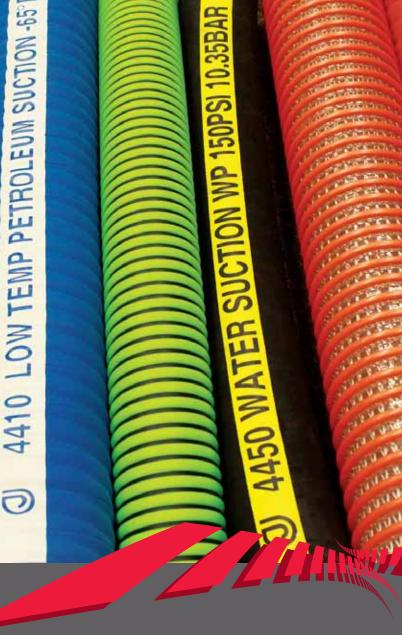
# HOSE, COUPLINGS, ACCESSORIES & SKIRTBOARD

4420 PETROLEUM SUCTION





# HOSE, COUPLINGS, ACCESSORIES & SKIRTBOARD

**Jason Industrial** is a Megadyne Group company that manufactures and delivers a comprehensive inventory of rubber and polyurethane synchronous belts, rubber v-belts, industrial hose and couplings, plus hardware to the industrial community worldwide.

When extraordinary needs require specialized components, we will work with you from prototype to production, creating custom solutions that suit your unique application.

As a Jason customer, you can feel confident in the quality and integrity of our products, the speed and efficiency at which they are delivered, and the expertise and customer focus that our local representatives are committed to providing.

Jason's corporate headquarters are based in Fairfield, New Jersey. Our distribution center is located just outside of Chicago, Illinois, with additional corporate offices in Canada, Mexico, Brazil and Colombia, as well as manufacturing, warehousing and distribution centers in cities across the globe.

Welcome to Jason...the first name in mechanical rubber and urethane products that power industry forward.



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#### Organizations Having Regulations or Specifications for Hose

#### **U.S. Government Agencies**

Department of Defense
Department of Transportation
Food and Drug Administration

MSHA Mine Safety and Health Administration

**NHTSA** National Highway Traffic Safety Administration **OSHA** Occupational Safety & 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 CanadaCSA Canadian Specifications Association

#### **Other Organizations**

ABS	American	Bureau	$\circ$ f	Shipping
ADS	American	Duitau	OI	Jupping

**ANSI** American National Standards Institute

API American Petroleum Institute

**ARPM** Association for Rubber Products Manufacturers

BIA Boating Industry Association
BSI British Standards Institute
CARB California Air Resource Board
CGA Compressed Gas Association
DIN Duetches Institut for Normung -

German Standards Det Norske Veritas

EN European NormsFM Factory Mutual Research

DNV

FPS Fluid Power Society
ISO International Organization for Standardization

JIC Joint Industrial Council (now defunct)

JIS Japanese Industrial Standards

NAHAD National Association of Hose and

Accessories Distributors

NFPA National Fire Protection Association
National Fluid Power Association

**RMA** Rubber Manufacturers Association

(replaced by ARPM)

ROHS Restriction of Hazardous Substances
SAE Society of Automotive Engineers

TFI The Fertilizer Institute
UL Underwriters Laboratories

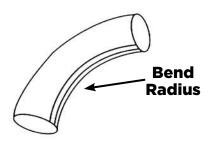
#### **ARPM Oil Resistance Data**

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 the length of exposure. The ARPM (replacing RMA) has developed a classification of hose performance based on simple immersions in ASTM No. 3 oil (High Swell) at 212° F for 70 hours. Oil resistance classifications for rubber stocks are shown in the table in the next column.

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

#### **Minimum Hose Bend Radius Data (MBR)**

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



#### General formula to determine bend length:

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

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

Given r = 4.5 inches  $90^{\circ}$  (2 x 3.14 x 4.5)  $360^{\circ}$ 

 $.25 \times 2 \times 3.14 \times 4.5 = 7$  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.

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#### I. HOSE SELECTION

It is important to have all the required information to select the proper hose for any hose application. The acronym "STAMPED" can be used to remember the required information as follows:

SIZE - Inside diameter (I.D.) and length. In some cases, the outside diameter (O.D.), also.

**T**EMPERATURE - Internal, external, minimum and maximum.

**APPLICATION** - What is the hose supposed to do?

**M**ATERIAL - What type of product will be conveyed?

PRESSURE - What are the normal working and burst pressures?

**E**NDS - Are couplings needed? What type, size and thread?

DELIVERY - When and where will it be needed? Special packaging required?

#### II. PRESSURE RE-RATING PERCENTAGES FOR INCREASED TEMPERATURES

As temperatures go up, pressure ratings go down. When considering the proper hose for any application, check this table if temperature is a consideration in the decision. This table will indicate the percentage of the initial working pressure by temperature.

Temperature °F °C	PVC Hose	Steam & Hot Tar & Asphalt	All Other Hose Types
70° 21°	100%	100%	100%
90° 32°	82%	95%	91%
150° 66°	30%	81%	64%
200° 93°	N/R	68%	42%
250° 121°	N/R	56%	20%
300° 149°	N/R	44%	N/R
350° 177°	N/R	32%	N/R
400° 204°	N/R	20%	N/R
450° 232°	N/R	8%	N/R
500° 260°	N/R	N/R	N/R

N/R - Not Recommended



#### **III. COMMON TERMS**

Terms	Definition	Term	Definition
I.D.	Inside diameter of hose opening	Weight/ft.	Weight per foot of hose
O.D.	Outside diameter of hose	Bend Radius	The minimum radius to which the
Max W.P.	Maximum recommended		hose will bend before it is damaged
	working pressure	Standard Lengths	The bulk length that the hose is
PSI	Pressure in pounds per square inch	_	stocked for distributors

#### **IV. THREAD CHART**

Abbreviation	Thread Name	Seal Method	Thread Compatibility
GHT	Garden Hose Thread	Washer Seal	GHT - GHT
JIC 37° Flare	Joint Industrial Committee	Mechanical Seal	JIC Male - JIC Female
NH or NST	NH or NST  American Standard Fire Hose Thread  National Hose or National Standard Thread		NH or NST - NH or NST
NPT	NPT American Standard Taper Pipe Thread National Pipe Thread		NPT - NPT or NPTF
NPTF	NPTF American Standard Taper Pipe Fuel Dryseal National Pipe Tapered Fuel		NPTF - NPTF or NPT
NPSH  American Standard Straight Pipe for Hose Couplings  National Pipe Straight Hose		Washer Seal	NPSH - NPSH or NPT
NPSM	American Standard Straight Mechanical Joints National Pipe Straight Mechanical	Washer Seal or Mechanical Seal	NPSM - NPSM, NPT or NPTF
SAE 45° Flare	Society of Automotive Engineers	Mechanical Seal SAE Male - SAE Female	

Note: Thread sealant is required for Thread Seal connections, except for NPTF during initial use.

Note: Compatibility of thread type does not ensure compatibility of fittings. Always use mating fittings of the same type.



#### **COMMONLY USED COMPOUNDS - RUBBER**

ASTM	Common Name	Composition	General Properties
AU or EU	Urethane	Polyester Urethane	Excellent for high temperature, oil and air resistance. Poor cold flow and low temperature resistance. Not recommended for water service.
CR	Neoprene*	Chloroprene	Good weathering resistance and flame retarding. Moderate resistance to petroleum-based fluids. Good physical properties.
EPDM	Ethylene Propylene Rubber	Ethylene-propylene diene-terpolymer	Excellent ozone, chemical and aging characteristics. Good heat resistance. Poor resistance to petroleum-based fluids.
NBR	Nitrile	Acrylonitrile- butadiene	Excellent resistance to petroleum- based fluids. Moderate resistance to aromatics. Good physical properties.
NR	Natural Rubber	Isoprene, Natural	Excellent physical properties, including abrasion and low temperature resistance. Poor resistance to petroleum-based fluids.
SBR	SBR	Styrene-Butadiene	Good physical properties, including abrasion resistance. Poor resistance to petroleum-based fluids.
XLPE	Cross-Linked Polyethylene	Polyethylene and cross linking agent	Excellent chemical resistance, with good heat and electrical properties.

#### **COMMONLY USED COMPOUNDS - PLASTIC**

PE	Polyethylene	Polyethylene	Excellent dielectric properties. Excellent resistance to water, acids, alkalis and solvents. Good abrasion and weathering resistance.
UHMW-PE	UHMWPE	Ultra High Molecular Weight Polyethylene	Excellent resistance to a broad range of chemicals, excellent weight and abrasion resistance.
PVC	PVC	Polyvinyl Chloride	Good weathering, moisture and flame resistance. General resistance to alkalis and weak acids. Good abrasion resistance.
TPE	Thermoplastic Rubber	Thermoplastic Polyolefins and Block Copolymers of Styrene and Butadiene	Good weathering and aging resistance. Good for water, diluted acids and bases.

<sup>\*</sup>DuPont registered trademark

# **CARE, MAINTENANCE & STORAGE OF HOSE**

Hose has a limited life and the use 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 are reached

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.

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

#### **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 not to subject the hose to excessive surge pressures. Hose should not be kinked or be run over by equipment. In handling the 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 & Inspection Procedures**

An inspection and hydrostatic test should be made at periodic intervals to determine if a hose is suitable for continued service. A visual inspection of the hose should be made for loose covers, kinks, bulges, or soft spots which might indicate broken or displaced reinforcement. The couplings or fittings should be closely examined and, if there is any sign of movement of the hose from the couplings, the hose should be removed from service. The periodic inspection should include a hydrostatic test for one minute at 150% of the recommended working pressure of the hose. An exception to this would be the woven jacketed fire hose.\* During the hydrostatic test, the hose should be straight, not coiled or in a kinked position. Water is the usual test medium and, following the test, the hose may be flushed with alcohol to remove traces of moisture. A regular schedule for testing should be followed and inspection records maintained.

