubricant
• Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
		Reels (ft.)	(inches)	(mm)	(inches)		(mm)	(psi)	(Mpa)	(inches)	(mm)	(lb/ft)
00470908199	700	½	12.70	0.81	20.64	2	35	0.24	3.00	76.20	0.16	0.24
00470910199	700	⅝	15.88	0.88	22.23	2	35	0.24	3.75	95.25	0.20	0.30
00470912199	700	¾	19.05	1.03	26.19	2	35	0.24	4.50	114.30	0.23	0.34
00470916199	700	1	25.40	1.34	34.13	2	25	0.17	7.00	177.80	0.39	0.58
50 ft. Lengths												
00470908151	1 per carton	½	12.70	0.81	20.64	2	35	0.24	3.00	76.20	0.16	0.24
00470910151	1 per carton	⅝	15.88	0.88	22.23	2	35	0.24	3.75	95.25	0.20	0.30
00470912151	1 per carton	¾	19.05	1.03	26.19	2	35	0.24	4.50	114.30	0.23	0.34
00470916151	1 per carton	1	25.40	1.34	34.13	2	25	0.17	7.00	177.80	0.39	0.58

BLACK HEATER - OEM

SAE 20R3 Class D2 Type

Black Heater hose feature kink-resistant EPDM tube and covers that resist cracking and weather checking and withstands the abuse of corrosive additives, ozone and abrasion. The multi-spiral polyester in this hose is reinforced to maintain flexibility even in extreme temperatures.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Abrasion Coolant Ozone

BRANDING: 4703 Thermoid (Size) OEM Heater Hose Made In USA

COVER COLOR: Black

CONSTRUCTION

TUBE: EPDM, ARPM - Class C
• High Temperature Resistant

COVER: EPDM, ARPM - Class C
• High Temperature Resistant
• Cracking and Weathering Resistant

REINFORCEMENT: 2-Spiral Polyester Yarn
• Provides a Working Pressure Range from 44 to 62 psi, Depending on the I.D.
• Easier to Route Assemblies
• Easier to Coil and Handle
• Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque
• Maintains its Flexibility

TEMPERATURE RANGE: -40°F to +212°F (+257°F Intermittent)

• Still Flexible even in Extreme Temperatures

PACKAGING: Reels, 50 ft. Lengths

- 700 ft. Reels
- Over 80% One Piece Reels
- Less Scrap
- Most Footage per Reel vs. Competition

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

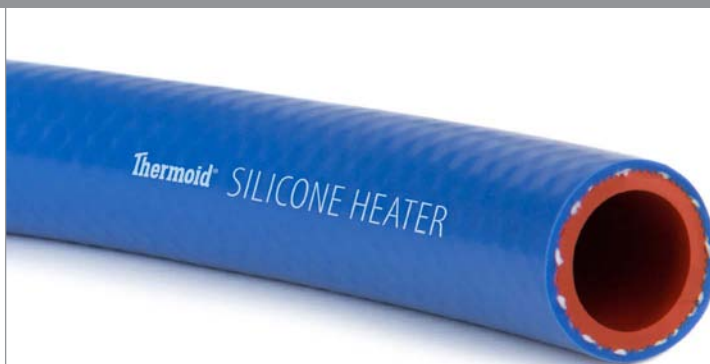
- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00470310199	700	5/8	15.88	0.94	23.81	2	62	0.43	3.75	95.25	0.22	0.33
00470312199	700	3/4	19.05	1.06	26.99	2	50	0.34	4.50	114.30	0.25	0.37
50 ft. Lengths												
00470308151	1 per carton	1/2	12.70	0.80	20.24	2	62	0.43	3.00	76.20	0.18	0.27
00470310151	1 per carton	5/8	15.88	0.94	23.81	2	62	0.43	3.75	95.25	0.22	0.33
00470312151	1 per carton	3/4	19.05	1.06	26.99	2	50	0.34	4.50	114.30	0.25	0.37
00470316151	1 per carton	1	25.40	1.34	34.13	2	44	0.30	7.00	177.80	0.38	0.57

SILICONE HEATER

SAE 20R3 CLASS A

Recommended for heavy-duty applications, this hose features a special silicone compound that meets SAE (Society of Automotive Engineers) standard 20R3 for class A hose. It 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°F (+175°C).



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Coolant



Heat



Oil



Ozone

BRANDING: Silicone Heater Hose Made In USA

COVER COLOR: Blue

CONSTRUCTION

TUBE: Silicone

COVER: Silicone

REINFORCEMENT: Textile

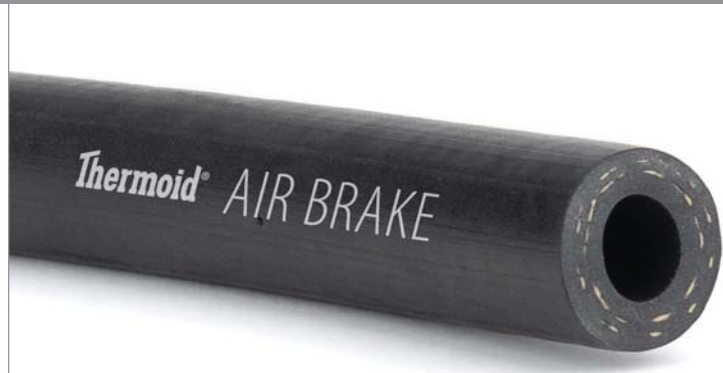
TEMPERATURE RANGE: -67°F to +347°F, -55°C to +175°C

PACKAGING: Reels; 25 and 50 ft. Length Cartons

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(lb/ft)	(Kg/m)
00702014250	250	¼	6.35	0.56	14.29	2	63	0.43	0.19	0.28
00702038250	250	⅜	9.53	0.69	17.46	2	63	0.43	0.25	0.37
00702012250	250	½	12.70	0.81	20.64	2	63	0.43	0.29	0.43
00702058250	250	⅝	15.88	0.94	23.81	2	63	0.43	0.35	0.52
00702034250	250	¾	19.05	1.06	26.99	2	50	0.34	0.39	0.58
00702010100	100	1	25.40	1.34	34.13	2	44	0.30	0.49	0.73
25 ft. Lengths										
00700201425	1 per carton	¼	6.35	0.56	14.29	2	63	0.43	0.19	0.28
00700203825	1 per carton	⅜	9.53	0.69	17.46	2	63	0.43	0.25	0.37
00700201225	1 per carton	½	12.70	0.81	20.64	2	63	0.43	0.29	0.43
00700205825	1 per carton	⅝	15.88	0.94	23.81	2	63	0.43	0.35	0.52
00700203425	1 per carton	¾	19.05	1.06	26.99	2	50	0.34	0.39	0.58
00700201025	1 per carton	1	25.40	1.34	34.13	2	44	0.30	0.49	0.73
50 ft. Lengths										
00700201450	1 per carton	¼	6.35	0.56	14.29	2	63	0.43	0.19	0.28
00700203850	1 per carton	⅜	9.53	0.69	17.46	2	63	0.43	0.25	0.37
00700201250	1 per carton	½	12.70	0.81	20.64	2	63	0.43	0.29	0.43
00700205850	1 per carton	⅝	15.88	0.94	23.81	2	63	0.43	0.35	0.52
00700203450	1 per carton	¾	19.05	1.06	26.99	2	50	0.34	0.39	0.58
00700201050	1 per carton	1	25.40	1.34	34.13	2	44	0.30	0.49	0.73