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

- 1. Air or any other compressible gas must never be used as the test media because of the explosive action of the gas should a failure occur. Such a failure might result in possible damage to property and serious bodily injury.
- 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' (3m) 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 blownout 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 a test fluid, precautions must be taken to protect against fire or other damage should a hose assembly fail and the test liquid be 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 the size (diameter and length), the quantity to be stored, and the way in which it is packaged. Hose should not be piled or stacked to such an extent that the weight of the stack creates distortions on the lengths stored at the bottom.

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

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

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

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

The ideal temperature for storage of rubber product 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 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 from dampness and mildew. Items should be stored on a first-in, first-out basis, since even under the best of conditions, an unusually long shelf life could deteriorate certain rubber products.

- \*Woven jacket fire hose should be tested in accordance with the service test provisions contained in the current edition of the National Fire Protection Association Bulletin No. 1962 -Standard for the Care, Use and Service Testing of Fire Hose.
- Reprinted with permission from the Association of Rubber Products Manufacturers (ARPM), Hose Handbook, RMA/IP-2/2003 (ARPM has replaced RMA)



# FOR THE TRANSFER OF AIR, WATER & MODERATE CHEMICAL SOLUTIONS

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Hoses are constantly being upgraded. Jason Industrial reserves the right to make changes in construction without prior notice.





4103

### **RED PVC AIR HOSE - MEDIUM OIL RESISTANT**







**CONSTRUCTION:** Tube and cover are PVC, smooth,

medium oil resistance, ARPM Class C. Cover is red. Reinforcement is one braid, synthetic material.

**TEMPERATURE:** -15°F (-26°C) to +150°F (+66°C)

**BRANDING:** ID XX" (XXmm) Jason logo WP PSI 4103

(Country of Origin).

**APPLICATION:** General purpose use, including air,

water and mild chemical applications.

#### **FEATURES:**

- Oil mist resistant tube.
- Non-marking cover.
- Ozone and weather resistant.
- Resistant to ultra-violet (UV) light rays.

Part Number	in.	.D. mm.	O in.	.D. mm.	Rein. Braids	Max W.P. PSI	@68°F BAR	Vacuum @68°F	Wei lb./ft.	-		BR* mm	Std. Lgth. (ft)	
4103-0025-328	1/4	6.35	0.44	11.18	1	300	20.68	n/a	0.07	0.10	1.70	43.20	328	
4103-0031-328	5/16	7.94	0.50	12.70	1	300	20.68	n/a	0.08	0.12	2.10	53.30	328	
4103-0037-328	3/8	9.53	0.59	14.99	1	300	20.68	n/a	0.10	0.15	2.50	63.50	328	
4103-0050-328	1/2	12.70	0.75	19.05	1	300	20.68	n/a	0.16	0.24	3.30	83.80	328	
4103-0062-328	5/8	15.88	0.91	23.11	1	300	20.68	n/a	0.22	0.33	4.20	106.70	328	
4103-0075-164	3/4	19.05	1.05	26.59	1	215	14.81	n/a	0.28	0.42	5.00	127.00	164	
4103-0100-164	1	25.40	1.33	33.73	1	170	11.71	n/a	0.41	0.61	6.70	170.20	164	
Coupled 1/4"	Coupled 1/4" Male NPT x 1/4" Male NPT x 50' Hose Assembly													
4103-037450	3/8	9.53	0.59	14.99	1	300	20.68	n/a	0.10	0.15	2.50	63.50	50	

<sup>\*</sup>MBR = Minimum Bend Radius



### 4102

#### **MULTI-PURPOSE TPR HOSE - BLACK**







smooth, high oil resistance, ARPM Class A. Cover is black. Reinforcement is one braid, synthetic material.

CONSTRUCTION: Tube and cover are TPR (NBR/PVC), APPLICATION: For air, oil and medium grade fuels used in construction, shipyards, mining and agriculture.

#### **FEATURES:**

**TEMPERATURE:** -15°F (-26°C) to +176°F (+80°C)

BRANDING: ID XX" (XXmm) Jason logo WP PSI 4102

(Country of Origin).

- Class A oil mist resistant tube and cover.
- Ozone and weather resistant.
- Resistant to ultra-violet (UV) light rays.

Part Number	in.	.D. mm.	O. in.	.D. mm.	Rein. Braids		@68°F BAR	Vacuum @68°F		ight KG/m		BR* mm	Std. Lgth. (ft)
4102-0025-328	1/4	6.35	0.44	11.18	1	300	20.68	n/a	0.07	0.10	1.70	43.20	328
4102-0031-328	5/16	7.94	0.50	12.70	1	300	20.68	n/a	0.08	0.12	2.10	53.30	328
4102-0037-328	3/8	9.53	0.59	14.99	1	300	20.68	n/a	0.10	0.15	2.50	63.50	328
4102-0050-328	1/2	12.70	0.75	19.05	1	300	20.68	n/a	0.16	0.24	3.30	83.80	328
4102-0062-328	5/8	15.88	0.91	23.11	1	300	20.68	n/a	0.22	0.33	4.20	106.70	328
4102-0075-164	3/4	19.05	1.05	26.59	1	215	14.81	n/a	0.28	0.42	5.00	127.00	164
4102-0100-164	1	25.40	1.33	33.73	1	170	11.71	n/a	0.41	0.61	6.70	170.20	164

\*MBR = Minimum Bend Radius



4105

#### **MULTI-PURPOSE TPR HOSE - RED**







CONSTRUCTION: Tube and cover are TPR (NBR/PVC), APPLICATION: For air, oil and medium grade fuels

smooth, high oil resistance, ARPM Class A. Cover is red. Reinforcement is one braid, synthetic material.

used in construction, shipyards, mining and agriculture.

**TEMPERATURE:** -15°F (-26°C) to +176°F (+80°C)

**BRANDING:** 4105 Jason logo JASON ID in. (mm.)

WP PSI MULTIPURPOSE-AIR-WATER-

PETROLEUM ARPM CLASS A

#### **FEATURES:**

- Class A oil mist resistant tube and cover.
- Non-marking cover.
- Ozone and weather resistant.
- Resistant to ultra-violet (UV) light rays.

Part Number	in.	I.D. mm.	o in.	.D. mm.	Rein. Braids		. @68°F BAR	Vacuum @68°F	Wei lb./ft.	ght KG/m	ı	BR* mm	Std. Lgth. (ft)
4105-0025-328	1/4	6.35	0.44	11.18	1	300	20.68	n/a	0.07	0.10	1.70	43.20	328
4105-0031-328	5/16	7.94	0.50	12.70	1	300	20.68	n/a	0.08	0.12	2.10	53.30	328
4105-0037-328	3/8	9.53	0.59	14.99	1	300	20.68	n/a	0.10	0.15	2.50	63.50	328
4105-0050-328	1/2	12.70	0.75	19.05	1	300	20.68	n/a	0.16	0.24	3.30	83.80	328
4105-0075-164	3/4	19.05	1.05	26.59	1	215	14.81	n/a	0.28	0.42	5.00	127.00	164
4105-0100-164	1	25.40	1.33	33.73	1	170	11.71	n/a	0.41	0.61	6.70	170.20	164

\*MBR = Minimum Bend Radius



# 4121 JACKHAMMER HOSE ASSEMBLY - YELLOW 4122 JACKHAMMER HOSE ASSEMBLY - RED









CONSTRUCTION: Tube is an SBR/NBR blend. Cover

is EPDM, yellow or red. Reinforcement is a two-spiral polyester yarn. Crimped coupling

with universal end.

**TEMPERATURE:** -22°F (-30°C) to +176°F (+80°C)

BRANDING: ID 4121 or 4122 300 PSI WP Production Date.

**APPLICATION:** For jackhammer applications. **FEATURES:** 

- Coupling crimped:
  - Better hose/coupling retention
  - No snagging
  - No leaking
  - Easy to handle.
  - Weather, heat and ozone resistant.
  - Excellent abrasion resistance.
  - Hose WP is 300 PSI.

Part			O.D.		Rein.	Max W.F	P. @68°F**	Vacuum		-	MBR*	Std. Lgth.
Number	in.	mm.	in.	mm.	Spirals	PSI	BAR	@68°F	lb./ft.	KG/m	in. mm	(ft)
YELLOW												
4121-0075-050	3/4	19.05	1.16	29.50	2	150	10.35	n/a	0.54	0.80	5.00 127.00	50
RED												
4122-0075-050	3/4	19.05	1.16	29.50	2	150	10.35	n/a	0.54	0.80	5.00 127.00	50

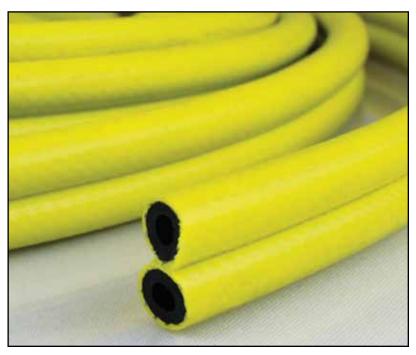
<sup>\*\*</sup>Assembly working pressure. Hose WP is 300 PSI

Safety clip and lanyard not supplied. For safety reasons, please follow all OSHA regulations.

#### \*MBR = Minimum Bend Radius



# 4142 BULK PNEUMATIC DEADMAN TWINLINE HOSE







Cover is yellow. Reinforcement is two spirals, synthetic fabric.

**TEMPERATURE:** -25°F (-32°C) to +180°F (+82°C)

**BRANDING:** Country of Origin

CONSTRUCTION: Tube and cover are TPR (NBR/PVC). APPLICATION: Used to pneumatically engage or

disengage the remote control on

sandblast machines.

#### **FEATURES:**

• Oil resistant.

- Bright yellow non-marking cover.
- Siamese two line construction.
- Heavy duty cover makes this a durable hose.

	Part Number	in.	.D. mm.	o in.	.D. mm.	Rein. Spirals		. @68°F BAR	Vacuum @68°F		-		BR* mm	Std. Lgth. (ft)
Γ	4142-0188-328	3/16	4.76	0.42	10.72	2	300	20.68	n/a	0.10	0.15	1.30	31.80	328

<sup>\*</sup>MBR = Minimum Bend Radius



## 4302 TEXTILE REINFORCED AIR HOSE - 400 PSI







CONSTRUCTION: Tube is a nitrile blend, smooth and

black. Cover is SBR, fabric impression, yellow, pin-pricked. Reinforcement is a two-ply

synthetic fabric.

**TEMPERATURE:** -25°F (-32°C) to +200°F (+93°C)

**BRANDING:** Jason logo 4302 TEXTILE AIR WP (PSI) (BAR). Blue mylar longitudinal stripe.

**APPLICATION:** For tough applications in mines and quarries.

#### **FEATURES:**

- Oil mist resistant tube.
- Bright yellow non-marking cover.
- Medium high working pressure.
- Weather and ozone resistant.
- Excellent abrasion resistance.

Part Number	in.	.D. mm.	o in.	D.D. mm.	Rein. Plies	Max W.P PSI	. @68°F BAR	Vacuum @68°F		ght KG/m		BR* mm	Std. Lgth. (ft)
4302-0050-050	1/2	12.70	0.91	23.11	2	400	27.58	n/a	0.32	0.48	6.00	152.40	50
4302-0075-050	3/4	19.05	1.18	29.97	2	400	27.58	n/a	0.40	0.60	7.50	190.00	50
4302-0100-050	1	25.40	1.46	37.08	2	400	27.58	n/a	0.54	0.80	10.00	254.00	50
4302-0150-050	1-1/2	38.10	2.05	52.07	2	400	27.58	n/a	0.92	1.37	15.00	280.00	50
4302-0200-050	2	50.80	2.64	67.06	2	400	27.58	n/a	1.37	2.04	20.00	508.00	50

<sup>\*</sup>MBR = Minimum Bend Radius



### 4305 TEXTILE REINFORCED AIR HOSE - 300 PSI







**CONSTRUCTION:** Tube is a nitrile blend, smooth and

black. Cover is Nitrile/SBR, fabric impression, yellow, pin-pricked. Reinforcement is a two-ply

synthetic fabric.

**TEMPERATURE:** -25°F (-32°C) to +200°F (+93°C)

**BRANDING:** Jason logo 4305 TEXTILE AIR WP (PSI)

(BAR). Blue mylar longitudinal stripe.

**APPLICATION:** For rugged air line service in mining,

quarries, construction, sandblasting, industrial air placement and equipment

rental.

#### **FEATURES:**

- Oil mist resistant tube.
- Bright yellow non-marking cover.
- Weather and ozone resistant.
- Excellent abrasion resistance.

Part Number	l. in.	D. mm.	in.	D.D. mm.	Rein. Plies	Max W.F PSI	P. @68°F BAR	Vacuum @68°F		ight KG/m		BR* mm	Std. Lgth. (ft)
4305-0050-100	1/2	12.70	0.91	23.11	2	300	24.13	n/a	0.32	0.48	6.00	152.40	100
4305-0075-100	3/4	19.05	1.18	29.97	2	300	24.13	n/a	0.40	0.60	7.50	190.00	100
4305-0100-050	1	25.40	1.46	37.08	2	300	24.13	n/a	0.54	0.80	10.00	254.00	50
4305-0100-100	1	25.40	1.46	37.08	2	300	24.13	n/a	0.54	0.80	10.00	254.00	100
4305-0125-100	1-1/4	31.75	1.81	45.97	2	300	24.13	n/a	0.81	1.21	12.50	320.00	100
4305-0150-100	1-1/2	38.10	2.05	52.07	2	300	24.13	n/a	0.92	1.37	15.00	381.00	100
4305-0200-100	2	50.80	2.64	67.06	2	300	24.13	n/a	1.37	2.04	20.00	508.00	100
4305-0250-100	2-1/2	63.50	3.15	80.01	2	300	24.13	n/a	1.69	2.51	25.00	635.00	100
4305-0300-050	3	76.20	3.70	93.98	2	300	24.13	n/a	2.16	3.21	30.00	762.00	50
4305-0300-100	3	76.20	3.70	93.98	2	300	24.13	n/a	2.16	3.21	30.00	762.00	100

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability. We disclaim any liability for use of our products in applications other than which they are designed.



### 4805

## **WIRE REINFORCED AIR HOSE**







**CONSTRUCTION:** Tube is nitrile blend, smooth and

black. Cover is SBR, yellow, fabric impression and pin-pricked. Reinforcement is two spiral wires.

**TEMPERATURE:** -25°F (-32°C) to +200°F (+93°C)

BRANDING: Jason logo 4805 WIRE AIR WP (PSI) (BAR).

**APPLICATION:** For heavy duty air supply in mining,

quarries, construction, industrial air place ment, sandblasting and heavy duty

equipment rental.

#### **FEATURES:**

• Oil mist resistant tube with high working pressure.

• Bright yellow non-marking cover.

• Heavy duty cover makes this a durable hose.

					I	ı							
Part Number	in.	.D. mm.	in.	D.D. mm.	Rein. Spirals	Max W.P PSI	. @68°F BAR	Vacuum @68°F		eight . KG/m		BR* mm	Std. Lgth. (ft)
4805-0050-050	1/2	12.70	0.91	23.11	2	600	41.37	n/a	0.36	0.54	5.50	140.00	50
4805-0050-100	1/2	12.70	0.91	23.11	2	600	41.37	n/a	0.36	0.54	5.50	140.00	100
4805-0075-050	3/4	19.05	1.22	30.99	2	600	41.37	n/a	0.60	0.89	8.30	210.00	50
4805-0075-100	3/4	19.05	1.22	30.99	2	600	41.37	n/a	0.60	0.89	8.30	210.00	100
4805-0100-050	1	25.40	1.49	37.85	2	600	41.37	n/a	0.80	1.19	11.00	280.00	50
4805-0100-100	1	25.40	1.49	37.85	2	600	41.37	n/a	0.80	1.19	11.00	280.00	100
4805-0125-050	1-1/4	31.75	1.81	45.97	2	600	41.37	n/a	1.05	1.56	13.80	350.00	50
4805-0125-100	1-1/4	31.75	1.81	45.97	2	600	41.37	n/a	1.05	1.56	13.80	350.00	100
4805-0150-050	1-1/2	38.10	2.04	51.82	2	600	41.37	n/a	1.24	1.85	16.50	420.00	50
4805-0150-100	1-1/2	38.10	2.04	51.82	2	600	41.37	n/a	1.24	1.85	16.50	420.00	100
4805-0200-050	2	50.80	2.60	66.04	2	600	41.37	n/a	1.80	2.68	22.00	560.00	50
4805-0200-100	2	50.80	2.60	66.04	2	600	41.37	n/a	1.80	2.68	22.00	560.00	100
4805-0250-050	2-1/2	63.50	3.15	80.01	2	600	41.37	n/a	2.40	3.57	27.50	700.00	50
4805-0250-100	2-1/2	63.50	3.15	80.01	2	600	41.37	n/a	2.40	3.57	27.50	700.00	100
4805-0300-050	3	76.20	3.70	93.98	2	600	41.37	n/a	3.22	4.79	33.10	840.00	50
4805-0300-100	3	76.20	3.70	93.98	2	600	41.37	n/a	3.22	4.79	33.10	840.00	100
4805-0400-050	4	101.60	4.88	123.95	2	600	41.37	n/a	4.70	6.99	44.10	1120.00	50
4805-0400-100	4	101.60	4.88	123.95	2	600	41.37	n/a	4.70	6.99	44.10	1120.00	100
4805-0600-050	6	152.40	6.89	175.01	2	600	41.37	n/a	6.82	10.14	63.00	1600.20	50
4805-0600-100	6	152.40	6.89	175.01	2	600	41.37	n/a	6.82	10.14	63.00	1600.20	100

\*MBR = Minimum Bend Radius Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.



4807

#### **HI-TEMP AIR HOSE - WIRE REINFORCED**







temperature is required. For use with high-temperature compressors without

an after-cooler, mining, quarries, con-

blasting and heavy duty equipment.

struction, industrial air placement, sand

**CONSTRUCTION:** Tube is a hydraulic oil resistant,

high heat synthetic rubber. Cover is EPDM, yellow, pin-pricked.

Reinforcement is a two-spiral wire.

**TEMPERATURE:** -40°F (-40°C) to +275°F (+135°C)

**BRANDING:** Jason logo 4807 HIGH HEAT WIRE AIR

275°F (+135°C) 600 PSI/41.4 BAR. Green mylar longitudinal stripe.

**FEATURES:** 

• Hydraulic oil resistant tube.

Bright yellow non-marking cover.

**APPLICATION:** For heavy duty air supply where high

• High working pressure.

• Extreme heat resistance.

Abrasion and ozone resistant.

Part Number	I.D. in. mm.		in.	D.D. mm.	Rein. Spirals	Max W.P PSI	. @68°F BAR	Vacuum @68°F	_	eight KG/m	l	BR* mm	Std. Lgth. (ft)
4807-0075-050	3/4	19.05	1.42	36.00	2	600	41.37	n/a	0.60	0.89	8.30	210.00	50
4807-0075-100	3/4	19.05	1.42	36.00	2	600	41.37	n/a	0.60	0.89	8.30	210.00	100
4807-0100-050	1	25.40	1.93	49.00	2	600	41.37	n/a	0.80	1.19	11.00	280.00	50
4807-0100-100	1	25.40	1.93	49.00	2	600	41.37	n/a	0.80	1.19	11.00	280.00	100
4807-0200-050	2	50.80	2.48	63.00	2	600	41.37	n/a	1.80	2.68	22.00	560.00	50
4807-0200-100	2	50.80	2.48	63.00	2	600	41.37	n/a	1.80	2.68	22.00	560.00	100
4807-0300-050	3	76.20	3.50	89.00	2	600	41.37	n/a	3.22	4.79	33.10	840.00	50
4807-0300-100	3	76.20	3.50	89.00	2	600	41.37	n/a	3.22	4.79	33.10	840.00	100

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.

We disclaim any liability for use of our products in applications other than which they are designed.