AIR BRAKE

Air Brake hose is engineered to convey air in truck and trailer brake systems and is designed for truck and trailer manufacturers, aftermarket packagers and wholesalers. This hose is certified to meet D.O.T. FMVSS 106 and meets SAE (Society of Automotive Engineers) standard J1402A requirements. This hose features an EPDM tube and cover with 4-spiral reinforcement making this hose virtually kink proof.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Abrasion Kinking

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

CONSTRUCTION

TUBE: EPDM, ARPM - Class C
• Withstands Heat

COVER: EPDM, ARPM - Class C
• Abrasion Resistant

REINFORCEMENT: 4-Spiral Polyester Yarn
• Minimum Burst Exceeds 900 psi
• More Flexible than Braid Reinforced Hose
• Easier to Route Assemblies
• Easier to Coil and Handle
• Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque
• Maintains its Flexibility
• Kink Resistant

TEMPERATURE RANGE: -40°F to +200°F, -40°C to +93°C

PACKAGING: Reels, 500 ft., 250 ft. and 50 ft. Lengths – 1 Per Carton

- 250-500 ft. Reels
- Over 80% One Piece Reels
- Less Scrap
- Most Footage per Reel vs. Competition

D.O.T. FMVSS 106 SAE J1402, TYPE A

- Meets or Exceeds All of the Industry Standards

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00482106499	500	3/8	9.53	0.75	19.05	4	Min. Burst 900	6.20	2.25	57.15	0.17	0.25
00482108500	500	1/2	12.70	0.88	22.23	4	Min. Burst 900	6.20	3.00	76.20	0.20	0.30
00482106498	250	3/8	9.53	0.75	19.05	4	Min. Burst 900	6.20	2.25	57.15	0.17	0.25
00482108498	250	1/2	12.70	0.88	22.23	4	Min. Burst 900	6.20	3.00	76.20	0.20	0.30
50 ft. Lengths												
00482106451	1 per carton	3/8	9.53	0.75	19.05	4	Min. Burst 900	6.20	2.25	57.15	0.17	0.25
00482108451	1 per carton	1/2	12.70	0.88	22.23	4	Min. Burst 900	6.20	3.00	76.20	0.20	0.30

FUEL LINE SAE 30R7, VAPOR EMISSION & CRANKCASE VENTILATION

This durable, aftermarket standard hose is used for conveying most automobile, truck and bus fuel and is ideal for equipment, wholesalers, aftermarket packagers and auxiliary tank manufacturers. It provides superior service and remains flexible and resistant to oil, grease, ozone and under-hood temperatures generated by today's automotive engines.

SAE 30R7: Not recommended for recirculating fuel systems. Product conforms to all SAE 30R7 requirements for non-recirculating systems. SAE 30R9 recommended for recirculating systems.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



BRANDING: Size SAE 30R7-KX Date Made In USA

COVER COLOR: Black

CONSTRUCTION

TUBE: Nitrile, ARPM - Class A
• Ozone Resistant

COVER: Nitrile Blend, ARPM - Class B
• Heat Resistant
• Ozone Resistant

REINFORCEMENT: 2-Spiral Polyester Yarn
• 50 psi Regardless of I.D.
• More Flexible than Braid Reinforced Hose
• Easier to Route Assemblies
• Easier to Coil and Handle
• Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -40°F to +257°F, -40°C to +125°C
• Still Flexible even in Extreme Temperatures

PACKAGING: Coils, 25 ft. and 50 ft.; Reels, 250 ft. and 700 ft.
• Over 80% One Piece Reels
• Less Scrap
• Most Footage per Reel vs. Competition

SIMILAR TO SAE 30R7 SPECIFICATION
• Meets or Exceeds Nearly All SAE Requirements

PRESSURELESS CURE SYSTEM
• Minimal Cast (Natural Curvature of the Hose)
• Extends the Life of the Rubber Compounds




Product Number	Packaging	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)
00667503299	700	3/16	4.76	0.41	10.32	2	50	0.34	1.25	31.75	0.07	0.10
00667504299	700	1/4	6.35	0.50	12.70	2	50	0.34	1.50	38.10	0.09	0.13
00667505299	700	5/16	7.94	0.56	14.29	2	50	0.34	2.00	50.80	0.11	0.16
00667506299	700	3/8	9.53	0.63	15.88	2	50	0.34	2.25	57.15	0.12	0.18
00667508299	700	1/2	12.70	0.78	19.83	2	35	0.24	3.00	76.20	0.16	0.24
00667503298	250	3/16	4.76	0.41	10.32	2	50	0.34	1.25	31.75	0.07	0.10
00667504298	250	1/4	6.35	0.50	12.70	2	50	0.34	1.50	38.10	0.09	0.13
00667505298	250	5/16	7.94	0.56	14.29	2	50	0.34	2.00	50.80	0.11	0.16
00667506298	250	3/8	9.53	0.63	15.88	2	50	0.34	2.25	57.15	0.12	0.18
25 ft. Coils												
00667503225	1 per carton	3/16	4.76	0.41	10.32	2	50	0.34	1.25	31.75	0.07	0.10
00667504225	1 per carton	1/4	6.35	0.50	12.70	2	50	0.34	1.50	38.10	0.09	0.13
00667505225	1 per carton	5/16	7.94	0.56	14.29	2	50	0.34	2.00	50.80	0.11	0.16
00667506225	1 per carton	3/8	9.53	0.63	15.88	2	50	0.34	2.25	57.15	0.12	0.18
50 ft. Coils												
00667503252	1 per carton	3/16	4.76	0.41	10.32	2	50	0.34	1.25	31.75	0.07	0.10
00667504252	1 per carton	1/4	6.35	0.50	12.70	2	50	0.34	1.50	38.10	0.09	0.13
00667505252	1 per carton	5/16	7.94	0.56	14.29	2	50	0.34	2.00	50.80	0.11	0.16
00667506252	1 per carton	3/8	9.53	0.63	15.88	2	50	0.34	2.25	57.15	0.12	0.18

VAPOR-LOC™ SAE 30R9 – FUEL INJECTION

Thermoid Vapor-Loc™ Fuel Line hose traps or prevents up to 99% of all fuel vapors from permeating through the hose walls. 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 biofuels, cover abrasion and ozone.



Representative image photo see BRANDING below for product stamp.

<p>RESISTANCE</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Heat </div> <div style="text-align: center;">  Oil </div> <div style="text-align: center;">  Ozone </div> </div> <p>BRANDING: Thermoid VAPOR-LOC Fuel Injection Size I.D. Date Made In USA</p> <p>COVER COLOR: Black</p>	<p>CONSTRUCTION</p> <p>BARRIER: VAPOR-LOC System</p> <p>TUBE: Nitrile, ARPM - Class A</p> <ul style="list-style-type: none"> • Ozone Resistant <p>COVER: Nitrile Blend, ARPM - Class B</p> <ul style="list-style-type: none"> • Heat Resistant • Ozone Resistant <p>REINFORCEMENT: 2-Spiral Polyester</p> <ul style="list-style-type: none"> • 100 psi, Regardless of I.D. • More Flexible than Braid Reinforced Hose • Easier to Route Assemblies • Easier to Coil and Handle • Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque 	<p>TEMPERATURE RANGE: -40°F to +257°F, -40°C to +125°C</p> <p>PACKAGING: Reels</p> <ul style="list-style-type: none"> • 500-700 ft. Reels • Over 80% One Piece Reels • Less Scrap • Most Footage per Reel vs. Competition <p>SIMILAR TO SAE 30R9 SPECIFICATION</p> <ul style="list-style-type: none"> • Meets or Exceeds Nearly All SAE Requirements <p>PRESSURELESS CURE SYSTEM</p> <ul style="list-style-type: none"> • Minimal Cast (Natural Curvature of the Hose) • Extends the Life of the Rubber Compounds <p>AIR MANDREL MANUFACTURING PROCESS</p> <ul style="list-style-type: none"> • No Internal Contamination of the Inside Diameter Due to the Lubricant • Eliminates the Need for Customers to Flush the Hose
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Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22602161662	500-700*	¼	6.30	0.50	12.70	2 spiral	100	0.69	1.50	38.90	0.09	0.13
22602201662	500-700*	⅝	7.94	0.56	14.29	2 spiral	100	0.69	2.00	50.80	0.11	0.16
22602241662	500-700*	¾	9.53	0.56	14.29	2 spiral	100	0.69	2.25	57.15	0.12	0.18

*Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

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*. The unique spiral construction of this hose adds strength and flexibility to make it easy to handle, kink resistant. Its smooth, durable cover resists oil and abrasion and provides excellent drag resistance. 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, diesel, Biodiesel and Biodiesel blends (based on biodiesel fuel equivalent to ASTM D 6751. For use in dedicated service only with compatible fuels. No alternating fuel types.