# **CHEMICAL HOSE**



# FOR IN-PLANT OR TANK TRUCK USE TO TRANSFER CHEMICALS & SOLVENTS

SERIES		PAGE
4430	Cross-Linked Polyethylene Suction Hose	20
4433	UHMWPE Chemical Suction Hose	21

Hoses are constantly being upgraded. Jason Industrial reserves the right to make changes in construction without prior notice.





# **CHEMICAL HOSE**

### 4430 CROSS-LINKED POLYETHYLENE SUCTION HOSE







CONSTRUCTION: Tube is clear, smooth cross-linked

polyethylene (XLPE). Cover is EPDM, green with fabric impression. Reinforcement is two plies of synthetic fabric with a wire helix and a copper static wire.

**TEMPERATURE:** -40°F (-40°C) to +150°F (+66°C)

BRANDING: Jason logo 4430 XLPE ACID CHEMICAL ID

WP (PSI) (BAR). Blue mylar longitudinal stripe.

**APPLICATION:** For in-plant or tank truck use to transfer chemicals and solvents.

#### **FEATURES:**

- Versatile, it handles a variety of chemicals.
- Handles 90% of the chemical/acid applications.
- Reduces the need to stock several types of chemical hoses.
- EPDM cover is heat, weather & abrasion resistant.
- All sizes are full vacuum.

Part Number	I.D. in. mm.		in.	D.D. mm.	Rein. Plies	Max W.P. PSI	@68°F BAR	Vacuum @68°F	l	ight KG/m		BR* mm	Std. Lgth. (ft)
4430-0075-100	3/4	19.05	1.19	30.23	2	200	13.79	29.9	0.36	0.54	6.00	152.40	100
4430-0100-100	1	25.40	1.50	38.10	2	200	13.79	29.9	0.49	0.73	6.50	165.10	100
4430-0125-100	1-1/4	31.75	1.75	44.45	2	200	13.79	29.9	0.55	0.82	9.00	228.60	100
4430-0150-100	1-1/2	38.10	2.09	53.09	2	200	13.79	29.9	0.69	1.03	10.00	254.00	100
4430-0200-100	2	50.80	2.61	66.29	2	200	13.79	29.9	0.98	1.46	12.00	304.80	100
4430-0250-100	2-1/2	63.50	3.19	81.03	2	150	10.35	29.9	1.35	2.01	15.00	381.00	100
4430-0300-100	3	76.20	3.75	95.25	2	150	10.35	29.9	1.90	2.83	16.00	406.40	100
4430-0400-100	4	101.60	4.88	123.95	2	150	10.35	29.9	2.57	3.82	18.00	457.20	100

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability. We disclaim any liability for use of our products in applications other than which they are designed.

# **CHEMICAL HOSE**



#### 4433

#### **UHMWPE CHEMICAL SUCTION HOSE**







**CONSTRUCTION:** Tube is an Ultra-High Molecular

Weight Polyethylene (UHMWPE). Cover is EPDM, blue and corrugated. Reinforcement is a two-ply synthetic fabric with a wire helix.

**TEMPERATURE:** -40°F (-40°C) to +150°F (+66°C)

**BRANDING:** Jason logo 4433 UHMWPE ACID

CHEMICAL ID WP (PSI) (BAR). Orange mylar longitudinal stripe. **APPLICATION:** For in-plant or tank truck use to transfer chemicals and solvents.

#### **FEATURES:**

- Corrugations make the hose flexible.
- Handles 98% of the chemical/acid applications.
- Reduces the need to stock several types of chemical hoses.
- EPDM cover is heat, weather & abrasion resistant.
- All sizes are full vacuum.

Part Number	I in.	.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P. PSI	@68°F BAR	Vacuum @68°F		ight KG/m		BR* mm	Std. Lgth. (ft)
4433-0075-100	3/4	19.05	1.14	28.96	2	200	13.79	29.9	0.38	0.57	6.00	152.40	100
4433-0100-100	1	25.40	1.46	37.08	2	200	13.79	29.9	0.50	0.74	6.50	165.10	100
4433-0125-100	1-1/4	31.75	1.77	44.96	2	200	13.79	29.9	0.58	0.86	9.00	228.60	100
4433-0150-100	1-1/2	38.10	2.05	52.07	2	200	13.79	29.9	0.71	1.06	10.00	254.00	100
4433-0200-100	2	50.80	2.64	67.06	2	200	13.79	29.9	1.01	1.50	12.00	304.80	100
4433-0250-100	2-1/2	63.50	3.15	80.01	2	200	13.79	29.9	1.46	2.17	15.00	381.00	100
4433-0300-100	3	76.20	3.86	98.04	2	200	13.79	29.9	1.97	2.93	16.00	406.40	100
4433-0400-100	4	101.60	4.72	119.89	2	150	10.35	29.9	2.60	3.87	18.00	457.20	100

<sup>\*</sup>MBR = Minimum Bend Radius



# FOR IN-PLANT OR TANK TRUCK USE TO TRANSFER FOOD GRADE PRODUCTS

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Hoses are constantly being upgraded. Jason Industrial reserves the right to make changes in construction without prior notice.

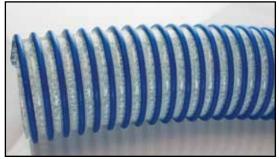




### 3000

# POLYURETHANE FDA USDA MATERIAL HANDLING HOSE - $S\Omega$







**CONSTRUCTION:** Polyurethane tube with high tensile

strength polyester yarn reinforcement.

Clockwise PVC helix with  $S\Omega$ 

ground wire.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Heavy duty food grade material

Heavy duty food grade material handling, railcar unloading, abrasive

suction and transfer.

#### **FEATURES:**

- Meets FDA requirements.
- Approved by USDA for use in meat & poultry plants.
- Clear visual flow and higher transfer pressures.
- Safety Ohm ( $S\Omega$ ) ground wire embedded into the hose wall to help prevent the build-up of static electricity.  $S\Omega$  wire must be secured to ground to dissipate static electricity.
- -40°F cold weather resistance with sub-zero flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- Vacuum up to 29" of Hg.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Braids	Max W.P. PSI	@68°F BAR	Vacuum @68°F		ght KG/m	M in.	BR* mm	Std. Lgth. (ft)
3000-0300-100	3	76.20	3.80	96.52	1	70	4.83	29.0	1.20	1.79	4.00	101.60	100
3000-0400-100	4	101.60	4.85	123.19	1	65	4.48	29.0	1.60	2.38	6.00	152.40	100
3000-0500-020	5	127.00	5.80	147.32	1	45	3.10	29.0	2.46	3.66	10.00	254.00	20
3000-0500-050	5	127.00	5.80	147.32	1	45	3.10	29.0	2.46	3.66	10.00	254.00	50
3000-0500-100	5	127.00	5.80	147.32	1	45	3.10	29.0	2.46	3.66	10.00	254.00	100
3000-0600-050	6	152.40	6.92	175.77	1	40	2.76	29.0	2.86	4.26	12.00	304.80	50
3000-0600-100	6	152.40	6.92	175.77	1	40	2.76	29.0	2.86	4.26	12.00	304.80	100

\*MBR = Minimum Bend Radius

 $S\Omega$  = Safety OHM

Working pressure is temperature dependent. See page 5 for more information.

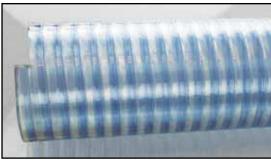
We disclaim any liability for use of our products in applications other than which they are designed.



3010

# HD PVC FDA USDA 3-A LIQUID FOOD SUCTION HOSE







**CONSTRUCTION:** PVC tube with a sturdy clockwise

PVC helix.

**TEMPERATURE:** -5°F (-23°C) to +140°F (+60°C)

**APPLICATION:** Transfer of food grade liquids, such as juices, wine, beer and potable water

and dairy products.

#### **FEATURES:**

- Meets FDA requirements.
- Approved by USDA for use in meat and poultry plants.
- Meets 3-A sanitary standards, which includes processing dairy products.
- Clear visual flow.
- Vacuum up to 29" of Hg.

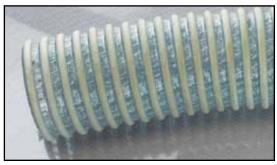
Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein.	Max W.F PSI	P. @68°F BAR	Vacuum @68°F		ght KG/m		BR* mm	Std. Lgth. (ft)
3010-0100-100	1	25.40	1.24	31.50	PVC Helix	71	4.90	29.9	0.26	0.39	3.00	76.20	100
3010-0125-100	1-1/4	31.75	1.54	39.12	PVC Helix	64	4.41	29.9	0.34	0.51	4.00	101.60	100
3010-0150-100	1-1/2	38.10	1.82	46.23	PVC Helix	57	3.93	29.9	0.44	0.65	6.00	152.40	100
3010-0200-100	2	50.80	2.39	60.71	PVC Helix	57	3.93	29.9	0.74	1.10	8.00	203.20	100
3010-0250-100	2-1/2	63.50	2.93	74.42	PVC Helix	57	3.93	29.9	1.01	1.50	10.00	254.00	100
3010-0300-100	3	76.20	3.43	87.12	PVC Helix	57	3.93	29.9	1.21	1.80	12.00	304.80	100
3010-0400-100	4	101.60	4.53	115.06	PVC Helix	43	2.97	29.9	2.02	3.01	15.00	381.00	100

\*MBR = Minimum Bend Radius



### **3012** PVC FDA 3-A LIQUID SUCTION HOSE - $S\Omega$







**CONSTRUCTION:** Non-toxic food grade PVC helix

(white) and PVC tube.

Reinforcement is one synthetic

braid.

**TEMPERATURE:** -50°F (-46°C) to +150°F (+66°C)

**BRANDING: None** 

**APPLICATION:** Food handling and heavy duty suction

and discharge applications. Also for processing wine, beer, food paste,

dairy and syrup.

#### **FEATURES:**

- Meets FDA, USDA and 3-A sanitary standards.
- Clear, visual flow.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- Vacuum rating up to 29" of HG.
- ullet Safety Ohm (S $\Omega$ ) embedded ground wire.
- -50°F cold weather resistant and still flexible.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Braids	Max W.P PSI	. @68°F BAR	Vacuum @68°F	Wei lb./ft.	-	M in.	BR* mm	Std. Lgth. (ft)
3012-0150-100	1-1/2	38.10	2.03	51.56	1	110	7.58	29.0	0.47	0.70	2.50	63.50	100
3012-0200-100	2	50.80	2.60	66.04	1	100	6.89	29.0	0.69	1.02	4.00	101.60	100
3012-0300-100	3	76.20	3.70	93.98	1	100	6.89	28.0	1.13	1.68	6.00	152.40	100
3012-0400-100	4	101.60	4.78	121.41	1	80	5.51	28.0	1.74	2.58	7.00	177.80	100
3012-0500-100	5	127.00	6.04	153.42	1	70	4.83	28.0	2.99	4.44	9.00	228.60	100

\*MBR = Minimum Bend Radius

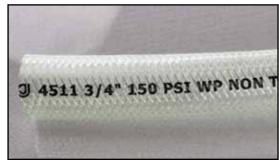
 $S\Omega$  = Safety OHM



#### 4511

#### **FDA BRAIDED PVC HOSE**







**CONSTRUCTION:** Tube and cover are crystal clear,

non-toxic FDA Grade. Reinforcement one braid of synthetic material.

**TEMPERATURE:** -14°F (-26°C) to +140°F (+60°C)

**BRANDING:** Jason logo WP (PSI) FDA NON-TOXIC,

Country of Origin.

**APPLICATION:** Food and beverage dispensing, potable

water, air, breathing lines, packaging and equipment, lube lines and other visual flow applications.

#### **FEATURES:**

- One piece coils.
- FDA Grade tube and cover.
- Resists chemical, ozone and weathering.
- Capable of handling a wide variety of food products.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Braids	Max W.P. PSI	@68°F BAR	Vacuum @68°F	Wei lb./ft.	ght KG/m	MI in.	3R* mm	Std. Lgth. (ft)
4511-0251	1/4	6.35	0.45	11.43	1	250	17.24	n/a	0.04	0.06	n/a	n/a	300
4511-0311	5/16	7.94	0.47	11.94	1	250	17.24	n/a	0.05	0.07	n/a	n/a	300
4511-0381	3/8	9.53	0.55	13.97	1	200	13.79	n/a	0.07	0.10	n/a	n/a	300
4511-0501	1/2	12.70	0.69	17.53	1	150	10.35	n/a	0.10	0.15	n/a	n/a	300
4511-0631	5/8	15.88	0.82	20.83	1	150	10.35	n/a	0.12	0.18	n/a	n/a	300
4511-0751	3/4	19.05	0.99	25.15	1	150	10.35	n/a	0.18	0.27	n/a	n/a	300
4511-1001	1	25.40	1.28	32.51	1	125	8.62	n/a	0.27	0.40	n/a	n/a	300
4511-1251	1-1/4	31.75	1.61	40.89	1	100	6.89	n/a	0.44	0.65	n/a	n/a	100
4511-1501	1-1/2	38.10	1.85	46.99	1	70	4.83	n/a	0.51	0.76	n/a	n/a	100
4511-2001	2	50.80	2.39	60.71	1	60	4.14	n/a	0.74	1.10	n/a	n/a	100

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.

We disclaim any liability for use of our products in applications other than which they are designed.



### 4600

### **FDA SPRING WIRE PVC HOSE**







**CONSTRUCTION:** Tube and cover are crystal clear,

FDA Grade. Reinforcement is electro-galvanized spring steel wire.

WII

**TEMPERATURE:** -14°F (-26°C) to +140°F (+60°C)

**BRANDING: None** 

**APPLICATION:** Food and beverage dispensing, air, water, coolant, car wash, deionized water systems and other clear flow applications.

#### **FEATURES:**

- Clear food grade PVC allows for visual flow inspection.
- Spring steel wire prevents kinking and collapsing.
- All sizes are full vacuum.

Part Number	in.	.D. mm.	in.	D.D. mm.	Rein.	Max W.I PSI	P. @68°F BAR	Vacuum @68°F	Wei	_	in.	IBR* mm	Std. Lgth. (ft)
4600-0380	3/8	9.53	0.63	16.00	Wire Spring	100	6.89	29.0	0.10	0.15	0.80	19.10	100
4600-0500	1/2	12.70	0.71	18.03	Wire Spring	100	6.89	29.0	0.13	0.19	1.00	25.40	100
4600-0630	5/8	15.88	0.90	22.86	Wire Spring	100	6.89	29.0	0.17	0.25	1.20	30.00	100
4600-0750	3/4	19.05	1.06	26.92	Wire Spring	100	6.89	29.0	0.24	0.36	1.30	34.00	100
4600-1000	1	25.40	1.31	33.27	Wire Spring	75	5.17	29.0	0.34	0.51	1.70	41.90	100
4600-1250	1-1/4	31.75	1.61	40.89	Wire Spring	75	5.17	29.0	0.50	0.74	2.00	50.80	50
4600-1500	1-1/2	38.10	1.85	46.99	Wire Spring	50	3.45	29.0	0.55	0.82	2.50	63.50	50
4600-2000	2	50.80	2.36	59.94	Wire Spring	50	3.45	29.0	0.84	1.25	3.20	82.00	50
4600-2500	2-1/2	63.50	2.97	75.44	Wire Spring	50	3.45	29.0	1.21	1.80	5.50	139.70	50
4600-3000	3	76.20	3.51	89.15	Wire Spring	50	3.45	29.0	1.48	2.20	6.50	165.10	50
4600-3500	3-1/2	88.90	4.09	103.89	Wire Spring	50	3.45	29.0	1.95	2.90	7.50	190.50	50
4600-4000	4	101.60	4.57	116.08	Wire Spring	50	3.45	29.0	2.18	3.24	8.50	215.90	50

<sup>\*</sup>MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.



### 4460

#### **FDA BULK FOOD SUCTION HOSE**







**CONSTRUCTION:** Tube is white natural rubber (NR),

3/16" thick, FDA Grade. Cover is natural rubber, gray with flat corrugations. Two-ply reinforcement with a steel wire helix.

**TEMPERATURE:** -40°F (-40°C) to +150°F (+66°C)

**BRANDING:** Jason logo 4460 FDA ID 3/16" Tube BULK

FOOD SUCTION WP (PSI) (BAR). Orange mylar longitudinal stripe.

**APPLICATION:** For suction, pneumatic or gravity transfer of flour, sugar, syrup or edible grains.

#### **FEATURES:**

- Corrugations make the hose extremely flexible.
- FDA Grade tube, natural rubber.
- Natural rubber cover is weather and abrasion resistant.
- All sizes are full vacuum.

-													
Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P. PSI	@68°F BAR	Vacuum @68°F		ight KG/m	MI in.	BR* mm	Std. Lgth. (ft)
4460-0100-100	1	25.40	1.49	37.85	2	150	10.35	29.0	0.69	1.03	4.50	114.30	100
4460-0150-100	1-1/2	38.10	2.05	52.07	2	150	10.35	29.0	0.98	1.46	5.00	127.00	100
4460-0200-100	2	50.80	2.66	67.56	2	150	10.35	29.0	1.37	2.04	6.00	152.40	100
4460-0200-200	2	50.80	2.66	67.56	2	150	10.35	29.0	1.37	2.04	6.00	152.40	200
4460-0250-100	2-1/2	63.50	3.07	77.98	2	150	10.35	29.0	1.67	2.49	8.00	203.20	100
4460-0300-100	3	76.20	3.62	91.95	2	150	10.35	29.0	2.14	3.18	10.00	254.00	100
4460-0350-100	3-1/2	88.90	4.21	106.93	2	150	10.35	29.0	2.60	3.87	12.00	304.80	100
4460-0400-100	4	101.60	4.72	119.89	2	150	10.35	29.0	3.14	4.67	20.00	508.00	100
4460-0450-060	4-1/2	114.30	5.27	133.86	2	150	10.35	29.0	3.94	5.86	22.00	558.80	60
4460-0500-100	5	127.00	5.71	145.03	2	150	10.35	29.0	4.67	6.95	24.00	609.60	100
4460-0600-020	6	152.40	6.77	171.96	2	150	10.35	29.0	5.98	8.90	26.00	660.40	20
4460-0600-100	6	152.40	6.77	171.96	2	150	10.35	29.0	5.98	8.90	26.00	660.40	100
4460-0662-020	6-5/8	168.28	7.52	191.01	2	150	10.35	29.0	7.31	10.88	29.00	736.60	20
4460-0688-020	6-7/8	174.63	7.80	198.13	2	150	10.35	29.0	7.81	11.58	30.00	762.60	20
4460-0800-020	8	203.20	8.78	223.01	2	150	10.35	29.0	9.36	13.93	32.00	812.80	20
4460-0862-020	8-5/8	219.08	9.33	236.98	2	125	8.62	29.0	9.64	14.35	36.00	914.40	20
4460-1000-020	10	254.00	10.83	275.08	2	125	8.62	29.0	11.57	17.22	44.00	1117.60	20
4460-1200-020	12	304.80	12.83	325.88	2	100	6.89	29.0	15.27	22.72	60.00	1524.00	20
4460-1400-020	14	355.60	14.76	374.90	2	100	6.89	29.0	18.41	27.40	72.00	1828.80	20

\*MBR = Minimum Bend Radius



#### 4465

#### **FDA LIQUID FOOD SUCTION HOSE**







**CONSTRUCTION:** Tube is white nitrile rubber FDA

Grade. Cover is nitrile, corrugated and white. Two-ply reinforcement with a steel wire helix.

**TEMPERATURE:** -25°F (-32°C) to +200°F (+93°C)

**BRANDING:** Jason logo 4465 FDA LIQUID FOOD

SUCTION WP 150 PSI 10.35 BAR. Blue mylar longitudinal stripe.