Representative image photos see BRANDING below for product stamp.

RESISTANCE



BRANDING: Thermoid Fuel Oil Hose WP
250 PSI Made In USA Month/Year
COVER COLOR: Red

CONSTRUCTION

TUBE: Nitrile, ARPM - Class A
 • High Oil Resistant
 • Designed to Handle a Variety of Fuel Oils
 • Water Resistant

COVER: Nitrile Blend, ARPM - Class A
 • High Oil Resistant
 • Abrasion Resistant
 • Heat Resistant

REINFORCEMENT:
 • Polyester Reinforcement
 • Provides a Working Pressure of 250 psi
 • More Flexible than Braid Reinforced Hose
 • Easier to Route Assemblies
 • Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque
 • Kink Resistant

TEMPERATURE RANGE:

- Fuel Oils -40°F to +150°F, -40°C to +70°C
- Gasoline/Gasoline Blends -40°F to +104°F, -40°C to +40°C

*Use in Gasoline or Ethanol Blend Applications Above +104°F (+40°C) is Not Recommended.

PACKAGING: Reels, Coupled and Uncoupled Lengths

STATIC WIRE, ALL SIZES
 • Safety - Grounds the Hose

MOLDED COVER PROCESS
 • Showroom Quality
 • Dust Free

REELS (THERMOCURE)

Product Number	Packaging Reels (ft.)	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)
22564642662	300-500*	1	25.40	1.50	38.10	4	250	1.72	7.00	177.80	0.47	0.70
22564802662	300-450*	1-¼	31.75	1.78	45.24	4	250	1.72	8.75	222.25	0.59	0.88
22564882662	300-450*	1-¾	34.93	1.88	47.63	4	250	1.72	9.25	234.95	0.65	0.97
22564962662	250-350*	1-½	38.10	2.09	53.18	4	250	1.72	10.50	266.70	0.80	1.19

*Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

CUT AND COUPLED LENGTHS



Product Number		Nominal I.D.		Length		Product Number		Nominal I.D.		Length	
Uncoupled	Coupled MxF	(inches)	(mm)	(feet)	(meters)	Uncoupled	Coupled MxF	(inches)	(mm)	(feet)	(meters)
22564642102	22564642111	1	25.40	100.00	30.48	22564882102	22564882111	1-¾	34.93	100.00	30.48
22564642122	22564642131	1	25.40	125.00	38.10	22564882122	22564882131	1-¾	34.93	125.00	38.10
22564642152	22564642141	1	25.40	150.00	45.72	22564882152	22564882141	1-¾	34.93	150.00	45.72
22564642172	22564642171	1	25.40	175.00	53.34	22564882162	22564882201	1-¾	34.93	175.00	53.34
22564802102	22564802111	1-¼	31.75	100.00	30.48	22564962102	22564962111	1-½	38.10	100.00	30.48
22564802122	22564802131	1-¼	31.75	125.00	38.10	22564962122	22564962131	1-½	38.10	125.00	38.10
22564802152	22564802141	1-¼	31.75	150.00	45.72	22564962152	22564962141	1-½	38.10	150.00	45.72
22564802162	22564802171	1-¼	31.75	175.00	53.34	22564962162	22564962171	1-½	38.10	175.00	53.34

GLACIER™ FUEL OIL DELIVERY

Glacier™ is a cold weather hose specifically engineered for use in sub-zero applications while maintaining its kink-resistant flexibility and easy-reeling characteristics. Featuring a synthetic rubber tube that is reinforced with a spiraled high tensile polyester cord, Glacier™ provides a constant working pressure of 300 PSI and a 4:1 burst safety factor, capable of handling air, oil, gasoline, diesel, green fuels (biodiesel, biodiesel blends, ethanol, ethanol blends), kerosene, fuel oil and some chemicals.



Representative image photos see BRANDING below for product stamp.

<p>RESISTANCE</p> <div style="display: flex; justify-content: space-around;">   </div> <p>Abrasion Oil</p> <p>BRANDING: Thermoid Glacier MP Hose Size I.D. WP Made In USA</p> <p>COVER COLOR: Black, Blue</p>	<p>CONSTRUCTION</p> <p>TUBE: ARPM - Class A ECO Low Temperature Oil Resistant Synthetic Rubber</p> <p>COVER: ARPM - Class A ECO Low Temperature Oil Resistant Synthetic Rubber</p> <p>REINFORCEMENT: Spiral Polyester Yarn</p>	<p>TEMPERATURE RANGE: -65°F to +180°F, -54°C to +82°C</p> <p>PACKAGING: Reels</p>
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Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22554166662▲	500-700*	¼	6.35	0.63	15.88	4	300	2.07	1.50	38.10	0.15	0.22
22554246662	500-700*	⅜	9.53	0.75	19.05	4	300	2.07	2.25	57.15	0.21	0.31
22554326662	500-700*	½	12.70	0.94	23.81	4	300	2.07	3.00	76.20	0.30	0.45
22554486662	500-700*	¾	19.05	1.25	31.75	4	300	2.07	4.50	114.30	0.39	0.58
22554646662	300-500*	1	25.40	1.50	38.10	4	300	2.07	7.00	177.80	0.49	0.73
22554806662	300-450*	1-¼	31.75	1.78	45.24	4	300	2.07	8.75	222.25	0.61	0.91
22554886662▲	300-450*	1-⅜	34.93	1.88	47.63	4	300	2.07	9.25	234.95	0.68	1.01
22554966662▲	250-350*	1-½	38.10	2.09	53.18	4	300	2.07	10.50	266.70	0.83	1.23

▲ = Make To Order (MTO) *Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

PREMIER FARM TANK

The economical Premier Farm Tank hose was engineered for use in agricultural, industrial and construction maintenance applications for dispensing gasoline, diesel, kerosene and oil from farm or barrel-type pumps where UL approval is not required. This hose includes embedded static wire to dissipate energy and is also offered in cut and coupled lengths.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Abrasion Oil

BRANDING: Thermoid Premier Farm Tank, Size, Made In USA with Static Wire

COVER COLOR: Black

CONSTRUCTION

TUBE: Nitrile, ARPM - Class A

- High Oil Resistant
- Handles Gasoline
- Handles Kerosene

COVER: Nitrile Blend ARPM - Class A

- High Oil Resistant
- Abrasion Resistant

REINFORCEMENT: 2-Spiral High Tensile Polyester Yarn

- Provides a Working Pressure to 60 psi
- More Flexible than Braid Reinforced Hose
- Easier to Route Assemblies
- Easier to Coil and Handle
- Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -20°F to +160°F, -29°C to +71°C