**APPLICATION:** For suction and discharge of liquid food products, including oily edibles and beer.

#### **FEATURES:**

- Corrugations make the hose extremely flexible.
- FDA Grade tube, nitrile rubber.
- Nitrile rubber cover is weather and abrasion resistant.
- All sizes are full vacuum.
- Capable of handling a wide variety of food products.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P. PSI	@68°F BAR			ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4465-0075-100	3/4	19.05	1.10	28.00	2	150	10.35	29.0	0.34	0.51	2.40	60.00	100
4465-0100-100	1	25.40	1.38	35.00	2	150	10.35	29.0	0.45	0.67	3.10	80.00	100
4465-0150-100	1-1/2	38.10	2.05	52.07	2	150	10.35	29.0	1.06	1.58	4.00	101.60	100
4465-0200-100	2	50.80	2.56	65.02	2	150	10.35	29.0	1.35	2.01	5.00	127.00	100
4465-0300-100	3	76.20	3.56	90.42	2	150	10.35	29.0	2.08	3.10	6.00	152.40	100
4465-0400-100	4	101.60	4.69	119.13	2	150	10.35	29.0	3.21	4.79	8.00	203.20	100

\*MBR = Minimum Bend Radius



# FOR THE TRANSFER OF BULK MATERIAL, ABRASIVES, CONCRETE & CEMENT

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Hoses are constantly being upgraded. Jason Industrial reserves the right to make changes in construction without prior notice.

\*\*Vacitation and hability for use of our products in applications other than which they are designed.

30



### 3020

#### **HD POLYURETHANE LINED, PVC MATERIAL HANDLING HOSE**







**CONSTRUCTION:** Polyurethane abrasion resistant

liner with a PVC cover and a sturdy clockwise PVC helix.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** For vacuum and transfer of abrasive crushed rock, gravel, sand or dry fertilizers, fly ash and also used for shot blast recovery.

#### **FEATURES:**

- Abrasion resistant PU liner.
- Static dissipating cover compound.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Easy to drag with "Glo-Glide" external clockwise PVC helix.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein.	Max W.P. PSI	@68°F BAR	Vacuum @68°F	Weig lb./ft.			BR* mm	Std. Lgth. (ft)
3020-0150-100	1-1/2	38.10	1.85	46.99	PVC Helix	50	3.45	29.0	0.42	0.63	2.00	50.80	100
3020-0200-100	2	50.80	2.40	60.96	PVC Helix	40	2.76	29.0	0.59	0.88	3.00	76.20	100
3020-0250-100	2-1/2	63.50	3.09	78.49	PVC Helix	40	2.76	29.0	0.82	1.22	3.00	76.20	100
3020-0300-100	3	76.20	3.64	92.46	PVC Helix	40	2.76	29.0	1.18	1.76	4.00	101.60	100
3020-0400-100	4	101.60	4.76	120.90	PVC Helix	35	2.41	29.0	1.94	2.89	6.00	152.40	100
3020-0600-020	6	152.40	6.80	172.72	PVC Helix	30	2.07	28.0	3.50	5.21	12.00	304.80	20
3020-0600-050	6	152.40	6.80	172.72	PVC Helix	30	2.07	28.0	3.50	5.21	12.00	304.80	50
3020-0600-100	6	152.40	6.80	172.72	PVC Helix	30	2.07	28.0	3.50	5.21	12.00	304.80	100
3020-0800-020	8	203.20	9.16	232.66	PVC Helix	30	2.07	28.0	5.90	8.78	18.00	457.20	20
3020-0800-050	8	203.20	9.16	232.66	PVC Helix	30	2.07	28.0	5.90	8.78	18.00	457.20	50

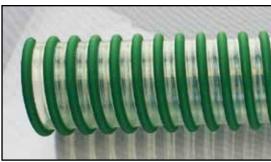
<sup>\*</sup>MBR = Minimum Bend Radius



3021

# POLYURETHANE MATERIAL HANDLING AND DUCT HOSE







**CONSTRUCTION:** Polyurethane abrasion resistant tube

with sturdy clockwise PVC helix.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Insulation blowing, fume removal,

ducting, ventilation and dust collection.

#### **FEATURES:**

- Abrasion resistant PU.
- Clear visual flow.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.

Part Number	in.	.D. mm.	in.	D.D. mm.	Rein.	Max W.F PSI	P. @68°F BAR	Vacuum @68°F		ight KG/m	MI in.	BR* mm	Std. Lgth. (ft)
3021-0150-100	1-1/2	38.10	1.82	46.23	PVC Helix	20	1.38	15.0	0.23	0.34	0.70	17.80	100
3021-0200-100	2	50.80	2.40	60.96	PVC Helix	15	1.03	12.0	0.32	0.48	1.37	34.80	100
3021-0250-100	2-1/2	63.50	2.90	73.66	PVC Helix	10	0.69	10.0	0.39	0.58	1.37	34.80	100
3021-0300-100	3	76.20	3.43	87.12	PVC Helix	10	0.69	10.0	0.55	0.82	2.25	57.20	100
3021-0400-100	4	101.60	4.48	113.79	PVC Helix	8	0.55	8.0	0.77	1.15	3.00	76.20	100

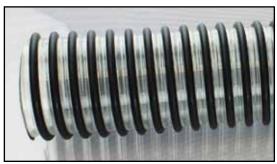
\*MBR = Minimum Bend Radius



3022

# MEDIUM DUTY POLYURETHANE LINED MATERIAL HANDLING HOSE







**CONSTRUCTION:** Medium duty abrasion resistant

polyurethane liner with static dissipating PVC cover and sturdy clockwise PVC helix.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Dust collection, dry fertilizer, plastic pellets or any dry medium abrasive

requirements.

#### **FEATURES:**

- Abrasion resistant PU tube.
- Clear visual flow.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- Static dissipating PVC cover compound.

Part Number	in.	.D. mm.	in.	D.D. mm.	Rein.	Max W.P. PSI	@68°F BAR			ight KG/m		BR* mm	Std. Lgth. (ft)
3022-0150-100	1-1/2	38.10	1.91	48.51	PVC Helix	30	2.07	24.0	0.29	0.43	1.37	34.80	100
3022-0200-100	2	50.80	2.46	62.48	PVC Helix	25	1.72	22.0	0.40	0.60	2.50	63.50	100
3022-0250-100	2-1/2	63.50	2.90	73.66	PVC Helix	20	1.38	19.0	0.54	0.80	2.50	63.50	100
3022-0300-100	3	76.20	3.53	89.66	PVC Helix	20	1.38	18.0	0.68	1.01	4.00	101.60	100
3022-0400-100	4	101.60	4.57	116.08	PVC Helix	15	1.03	13.0	1.01	1.50	6.00	152.40	100

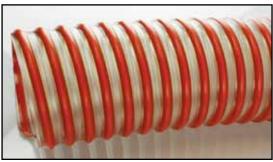
<sup>\*</sup>MBR = Minimum Bend Radius



3030

#### **PVC MULCH RESURFACING HOSE**







**CONSTRUCTION:** Abrasion resistant PVC tube with sturdy clockwise PVC helix.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Standard duty material handling hose to dispense mulch, bark, wood chips

or for resurfacing and landscaping.

#### **FEATURES:**

- Abrasion resistant PVC tube.
- Clear visual flow.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.

Part Number	I.D. in. mm.		O.D. in. mm.		Rein.	Max W PSI	/.P. @68°F BAR		Wei	ight KG/m		BR* mm	Std. Lgth. (ft)
3030-0400-100	4	101.60	4.55	115.57	PVC Helix	35	2.41	29.0	1.35	2.01	9.00	228.60	100
3030-0500-100	5	127.00	5.60	142.24	PVC Helix	30	2.07	24.0	1.75	2.60	10.00	254.00	100
3030-0600-100	6	152.40	6.79	172.47	PVC Helix	25	1.72	24.0	2.42	3.60	11.00	279.40	100

\*MBR = Minimum Bend Radius



## 3035

## ABRASION RESISTANT SBR MATERIAL HANDLING HOSE







**CONSTRUCTION:** Abrasion resistant SBR tube and

cover that are both static dissipating with a sturdy clockwise helix.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Abrasive suction for crushed rock, sand, dry fertilizer, small gravel and powdered

cement. Can also be used as a boom hose for catch basin clean out.

#### **FEATURES:**

- Heavy-duty abrasion resistance.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- No ground wire is needed as the tube and cover compound are static dissipating.
- Lightweight

Part Number	in.	I.D. mm.	in.	O.D. mm.	Rein.	Max W.I PSI	P. @68°F BAR		Wei lb./ft.	ght KG/m	l	1BR* mm	Std. Lgth. (ft)
3035-0150-100	1-1/2	38.10	1.82	46.23	PVC Helix	45	3.10	29.0	0.37	0.55	2.00	50.80	100
3035-0200-100	2	50.80	2.35	59.69	PVC Helix	40	2.76	29.0	0.50	0.74	2.50	63.50	100
3035-0250-100	2-1/2	63.50	2.95	74.93	PVC Helix	35	2.41	29.0	0.88	1.31	2.50	63.50	100
3035-0300-100	3	76.20	3.51	89.15	PVC Helix	35	2.41	29.0	1.10	1.64	3.00	76.20	100
3035-0400-100	4	101.60	4.63	117.60	PVC Helix	30	2.07	29.0	1.76	2.62	4.50	114.30	100
3035-0500-100	5	127.00	5.75	146.05	PVC Helix	30	2.07	28.0	2.47	3.68	5.00	127.00	100
3035-0600-050	6	152.40	6.73	170.94	PVC Helix	30	2.07	28.0	3.09	4.60	9.00	228.60	50
3035-0600-100	6	152.40	6.73	170.94	PVC Helix	30	2.07	28.0	3.09	4.60	9.00	228.60	100
3035-0800-050	8	203.20	9.04	230.00	PVC Helix	30	2.07	27.0	5.65	8.40	15.00	381.00	50

<sup>\*</sup>MBR = Minimum Bend Radius



4470

#### **BULK MATERIAL SUCTION HOSE**







**CONSTRUCTION:** Tube is 1/4" pure gum rubber, tan color. Cover is EPDM, fabric impression, corrugated and black. Reinforcement is a two-ply synthetic fabric with a wire helix and a

**TEMPERATURE:** -40°F (-40°C) to +180°F (+82°C) **BRANDING:** Jason logo 4470 DRY BULK SUCTION

WP (PSI) (BAR). White mylar longitudinal

static wire.

stripe

**APPLICATION:** For suction, discharge or gravity flow of abrasives from manufacturing, sandblast recovery, mineral processing power plants and spill recovery.