PACKAGING: ¾" Coupled – 10 Per Carton;
1" Coupled – 5 Per Carton

- 700 ft Reels
- Over 80% One Piece Reels
- Less Scrap
- Most Footage per Reel vs. Competition

STATIC WIRE, ALL SIZES

- Designed for Use with Electric Pumps
- Safety Feature

PRESSURELESS CURE SYSTEM

- Minimal Cast (Natural Curvature of the Hose)
- Extends the Life of the Rubber Compounds

AIR MANDREL MANUFACTURING PROCESS

- No Internal Contamination of the Inside Diameter Due to the Lubricant
- Eliminates the Need for Customers to Flush the Hose

Product Number	Packaging Reels (ft.)	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)
00667212200	700	¾	19.05	1.06	26.92	2	60	0.41	4.50	114.30	0.28	0.42
00667216200	700	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	Packaging Coupled MxM	Nominal I.D.		Length	
		(inches)	(mm)	(feet)	(meters)
00667212208	10 per carton	¾	19.05	8.00	2.44
00667212210	10 per carton	¾	19.05	10.00	3.05
00667212212	10 per carton	¾	19.05	12.00	3.66
00667212214	10 per carton	¾	19.05	14.00	4.27
00667216208	5 per carton	1	25.40	8.00	2.44
00667216210	5 per carton	1	25.40	10.00	3.05
00667216212	5 per carton	1	25.40	12.00	3.66
00667216214	5 per carton	1	25.40	14.00	4.27

PUMPFLEX® I – SOFTWALL

Pumpflex® I is designed for curb pump applications at service stations and convenience stores and 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.

Note: Do not use reusable couplings with this product.



Representative image photos see BRANDING below for product stamp.

RESISTANCE



Aging



Diesel Aromatic Fuels



Gasoline



Kerosene



Oil



Ozone



Sunlight

BRANDING: Thermoid Size Pumpflex I Gasoline Hose UL Listed 97MO Made In USA Month/Year

COVER COLOR: Black

CONSTRUCTION

TUBE: Nitrile Blend, ARPM - Class A

- High Oil Resistant
- Handles Gasoline
- Handles Kerosene
- Handles Diesel
- Handles Bio-Diesel Fuel

COVER: Thermalon™, U/L Approved, Class B

- Medium-High Oil Resistant
- Ozone and Sunlight Resistant

REINFORCEMENT: 2-Spiral Polyester Cord with Static Wire (Softwall)

- Provides a Working Pressure to 150-200 psi Depending on the I.D.

TEMPERATURE RANGE: -40°F to +180°F, -40°C to +82°C

PACKAGING: Reels or Coupled Lengths – See Table Below

- Meets Industry Standards

MOLDED COVER PROCESS

- Showroom Quality
- Dust Free

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22462401662	500-700*	5/8	15.88	1.03	26.19	2	200	1.38	3.75	95.25	0.27	0.40
22462481662	500-700*	3/4	19.05	1.13	28.58	2	200	1.38	4.50	114.30	0.32	0.48
22464641662	300-500*	1	25.40	1.50	38.10	4	150	1.03	7.00	177.80	0.62	0.92

*Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

COUPLED LENGTHS, MALE X MALE PERMANENT FITTINGS

Aluminum Crimped Coupling Product Number	Chrome-Plated Brass Coupling Product Number	Nominal I.D.		Length		Aluminum Crimped Coupling Product Number	Chrome-Plated Brass Coupling Product Number	Nominal I.D.		Length	
		(inches)	(mm)	(feet)	(meters)			(inches)	(mm)	(feet)	(meters)
22762401111	22462401111	5/8	15.88	11.00	3.35	22762481151	22462481151	3/4	19.05	15.00	4.57
22762401121	22462401121	5/8	15.88	12.00	3.66	22762481161	22462481161	3/4	19.05	16.00	4.88
22762401131	22462401131	5/8	15.88	13.00	3.96	22762481171	22462481171	3/4	19.05	17.00	5.18
22762401141	22462401141	5/8	15.88	14.00	4.27	22762481181	22462481181	3/4	19.05	18.00	5.49
22762401151	22462401151	5/8	15.88	15.00	4.57	22762481191	22462481191	3/4	19.05	19.00	5.79
22762401161	22462401161	5/8	15.88	16.00	4.88	22762481201	22462481201	3/4	19.05	20.00	6.10
22762401171	22462401171	5/8	15.88	17.00	5.18	22764641111	22464641111	1	25.40	11.00	3.35
22762401181	22462401181	5/8	15.88	18.00	5.49	22764641131	22464641131	1	25.40	13.00	3.96
22762401201	22462401201	5/8	15.88	20.00	6.10	22764641161	22464641161	1	25.40	16.00	4.88
22762481301	22462481301	3/4	19.05	10.50	3.20	22764641171	22464641171	1	25.40	17.00	5.18
22762481111	22462481111	3/4	19.05	11.00	3.35	22764641181	22464641181	1	25.40	18.00	5.49
22762481121	22462481121	3/4	19.05	12.00	3.66	22764641191	22464641191	1	25.40	19.00	5.79
22762481131	22462481131	3/4	19.05	13.00	3.96	22764641201	22464641201	1	25.40	20.00	6.10
22762481141	22462481141	3/4	19.05	14.00	4.27						

PUMPFLEX® II – HARDWALL

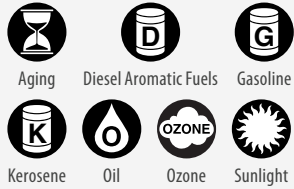
Pumpflex® II is designed for curb pump applications at service stations and convenience stores. The durable construction of this hose resists deterioration from fuel, ozone, sunlight and cracking around/behind the nozzle end coupling. Hardwall has a one wire braid steel reinforcement. Available with crimped aluminum fittings that are built to withstand the rough treatment received at curb pump self-service stations.

Note: Do not use reusable couplings with this product.



Representative image photos see BRANDING below for product stamp.

RESISTANCE



BRANDING: Thermoid Size Pumpflex II Gasoline Hose UL Listed 97MO Made In USA Month/Year
COVER COLOR: Black

CONSTRUCTION

TUBE: Nitrile Blend, ARPM - Class A

- High Oil Resistant
- Handles Gasoline
- Handles Kerosene
- Handles Diesel
- Handles Bio-Diesel Fuel
- Deterioration Resistant

COVER: Thermalon™, U/L Approved, Class B

- Medium-High Oil Resistant
- Ozone and Sunlight Resistant

REINFORCEMENT: 1 Wire Braid (Hardwall)

- Provides a Working Pressure to 150-200 psi Depending on the I.D.

TEMPERATURE RANGE: -40°F to +180°F, -40°C to +82°C

PACKAGING: Reels or Coupled Lengths – See Table Below
 • Meets Industry Standards

MOLDED COVER PROCESS

- Showroom Quality
- Dust Free

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight		
		Reels (ft.)	(inches)	(mm)	(inches)		(mm)	(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22341401662	500-700*		5/8	15.88	1.03	26.19	1	200	1.38	3.75	95.25	0.40	0.60
22341481662	500-700*		3/4	19.05	1.13	28.58	1	200	1.38	4.50	114.30	0.44	0.65
22341641662	300-500*		1	25.40	1.50	38.10	1	150	1.03	7.00	177.80	0.69	1.03

*Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

COUPLED LENGTHS, MALE X MALE PERMANENT FITTINGS

Aluminum Crimped Coupling Product Number	Chrome-Plated Brass Coupling Product Number	Nominal I.D.		Length		Aluminum Crimped Coupling Product Number	Chrome-Plated Brass Coupling Product Number	Nominal I.D.		Length	
		(inches)	(mm)	(feet)	(meters)			(inches)	(mm)	(feet)	(meters)
22361401591	22341401591	5/8	15.88	9.00	2.74	22361481301	22341481301	3/4	19.05	10.50	3.20
22361401231	22341401231	5/8	15.88	9.50	2.90	22361481111	22341481111	3/4	19.05	11.00	3.35
22361401071	22341401071	5/8	15.88	9.50	2.90	22361481131	22341481131	3/4	19.05	13.00	3.96
22361401351	22341401351	5/8	15.88	10.00	3.05	22361481141	22341481141	3/4	19.05	14.00	4.27
22361401211	22341401211	5/8	15.88	10.50	3.20	22361481241	22341481141	3/4	19.05	14.00	4.27
22361401111	22341401111	5/8	15.88	11.00	3.35	22361481151	22341481151	3/4	19.05	15.00	4.57
22361401121	22341401121	5/8	15.88	12.00	3.66	22361481161	22341481161	3/4	19.05	16.00	4.88
22361401391	22341401391	5/8	15.88	12.00	3.66	22361481171	22341481171	3/4	19.05	17.00	5.18
22361401131	22341401131	5/8	15.88	13.00	3.96	22361481181	22341481181	3/4	19.05	18.00	5.49
22361401141	22341401141	5/8	15.88	14.00	4.27	22361481201	22341481201	3/4	19.05	20.00	6.10
22361401151	22341401151	5/8	15.88	15.00	4.57	22361641011	22341641091	1	25.40	1.00	0.30
22361401161	22341401161	5/8	15.88	16.00	4.88	22361641301	22341641301	1	25.40	10.50	3.20
22361401171	22341401171	5/8	15.88	17.00	5.18	22361641111	22341641111	1	25.40	11.00	3.35
22361401181	22341401181	5/8	15.88	18.00	5.49	22361641131	22341641131	1	25.40	13.00	3.96
22361401191	22341401191	5/8	15.88	19.00	5.79	22361641161	22341641161	1	25.40	16.00	4.88
22361401201	22341401201	5/8	15.88	20.00	6.10	22361641171	22341641171	1	25.40	17.00	5.18
22361481651	22341481651	3/4	19.05	8.50	2.59	22361641181	22341641181	1	25.40	18.00	5.49
22361481581	22341481581	3/4	19.05	9.00	2.74	22361641191	22341641191	1	25.40	19.00	5.79
22361481221	22341481221	3/4	19.05	9.50	2.90	22361641201	22341641201	1	25.40	20.00	6.10

PUMPFLEX® MARINA – SOFTWALL

Color coded green primarily for marina use, this durable softwall 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, and its UL-approved cover is oil and weather resistant. The Pumpflex® Marina can be used for all types of gasoline, oil and other petroleum products.



Representative image photos see BRANDING below for product stamp.

RESISTANCE



Gasoline Oil Weathering

BRANDING: Thermoid Size Pumpflex Marina Hose UL Listed 97MO Made In USA Month/Year

COVER COLOR: Green

CONSTRUCTION

TUBE: Nitrile Blend, ARPM - Class A

- High Oil Resistant
- Handles Gasoline
- Handles Oil
- Handles Other Petroleum Products

COVER: Chlorinated Polyethylene, ARPM - Class A

- Medium-High Oil Resistant
- Weather Resistant

REINFORCEMENT: 4-Spiral Polyester Yarn with Static Wire (Softwall)

- Provides a Working Pressure to 150 to 200 psi

TEMPERATURE RANGE: -40°F to +180°F, -40°C to +82°C

PACKAGING: Reels

- Color Codes this Hose for Marina Use

STATIC WIRE, ALL SIZES

- Enables User to Ground the Hose, Dissipating a Build Up of Electricity

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22463484662	500-700*	¾	19.05	1.13	28.58	4	200	1.38	4.50	114.30	0.32	0.48
22464644662	300-500*	1	25.40	1.50	38.10	4	150	1.03	7.00	177.80	0.62	0.92

*Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft. Consult coupling manufacturers for specific coupling recommendations/attachment procedures.

FUEL DELIVERY HOSE: LP GAS HOSES

POLAR-FLEX™

CGA Type 1 Butane-Propane

Polar-Flex™ is a cold weather hose specifically engineered for use in transferring liquefied petroleum gases at peak efficiency in extreme sub-zero temperatures. Featuring flame-retardant cover, it is ideal for moving propane or butane from bulk storage to tank cars or cylinders, or from bobtail trucks to residential home storage tanks. Polar-Flex is UL 21 File MH12585 listed and is approved to Canadian Gas Association (CGA) Type 1 requirements. Thermoid assemblies, coupled with 1" PRO SUR™ couplings, meet Canadian Standards Association (CSA) 8.1:15.



Representative image photo see BRANDING below for product stamp.

RESISTANCE



Abrasion

Oil

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

CONSTRUCTION

TUBE: Nitrile, ARPM - Class A
 • Allows for Transferring Liquefied Petroleum Gases Even at Extreme Sub-Zero Temperatures

COVER: Chlorinated Polyethylene, ARPM - Class B

- Abrasion Resistant
- Flame Retardant

REINFORCEMENT: 2- or 4-Spiral Yarn
 • Provides a Constant Working Pressure to 350 psi Regardless of I.D.
 • More Flexible than Braid Reinforced Hose
 • Easier to Route Assemblies
 • Easier to Coil and Handle
 • Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

TEMPERATURE RANGE: -60°F to +180°F, -51°C to +82°C

- Flexible at Extreme Low Temperatures

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.

MOLDED COVER PROCESS

- Showroom Quality
- Dust Free

UL 21 FILE MH 12585 OR UL 21 FILE MH 12585 LISTED/ CSA APPROVED (CANADIAN STANDARDS APPROVAL)

- Meets All Industry Standards

PRO SUR FITTINGS AVAILABLE

- One-Piece Fitting Means No Leak Points

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
22073641662	300-500*	1	25.40	1.50	38.10	4	350	2.41	6.00	152.40	0.58	0.86

*Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

COUPLED, MALE X MALE WITH THERMOID® PRO SUR™ BRASS FITTINGS

Product Number	Packaging	Nominal I.D.		Length	
		(inches)	(mm)	(feet)	(meters)
22073641101	1 per carton	1	25.40	100.00	30.48
22073641121	1 per carton	1	25.40	125.00	38.10
22073641151	1 per carton	1	25.40	150.00	45.72



TYPE 75 BUTANE-PROPANE

The Type 75 Butane-Propane hose was engineered for transferring liquefied propane gas from bulk storage to tank cars or cylinder, or from bobtail trucks, to home storage tanks. This hose has been pin-pricked to permit gas diffusion, and its smooth black cover resists oil, snagging and abrasion.



Representative image photo see BRANDING below for product stamp.

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

CONSTRUCTION

TUBE: Nitrile, ARPM - Class A
COVER: Type 75 - Chlorinated Polyethylene, ARPM - Class B: ¾" and 1"
Type 75B - Nitrile Blend: ¼" - ½"
• Abrasion Resistant
• Weather Resistant
REINFORCEMENT: 4- Spiral Yarn
• Provides a Working Pressure of 350 psi
• More Flexible than Braid Reinforced Hose
• Easier to Route Assemblies
• Easier to Coil and Handle
• Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque

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.