#### **FEATURES:**

- 1/4" gum tube is highly abrasion resistant.
- Corrugated to make the hose flexible, even in tight bends.
- Weather and ozone resistant.
- All sizes are full vacuum.
- Static wire, when grounded, dissipates static electricity.

Part Number	in.	.D. mm.	o in.	.D. mm.	Rein. Plies	Max W.P. PSI	@68°F BAR	Vacuum @68°F		ight . KG/m		IBR* mm	Std. Lgth. (ft)
4470-0125-100	1-1/4	31.75	1.81	46.00	2	75	5.17	29.0	0.77	1.14	4.00	101.60	100
4470-0150-100	1-1/2	38.10	2.10	53.34	2	75	5.17	29.0	1.11	1.65	4.00	101.60	100
4470-0200-100	2	50.80	2.60	66.04	2	75	5.17	29.0	1.30	1.93	12.00	304.80	100
4470-0250-100	2-1/2	63.50	3.11	78.99	2	75	5.17	29.0	1.65	2.46	17.00	431.80	100
4470-0300-100	3	76.20	3.66	92.96	2	75	5.17	29.0	2.25	3.35	18.00	457.20	100
4470-0400-050	4	101.60	4.69	119.13	2	75	5.17	29.0	2.93	4.36	24.00	609.60	50
4470-0400-100	4	101.60	4.69	119.13	2	75	5.17	29.0	2.93	4.36	24.00	609.60	100
4470-0500-100	5	127.00	5.70	144.78	2	75	5.17	29.0	3.83	5.70	30.00	762.00	100
4470-0600-050	6	152.40	6.73	170.94	2	75	5.17	29.0	5.00	7.44	32.00	812.80	50
4470-0600-100	6	152.40	6.73	170.94	2	75	5.17	29.0	5.00	7.44	32.00	812.80	100
4470-0800-020	8	203.20	9.13	231.90	2	60	4.14	29.0	10.05	14.96	40.00	1016.00	20
4470-0800-050	8	203.20	9.13	231.90	2	60	4.14	29.0	10.05	14.96	40.00	1016.00	50

<sup>\*</sup>MBR = Minimum Bend Radius



## 4425

### **HOT AIR BLOWER HOSE**







**CONSTRUCTION:** Tube and cover are EPDM. Cover is **APPLICATION:** Used to convey hot air from blower to tank brown, fabric impression.

on bulk transport trucks.

Reinforcement is synthetic fabric

with a wire helix.

**TEMPERATURE:** Intermittent to +350°F (+177°C)

**BRANDING:** Jason logo 4425 HOT AIR 325°F WP

50 PSI 3.4 BAR.

White mylar longitudinal stripe.

#### **FEATURES:**

- EPDM tube and cover for high heat resistance.
- Temp range up to 350°F (intermittent).
- Excellent flexibility.
- All sizes full vacuum.

Part		I.D.	0	D.D.	Rein.	Max W.F	P. @68°F	Vacuum	We	ight	М	IBR*	Std. Lgth.
Number	in.	mm.	in.	mm.	Plies	PSI	BAR	@68°F	lb./ft.	KG/m	in.	mm	(ft)
4425-0300-100	3	76.20	3.56	90.42	2	50	3.45	29.0	1.93	2.87	5.50	139.70	100
4425-0400-100	4	101.60	4.60	118.84	2	50	3.45	29.0	2.65	3.94	7.00	177.80	100

<sup>\*</sup>MBR = Minimum Bend Radius



4322 4323 4324

1/8" TUBE SAND & DRY CEMENT, POWDER DISCHARGE HOSE 3/16" TUBE SAND & DRY CEMENT, POWDER DISCHARGE HOSE 1/4" TUBE SAND & DRY CEMENT, POWDER DISCHARGE HOSE







**CONSTRUCTION:** Tube is NR/SBR blend, black and

static-dissipating. Reinforcement is

a two-ply synthetic fabric.

**TEMPERATURE:** -40°F (-40°C) to +185°F (+85°C)

**BRANDING:** Jason logo 4322, 4323 or 4324 DRY

BULK DISCHARGE ID Tube WP 75 PSI

5.17 BAR.

White mylar longitudinal stripe.

**APPLICATION:** For pneumatic discharge of dry powders,

dry cement or other dry materials. Also used for sand/water mix applications on

fracking sites.

#### **FEATURES:**

- Special static dissipating tube compound.
- Weather and ozone resistant.
- High abrasion resistant tube resists cutting/gouging.
- Can be rolled for transport and storage.

_						
1	/8"	Τl	JRF	TH	ICKN	IFSS

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.I	P. @68°F BAR		Wei	ght KG/m	in.	1BR* mm	Std. Lgth. (ft)
4322-0400-100	4			113.79		75	5.17	n/a	1.60	2.38	40.00		<del>- ` ` -</del>
4322-0500-100	5	127.00	5.46	138.68	2	75	5.17	n/a	1.88	2.80	50.00	1270.00	100

#### 3/16" TUBE THICKNESS

4323-0400-100	4	101.60	4.68 118.87	2	75	5.17	n/a	2.42	3.60	40.00 1016.00	100
4323-0500-100	5	127.00	5.68 144.27	2	75	5.17	n/a	2.92	4.35	50.00 1270.00	100

#### 1/4" TUBE THICKNESS

4324-0400-100	4	101.60	4.84 122.94	2	75	5.17	n/a	3.23	4.81	40.00 1016.00	100
4324-0500-100	5	127.00	5.84 148.34	2	75	5.17	n/a	3.80	5.65	50.00 1270.00	100

\*MBR = Minimum Bend Radius



#### 4370 **CONCRETE PLACEMENT HOSE - 800 PSI**







**CONSTRUCTION:** Tube is a blend of synthetic and natural elastomers, black, smooth and anti-static. Cover is also a blend of synthetic and natural elastomers, black, smooth with a cloth impression. Reinforcement is several spirals of high tensile textile cord.

**TEMPERATURE:** -22°F (-30°C) to +185°F (+85°C)

BRANDING: Jason logo 4370 800 PSI WP TEXTILE

CONCRETE PLACEMENT. Clear mylar longitudinal stripe. **APPLICATION:** High pressure concrete placement applications.

#### **FEATURES:**

- Anti-static tube and cover.
- Cover is abrasion, weather and ozone resistant.
- Designed for high kink resistance and perfect flow.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Spirals	Max W.P. PSI	. @68°F BAR	Vacuum @68°F		ight KG/m	MI in.	BR* mm	Std. Lgth. (ft)
4370-0200-050	2	50.80	2.68	68.00	6	800	55.2	n/a	1.41	2.09	13.75	350.00	50
4370-0200-100	2	50.80	2.68	68.00	6	800	55.2	n/a	1.41	2.09	13.75	350.00	100
4370-0300-050	3	76.20	3.78	96.00	6	800	55.2	n/a	2.40	3.57	16.10	408.00	50
4370-0300-100	3	76.20	3.78	96.00	6	800	55.2	n/a	2.40	3.57	16.10	408.00	100
4370-0400-050	4	101.60	4.96	126.00	8	800	55.2	n/a	4.23	6.29	26.00	660.00	50
4370-0400-100	4	101.60	4.96	126.00	8	800	55.2	n/a	4.23	6.29	26.00	660.00	100

<sup>\*</sup>MBR = Minimum Bend Radius



4375

#### **CONCRETE PLACEMENT HOSE - 1300 PSI**







**CONSTRUCTION:** Tube is a blend of synthetic and natural elastomers, black, smooth and anti-static. Cover is also a blend of synthetic and natural elastomers, black, smooth with a cloth impression and anti-static. Reinforcement is a 2 or 4-spiral high tensile steel wire.

**TEMPERATURE:** -22°F (-30°C) to +185°F (+85°C)

BRANDING: Jason logo 4375 1300 PSI WP WIRE

CONCRETE PLACEMENT.

Clear stripe with reversed lettering.

**APPLICATION:** For very high pressure concrete placement applications.

#### **FEATURES:**

- Tube and cover compounds are anti-static.
- Tube is abrasion resistant.
- Cover is abrasion, ozone and weather resistant.
- Designed for high kink resistance and perfect flow.

Part Number	in.	I.D. mm.	in.	O.D. mm.	Rein. Spirals		P. @68°F BAR	Vacuum @68°F		ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4375-0200-050	2	50.80	2.87	73.00	2	1300	89.6	n/a	1.95	2.91	16.10	410.00	50
4375-0200-100	2	50.80	2.87	73.00	2	1300	89.6	n/a	1.95	2.91	16.10	410.00	100
4375-0300-050	3	76.20	4.02	102.00	4	1300	89.6	n/a	3.63	5.40	24.00	610.00	50
4375-0300-100	3	76.20	4.02	102.00	4	1300	89.6	n/a	3.63	5.40	24.00	610.00	100
4375-0400-050	4	101.60	5.12	130.00	4	1300	89.6	n/a	5.31	7.90	32.30	820.00	50
4375-0400-100	4	101.60	5.12	130.00	4	1300	89.6	n/a	5.31	7.90	32.30	820.00	100

<sup>\*</sup>MBR = Minimum Bend Radius



4310 **GUNITE HOSE** 







tan color. Cover is EPDM, pin-pricked and tan in color. Reinforcement is a two-ply synthetic fabric with a static wire.

**TEMPERATURE:** -40°F (-40°C) to +185°F (+85°C)

**BRANDING:** Jason logo 4310 GUNITE 150 PSI 10.35 BAR.

CONSTRUCTION: Tube is 1/4" thick, pure gum rubber, APPLICATION: For conveyance of sand and cement to the mixing gun.