UL 21 FILE MH 12585 OR UL 21 FILE MH 12585 LISTED/CSA APPROVED (CANADIAN STANDARDS APPROVAL)

• Meets All Industry Standards

PRO SUR FITTINGS AVAILABLE

• One-Piece Fitting Means No Leak Points

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
		Reels (ft.)	(inches)	(mm)	(inches)		(mm)	(psi)	(Mpa)	(inches)	(mm)	(lb/ft)
TYPE 75B												
00667304600	700	¼	6.35	0.63	15.88	4	350	2.41	1.50	38.10	0.14	0.22
00667306600	700	⅜	9.53	0.75	19.05	4	350	2.41	2.25	57.15	0.18	0.30
00667308600	700	½	12.70	0.94	23.81	4	350	2.41	3.00	76.20	0.29	0.43
TYPE 75												
22074481662	500-700*	¾	19.05	1.25	31.75	4	350	2.41	4.50	114.30	0.27	0.61
22074641662	300-500*	1	25.40	1.50	38.10	4	350	2.41	7.00	177.80	0.58	0.86

*Footage between reels may vary. Maximum of 3 pieces per reel. No length shorter than 50 ft.

COUPLED, MALE X MALE WITH THERMOID® PRO SUR™ BRASS FITTINGS

Product Number	Packaging	Nominal I.D.		Length	
		(inches)	(mm)	(feet)	(meters)
22074641101	1 per carton	1	25.40	100.00	30.48
22074641121	1 per carton	1	25.40	125.00	38.10
22074641151	1 per carton	1	25.40	150.00	45.72
22074641171	1 per carton	1	25.40	175.00	53.34




GRADE R WELDING HOSE

Available in Tuline or Single Line Corrugated and Cut and Coupled

The 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 and corrugated covers available for single line. Each of these styles and grades feature multi-spiral construction for maximum kink resistance. The Grade R hose features an EPDM tube and cover that are heat resistant.



Representative image photos see BRANDING below for product stamp.

<p>RESISTANCE</p>  <p>Kinking</p> <p>BRANDING: Size, Grade R Acetylene Only Std. Duty KX WP 200 PSI RMA 1P-7-2008 (Date)</p> <p>COVER COLOR: Red, Green</p>	<p>CONSTRUCTION</p> <p>TUBE: EPDM, ARPM - Class C</p> <ul style="list-style-type: none"> • Heat Resistant <p>COVER: EPDM, ARPM - Class C</p> <ul style="list-style-type: none"> • Heat Resistant <p>REINFORCEMENT: 2- or 4-Spiral Polyester Yarn</p> <ul style="list-style-type: none"> • Provides a Working Pressure of 200 psi • More Flexible than Braid Reinforced Hose • Easier to Route Assemblies • Easier to Coil and Handle • Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque • Kink Resistant 	<p>TEMPERATURE RANGE: -40°F to +180°F, -40°C to +82°C</p> <p>PACKAGING: Reels, Cut and Coupled Lengths</p> <ul style="list-style-type: none"> • 700 ft. Reels • Over 80% One Piece Reels • Less Scrap • Most Footage per Reel vs. Competition <p>PRESSURELESS CURE SYSTEM</p> <ul style="list-style-type: none"> • Minimal Cast (Natural Curvature of the Hose) • Extends the Life of the Rubber Compounds <p>AIR MANDREL MANUFACTURING PROCESS</p> <ul style="list-style-type: none"> • No Internal Contamination of the Inside Diameter Due to the Lubricant • Eliminates the Need for Customers to Flush the Hose • Conforms to ARPM/CGA Specifications • Capable of Bonding Red and Green Hoses <p>MULTI-VENTILATION PORES</p> <ul style="list-style-type: none"> • Disperses Permeating Gases • Enhances Welder's Safety
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TULINE WELDING, GRADE R

RED IS FOR ACETYLENE USE ONLY, AND WHERE COVER MUST RESIST ABRASION, WEATHER AND OZONE.

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00521403200	700	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.15	0.22
00521404200	700	1/4	6.35	0.53	13.49	2	200	1.38	1.50	38.10	0.21	0.32
00521405200▲	700	5/16	7.94	0.59	15.08	2	200	1.38	2.00	50.80	0.25	0.37
00521406200	700	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	Packaging	Nominal I.D.		Length	
	Coupled BxB	(inches)	(mm)	(feet)	(meters)
00521403215	5 per carton	3/16	4.76	12.50	3.81
00521403225	5 per carton	3/16	4.76	25.00	7.62
00521403249	5 per carton	3/16	4.76	50.00	15.24
00521403291	1 per box	3/16	4.76	100.00	30.48
00521484212	5 per carton	1/4	6.35	12.50	3.81
00521484225	5 per carton	1/4	6.35	25.00	7.62
00521484250	5 per carton	1/4	6.35	50.00	15.24
00521484290	1 per box	1/4	6.35	100.00	30.48
00521405252▲	5 per carton	5/16	7.94	50.00	15.24
00521405291▲	1 per box	5/16	7.94	100.00	30.48
00521406226▲	5 per carton	3/8	9.53	25.00	7.62
00521406251	5 per carton	3/8	9.53	50.00	15.24
00521406290	1 per box	3/8	9.53	100.00	30.48

▲ = 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	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
GREEN												
00521803205	700	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.08	0.12
00521804205	700	1/4	6.35	0.53	13.49	2	200	1.38	1.50	38.10	0.11	0.16
00521804405	700	1/4	6.35	0.59	15.08	4	200	1.38	1.50	38.10	0.14	0.21
00521806400	700	3/8	9.53	0.72	18.26	4	200	1.38	2.25	57.15	0.18	0.27
RED												
00521903205	700	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.08	0.12
00521904205	700	1/4	6.35	0.53	13.49	2	200	1.38	1.50	38.10	0.11	0.16
00521904405	700	1/4	6.35	0.59	15.08	4	200	1.38	1.50	38.10	0.14	0.21
00521905400	700	5/16	7.94	0.66	16.69	4	200	1.38	2.00	50.80	0.16	0.24
00521906400	700	3/8	9.53	0.72	18.26	4	200	1.38	2.25	57.15	0.18	0.27


GRADE T WELDING HOSE

Available in Tuline or Single Line Corrugated and Cut and Coupled

The 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 and corrugated covers available for single line. Each of these styles and grades feature multi-spiral construction for maximum kink resistance. The Grade T hose features a CR (Polychloroprene) tube and cover that offer medium-high fuel gas resistance.



Representative image photos see BRANDING below for product stamp.

<p>RESISTANCE</p>  <p>Kinking</p> <p>BRANDING: Size, Grade T Fuel Gas Std. Duty KX WP 200 PSI RMA 1P-7-2008 (Date)</p> <p>COVER COLOR: Red, Green</p>	<p>CONSTRUCTION</p> <p>TUBE: Polychloroprene</p> <p>COVER: Polychloroprene</p> <ul style="list-style-type: none"> • Flame Resistant <p>REINFORCEMENT: 2- or 4-Spiral Polyester Yarn</p> <ul style="list-style-type: none"> • Provides a Working Pressure at a Constant 200 psi Regardless of Hose Size • More Flexible than Braid Reinforced Hose • Easier to Route Assemblies • Easier to Coil and Handle • Less Susceptible to Premature Failure than Braided Hose if Subjected to Torque • Kink Resistant 	<p>TEMPERATURE RANGE: -40°F to +180°F, -40°C to +82°C</p> <p>PACKAGING: Reels, Cut and Coupled Lengths</p> <ul style="list-style-type: none"> • 700 ft. Reels • Over 80% One Piece Reels • Less Scrap • Most Footage per Reel vs. Competition <p>PRESSURELESS CURE SYSTEM</p> <ul style="list-style-type: none"> • Minimal Cast (Natural Curvature of the Hose) • Extends the Life of the Rubber Compounds <p>AIR MANDREL MANUFACTURING PROCESS</p> <ul style="list-style-type: none"> • No Internal Contamination of the Inside Diameter Due to the Lubricant • Eliminates the Need for Customers to Flush the Hose • Conforms to ARPM/CGA Specifications <p>MULTI-VENTILATION PORES</p> <ul style="list-style-type: none"> • Disperses Permeating Gases • Enhances Welder's Safety
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TULINE WELDING, GRADE T

FOR USE WITH ALL FUEL GASES, AND WHERE A FLAME AND OIL RESISTANT TUBE AND COVER ARE REQUIRED.

Product Number	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
00521503200	700	3/16	4.76	0.44	11.11	2	200	1.38	1.25	31.75	0.17	0.25
00521504200	700	1/4	6.35	0.53	13.49	2	200	1.38	1.50	38.10	0.24	0.36
00521505200▲	700	5/16	7.94	0.59	15.08	2	200	1.38	2.00	50.80	0.27	0.40
00521506200	700	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	Packaging	Nominal I.D.		Length	
		(inches)	(mm)	(feet)	(meters)
00521583212	5 per carton	3/16	4.76	12.50	3.81
00521583225	5 per carton	3/16	4.76	25.00	7.62
00521583250	5 per carton	3/16	4.76	50.00	15.24
00521583290	1 per box	3/16	4.76	100.00	30.48
00521584212	5 per carton	1/4	6.35	12.50	3.81
00521584225	5 per carton	1/4	6.35	25.00	7.62
00521584250	5 per carton	1/4	6.35	50.00	15.24
00521584290	1 per box	1/4	6.35	100.00	30.48
00521585250▲	5 per carton	5/16	7.94	50.00	15.24
00521586225	5 per carton	3/8	9.53	25.00	7.62
00521586250	5 per carton	3/8	9.53	50.00	15.24
00521586290	1 per box	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	Packaging	Nominal I.D.		Nominal O.D.		Reinforcement Spirals	Working Pressure		Min. Bend Radius		Weight	
	Reels (ft.)	(inches)	(mm)	(inches)	(mm)		(psi)	(Mpa)	(inches)	(mm)	(lb/ft)	(Kg/m)
GREEN												
00523804405	700	1/4	6.35	0.59	15.08	4	200	1.38	1.50	38.10	0.15	0.22
00523806400	700	3/8	9.53	0.72	18.26	4	200	1.38	2.25	57.15	0.20	0.30
RED												
00523904405	700	1/4	6.35	0.59	15.08	4	200	1.38	1.50	38.10	0.15	0.22
00523906400	700	3/8	9.53	0.72	18.26	4	200	1.38	2.25	57.15	0.20	0.30

TECHNICAL REFERENCE

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 ARPM/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 ARPM/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 Association for Rubber Product Manufacturers (ARPM) Hose Handbook, RMA/IP-2/2003

WARNINGS/CAUTION

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, death 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.

1. 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.
2. NFPA 196 Standard for Fire Hose.
3. NFPA 198 Care and Maintenance of Fire Hose.
4. NFPA 407 Care and Maintenance of Aircraft Refueling.
5. ARPM—Storage, Care, Maintenance.
 - General
 - OS&D
 - LPG
 - Aircraft Ground Refueling
 - Motor Vehicle
 - Anhydrous Ammonia
 - Welding Hose
 - Steam
6. ARPM—Industry Hose Specs.
 - Hydraulic Hose
 - ARPM-CGA Welding
 - ARPM-ANSI Anhydrous Ammonia
 - ARPM-LPG
 - OS&D
 - 300, 400, 600# Fire Hose
7. ASTM-296 Fire Hose Spec.

WARNING

Rubber products contain a variety of chemicals and substances. Accelerators, such as mercaptobenzothiazole and thiuram, are chemicals contained in most rubber products that are used to speed the vulcanization process. Certain individuals may develop contact dermatitis and other allergic reactions as the result of exposure to mercaptobenzothiazole, thiuram and perhaps other chemicals contained in rubber products. Such reactions may develop and become more severe as the individual is sensitized with repeated exposure over time. If you develop any reactions from exposure to rubber products, avoid further contact with such products and consult with a physician experienced in treating such allergies.

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 Thermoid's Customer Service Department at 800/543-8070 or log onto www.thermoid.com.

TERMS & CONDITIONS OF SALE

ENTIRE AGREEMENT

The parties agree that there are no understandings, agreements or representations, express or implied, not specified herein, respecting this offer or sale, and that this instrument contains the entire agreement between Seller and Buyer. No prior waiver, course of prior dealing or usage of the trade shall be relevant to supplement or to explain terms used in this agreement.

CONTROLLING TERMS

All sales are expressly limited to, and the rights and liabilities of the parties shall be governed exclusively by, the terms and conditions herein. In the event any purchase order or offer from Buyer states terms additional to or different from those set forth herein, this document shall be deemed a notice of objection to such additional or different terms and a rejection thereof. Any acknowledgment or shipment of product by Seller to Buyer subsequent to Seller's receipt of a purchase order or offer from Buyer shall not be deemed to be an acceptance by Seller of an offer to contract on the basis of any Buyer's terms and conditions. Receipt and acceptance by Buyer of products shall be conclusive evidence of Buyer's acceptance of the terms and conditions set forth herein as the sole controlling terms and conditions of the contract between Seller and Buyer. Stenographic and clerical errors by Seller are subject to correction.

ACCEPTANCE OF ORDERS

Seller possesses the exclusive right to accept or refuse any and all orders. No bid, offer, or quotation shall be valid or binding upon Seller, and no order shall be accepted and no sale shall be final, until such bid, offer, quotation, order or sale shall be acknowledged in writing by Seller. See price pages for minimum order amount.

PRICES

All prices are subject to change without notice and shall be adjusted to the Seller's prices in effect on the date of shipment. Prices reflect standard packaging for domestic shipment only. All prices are in U.S. Dollars. All tooling and equipment Seller produces or acquires for purposes of filling this order shall remain property of Seller. All intellectual property associated with the products shall remain the sole property of Seller.

DELIVERY

Delivery dates are estimates and not a guaranty of a particular day of delivery and are based on the prompt receipt of all necessary information from the Buyer. Seller shall not be liable for failure or delay in shipping goods hereunder if such failure or delay is due to an act of God, fire, flood, war, labor difficulties, accident, strikes, lockouts, civil disorders, governmental priorities or embargoes, inability or difficulty in obtaining raw materials or supplies at customary terms and prices or any other causes or failure of presumed conditions of any

kind whatsoever which are either beyond the reasonable control of the Seller or which would make impracticable the fulfillment of Seller's obligations hereunder. Buyer shall not refuse to accept deliveries so delayed. Seller shall be compensated for any and all extra costs and expenses occasioned by delays attributable to Buyer.

TRANSPORTATION AND RISK OF LOSS

All shipments are freight collect unless eligible for a freight allowance expressly set forth in current price sheets or on the face hereof. Seller reserves the right to select the method and type of transportation. If a method of transportation other than that selected by Seller is requested by Buyer, excess packing, shipping and transportation charges resulting from compliance with Buyer's request shall be for the Buyer's account. All shipments are F.O.B. point of shipment and risk of loss shall pass to Buyer after products are delivered to carrier. Claims for damage or loss in transit must be filed by Buyer against the carrier.

CANCELLATION OR MODIFICATION

Buyer may not cancel or modify any order, either in whole or in part, without Seller's prior written consent and then only upon payment to Seller for all applicable costs incurred by Seller, including, without limitation, costs of materials, labor, equipment and supplies, and for lost profits on canceled or modified orders. Order changes or additions received after original order has been processed will be treated as a new order.

TAXES

Any taxes which Seller may be required to pay or collect with respect to the sale, delivery or storage of the products, including taxes upon or measured by the receipts from the sales thereof, shall be for the account of Buyer who shall promptly pay the amount thereof to Seller upon demand, or in lieu thereof, furnish Seller with a tax exemption certificate acceptable to the taxing authorities.

WARRANTY AND DISCLAIMER

Seller warrants that its products shall be free from defects in material and workmanship under normal use and service for a period of 12 months from date of shipment. On equipment and materials furnished by Seller but manufactured by others, Buyer shall accept in lieu of any liability or guarantees on the part of Seller, the benefits of guarantees as are obtained by Seller from such manufacturers or vendors. SELLER MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EXCEPT AS IS EXPRESSLY SET FORTH HEREIN. Failure by Buyer to object to or reject products or materials delivered hereunder, in writing within 30 days from the date of shipment of the products or materials, shall constitute an acceptance and waiver by Buyer of all claims hereunder on account of alleged errors, shortages, defective workmanship or material, breach of warranty or otherwise, discoverable upon inspection by Buyer.

TERMS & CONDITIONS OF SALE *continued*

LIMITATION OF LIABILITY

Buyer's exclusive remedy on any claim of any kind for any loss or damage arising out of, connected with, or resulting from this contract, or from the performance or breach thereof, or from the design, manufacture, sale, delivery, resale, or repair or use of any products covered by or furnished under the contract, including but not limited to any claim for breach of warranty, negligence, strict liability or other tort, shall be the repair or replacement, F.O.B. Seller's factory, as Seller may elect, of the product or part thereof giving rise to such claim, except that Seller's liability for such repair or replacement shall in no event exceed the contract price allocable to the products or part thereof which give rise to the claim. SELLER SHALL IN NO EVENT BE LIABLE FOR DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

RETURN OF MATERIAL

Seller's permission must be obtained in writing before any products are returned to it by Buyer. If products are returned without such permission, Buyer authorizes Seller, in addition to such other remedies as it may have, to hold the returned products at Buyer's sole risk and expense. All returns must be freight prepaid by Buyer. Seller will in no event accept the return of any product that upon return is in the opinion of Seller altered, damaged, used, or in other than first class salable condition.

INDEMNITY

Buyer agrees to indemnify, defend and hold harmless Seller from any claims, loss or damages arising out of or related to Seller's compliance with Buyer's designs, specifications or instructions in the furnishing of products to Buyer, whether based on infringement of patents, copyrights, trademarks or other rights of others, breach of warranty, negligence, strict liability or other tort.

PAYMENT

All invoices are due net 30 days from date of invoice unless otherwise specified by Seller. If at any time Seller deems itself insecure from any cause whatsoever, including but not limited to adverse changes in Buyer's financial condition or impairment of Buyer's credit, Seller may in its sole discretion stop delivery of goods, require advance payment for goods, and/or declare immediately due all indebtedness owed to Seller including amounts due hereunder. Payments not made when due shall bear interest at the prime rate plus 5% per annum or, if lower, the highest rate legally permissible, until paid. Credit balances will be applied against future purchases only and must be claimed within one year of creation or are waived.

GOVERNING LAW AND ARBITRATION

Any dealings or contract between the parties shall be governed by and construed in accordance with the law of the state of Ohio, excluding its choice of law provisions. Buyer and Seller agree that any action, suit or proceeding arising hereunder or related hereto may be brought in any state or federal court of competent jurisdiction sitting in the State of Ohio and each party submits to the jurisdiction of such courts. Either Buyer or Seller may elect to have any controversy arising under or in any way related to the subject matter hereof decided by arbitration by a single disinterested arbitrator in Columbus, Ohio, U.S.A., in accordance with the commercial rules of the American Arbitration Association then obtaining. The fee for the arbitrator shall be shared equally by the parties. Each party shall bear its own costs and expenses, including attorneys fees.

Revised 06/01/2008

CAUTION: use of damaged hose or misapplication may result in property damage or serious personal injury or death. Inspect hose regularly.

TERMS: MINIMUM PREPAID FREIGHT HOSE ONLY

Order \$3,000. F.O.B. Shipping Point (Continental USA)

Drop Shipments—Contact Customer Service. Minimum Stock Order is \$250.00.

Minimum Stock Order is \$250.00. Payment Terms are Net 30 Days.

Product orders that do not qualify for paid freight will be shipped collect.

Minimum Production Requirements for Non-Stocking Items

All Sizes15,000 ft. Per Size, Style & Color

Special Branding and packaging—Stock Items, Minimum—15,000 ft. Per size, style, and color on standard products.

One-time Branding Setup charge—\$150.00, We reserve the right to ship $\pm 10\%$ on all Special Branded products

***ALL BRANDING CHANGES MUST BE APPROVED *** FOR SPECIAL ITEMS CONTACT YOUR HBD REPRESENTATIVE FOR MINIMUM REQUIREMENTS.

PRICES FOR CUT LENGTHS

Cut lengths are subject to minimum order (15,000ft) requirements of standard products. We reserve the right to ship $\pm 10\%$ on all cut lengths.

Specified cut lengths are available in increments over 25 ft., at an addition to the per foot price as follows:

Cut lengths 25 FT AND ABOVE — plus 10%. Items under 25 ft. pricing will be reviewed.

ONE PIECE REELS

Specified one-piece reels—plus 15%.

HOSE LENGTHS

Some hose types have a tendency to shrink or shorten during shipment or storage. This is especially true of very flexible hoses that have a helical wire embedded in the carcass. Consequently, the actual length should be determined by measuring under hydrostatic pressure of 0.07 MPa (10 psi). When these hoses are subjected to working pressure, they generally will return to their original manufactured length. (Excerpt from ARPM Hose Handbook IP-2, Tenth Edition 2019)

FLEXSTRENGTH® Bellefontaine Plant

Standard Package Quantities	Feet Per Reel			
	¼" I.D. TO 1" I.D. Inclusive	1-¼" I.D.	1-½" I.D.	2" I.D.
Feet per reel—maximum	700	550	400	300
Max. number of pieces per reel	2	2	2	2
Minimum length	50'	50'	50'	50'

A Large percent of our hose is packaged on one-piece reels. However, in those few instances where a two-piece reel is necessary, you will be billed in multiples of 50 feet. (If one length is 390 ft., you will be billed for 350 ft.) Our modern Concore® process prohibits the manufacture of three or more lengths per reel. As such, we cannot offer a discount for this type of special packaging—REMNANTS OR SECONDS.

THERMOCURE FLEXIBLE MANDREL HOSE Oneida Plant

Standard Package Quantities	Feet Per Reel			
	¼" – ¾"	1"	1-¼"	1-½" I.D.
Feet per reel—minimum	500	300	300	250
Feet per reel—nominal	600	400	375	300
Feet per reel—maximum	700	500	450	350
Max. number of pieces per reel	3	3	3	3
Minimum length	50'	50'	50'	50'

While we strive to achieve the longest lengths possible, two- and three-piece reels are common. In those instances where a multiple length reel is necessary, no length will be shorter than 50 feet.

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.

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. Thermoid SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. See our terms and conditions of sale for further details.

SAFETY

Hose has an indeterminate and limited 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, death, 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 application and 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 or minimized.

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.thermoid.com or contact your Thermoid Customer Service Representative.

- **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 the “General Hose Information” section near the beginning of this catalog, that details various areas, including: ARPM Oil Resistance Data, Minimum Hose Radius, Basic Safety Considerations & Warnings, Steam/Chemical and Static Electricity Warnings, Hose Care, Maintenance and Storage, Hose Test Methods, Hose Coupling Selection Guide as well as other specific product guidance information pages found throughout this catalog. You may also contact a Thermoid marketing or technical representative for assistance.

Made in U.S.A.



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