#### **FEATURES:**

- 1/4" gum tube has superior abrasion resistance.
- Weather and abrasion resistant cover.
- Cover compound is non-marking, allows for work around buildings and pool tiles.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.F PSI	P. @68°F BAR	Vacuum @68°F		ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4310-0150-050	1-1/2	38.10	2.38	60.33	2	150	10.35	n/a	1.10	1.64	15.00	380.00	50
4310-0163-050	1-5/8	41.28	2.52	64.00	2	150	10.35	n/a	1.40	2.09	16.50	420.00	50
4310-0200-050	2	50.80	2.88	72.90	2	150	10.35	n/a	1.65	2.46	20.00	508.00	50
4310-0250-050	2-1/2	63.50	3.88	98.30	2	150	10.35	n/a	2.30	3.42	25.00	635.00	50

<sup>\*</sup>MBR = Minimum Bend Radius



4428

#### **PLASTER AND GROUT HOSE**







CONSTRUCTION: Tube is NR/SBR blend. Cover is a

NR/SBR blend, pin-pricked. Reinforcement is four plies of synthetic textile with a static wire.

**TEMPERATURE:** -40°F (-40°C) to +158°F (+70°C)

**BRANDING:** Jason logo 4428 PLASTER GROUT WP

800 PSI 55.2 BAR.

White mylar longitudinal stripe.

**APPLICATION:** Used for spraying plaster, grout, sand

and gypsym.

#### **FEATURES:**

- Cover ozone and weather resistant.
- Very good abrasion resistance.
- Handles a variety of applications.

Part Number	in.	.D. mm.	o in.	.D. mm.	Rein. Plies	Max W.	P. @68°F BAR			eight . KG/m	in.	IBR* mm	Std. Lgth. (ft)
4428-0150-100	1-1/2	38.10	2.20	56.00	4	800	55.20	n/a	1.07	1.59	n/a	n/a	100
4428-0200-100	2	50.80	2.76	70.00	4	800	55.20	n/a	1.43	2.13	n/a	n/a	100
4428-0250-100	2-1/2	63.50	3.31	84.00	4	800	55.20	n/a	1.73	2.58	n/a	n/a	100

<sup>\*</sup>MBR = Minimum Bend Radius



## 4312

### 2-PLY SANDBLAST HOSE







CONSTRUCTION: Tube is a SBR/NR blend which is a APPLICATION: For conveyance of highly abrasive

1/4" thick, black and static dissipating. Cover is an SBR/NR blend, pin-pricked. Reinforcement is a two-ply synthetic fabric.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

**BRANDING: None** 

materials in sandblasting/cleaning and general maintenance in construction, shipyards, power plants and equipment rental.

#### **FEATURES:**

- Tube compounds are static-dissipating.
- Highly abrasion resistant tube that will handle any
- Cover is abrasion and weather resistant.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P. PSI	@68°F BAR	Vacuum @68°F		ight KG/m	in.	IBR* mm	Std. Lgth. (ft)
4312-0050-050	1/2	12.70	1.00	25.40	2	150	10.35	n/a	0.31	0.46	5.00	127.00	50
4312-0051-050	1/2	12.70	1.06	26.99	2	150	10.35	n/a	0.33	0.49	5.00	127.00	50
4312-0051-100	1/2	12.70	1.06	26.99	2	150	10.35	n/a	0.33	0.49	5.00	127.00	100
4312-0052-050	1/2	12.70	1.13	28.58	2	150	10.35	n/a	0.38	0.57	5.00	127.00	50
4312-0075-050	3/4	19.05	1.50	38.10	2	150	10.35	n/a	0.60	0.89	7.50	190.00	50

<sup>\*</sup>MBR = Minimum Bend Radius



4313

#### LIGHTWEIGHT SANDBLAST HOSE







**CONSTRUCTION:** Tube is SBR/NR blend which is

static dissipating. Cover is an SBR/NR blend, black. Reinforcement is a two-ply

synthetic fabric.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

**BRANDING:** Jason logo 4313 LW SANDBLAST 1-7/8" O.D.

WP 150 PSI 10.35 BAR.

White longitudinal mylar stripe.

**APPLICATION:** For conveyance of highly abrasive materials in sandblasting/cleaning

operations.

#### **FEATURES:**

- Tube compounds are static-dissipating.
- Highly abrasion resistant tube that will handle any blast grit.
- Cover is abrasion and weather resistant.
- Lighter weight than standard sandblast hose.
- Maintains the high quality features.
- Utilizes couplings or nozzle holders made to fit 1-7/8" O.D. hose.

Part Number	l. in.	.D. mm.	in.	D.D. mm.	Rein. Plies	Max W. PSI	P. @68°F BAR	Vacuum @68°F	Wei	ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4313-0125-050	1-1/4	31.75	1.88	47.63	2	150	10.35	n/a	0.83	1.24	10.00	254.00	50
4313-0125-100	1-1/4	31.75	1.88	47.63	2	150	10.35	n/a	0.83	1.24	10.00	254.00	100
4313-0125-200	1-1/4	31.75	1.88	47.63	2	150	10.35	n/a	0.83	1.24	10.00	254.00	200

\*MBR = Minimum Bend Radius



## 4314

#### **4-PLY SANDBLAST HOSE**







**CONSTRUCTION:** Tube is a SBR/NR blend, 1/4" thick, **APPLICATION:** For sandblasting/cleaning operations in

black and static dissipating. Cover is an SBR/NR blend, black. Rein Reinforcement is a four-ply

synthetic fabric.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

BRANDING: Jason logo 4314 4-PLY SANDBLAST WP

150 PSI 10.35 BAR.

White mylar longitudinal stripe.

construction, shipyards, steel mills and

refineries.

#### **FEATURES:**

- Tube compounds are static-dissipating.
- Highly abrasion resistant tube that will handle any blast grit.
- Cover is abrasion and weather resistant.
- Highly abrasion resistant tube handles manufactured coal slag, aluminum oxide or grit.
- Each O.D. is held to strict tolerances (ARPM) for ideal coupling compatibility.

Part	I.	.D.	С	.D.	Rein.	Max W.	P. @68°F	Vacuum	We	ight	М	BR*	Std. Lgth.
Number	in.	mm.	in.	mm.	Plies	PSI	BAR	@68°F	lb./ft	. KG/m	in.	mm	(ft)
4314-0075-050	3/4	19.05	1.50	38.10	4	150	10.35	n/a	0.66	0.98	7.50	190.00	50
4314-0075-100	3/4	19.05	1.50	38.10	4	150	10.35	n/a	0.66	0.98	7.50	190.00	100
4314-0075-200	3/4	19.05	1.50	38.10	4	150	10.35	n/a	0.66	0.98	7.50	190.00	200
4314-0100-050	1	25.40	1.88	47.63	4	150	10.35	n/a	0.80	1.19	10.00	254.00	50
4314-0100-100	1	25.40	1.88	47.63	4	150	10.35	n/a	0.80	1.19	10.00	254.00	100
4314-0100-200	1	25.40	1.88	47.63	4	150	10.35	n/a	0.80	1.19	10.00	254.00	200
4314-0125-050	1-1/4	31.75	2.16	53.18	4	150	10.35	n/a	1.04	1.55	12.60	320.00	50
4314-0125-100	1-1/4	31.75	2.16	53.18	4	150	10.35	n/a	1.04	1.55	12.60	320.00	100
4314-0125-200	1-1/4	31.75	2.16	53.18	4	150	10.35	n/a	1.04	1.55	12.60	320.00	200
4314-0150-050	1-1/2	38.10	2.38	60.33	4	150	10.35	n/a	1.25	1.86	15.00	380.00	50
4314-0150-100	1-1/2	38.10	2.38	60.33	4	150	10.35	n/a	1.25	1.86	15.00	380.00	100
4314-0150-200	1-1/2	38.10	2.38	60.33	4	150	10.35	n/a	1.25	1.86	15.00	380.00	200
4314-0200-050	2	50.80	2.88	73.03	4	150	10.35	n/a	1.45	2.16	20.00	508.00	50
4314-0200-100	2	50.80	2.88	73.03	4	150	10.35	n/a	1.45	2.16	20.00	508.00	100

<sup>\*</sup>MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.



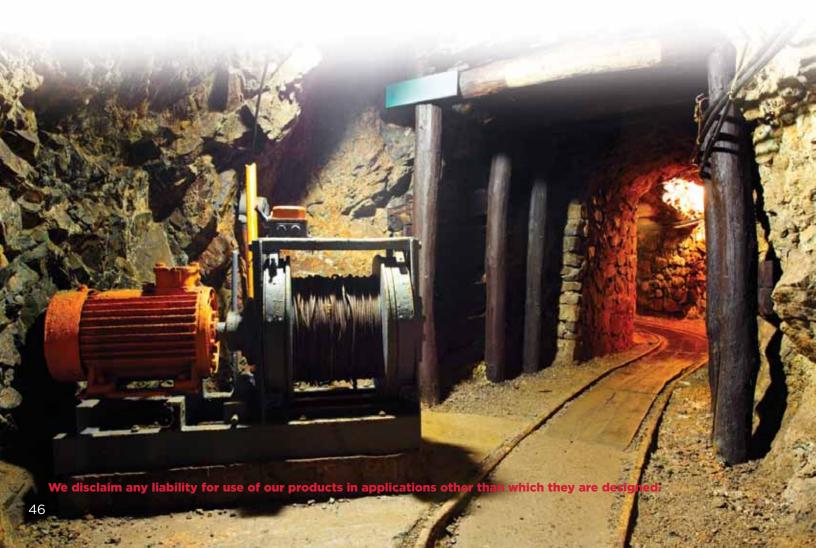
## MINE SPRAY HOSE

## FOR DUST CONTROL IN UNDERGROUND MINING

SERIES PAGE

4182 MSHA Mine Spray Hose 47

Hoses are constantly being upgraded. Jason Industrial reserves the right to make changes in construction without prior notice.



## **MINE SPRAY HOSE**



### 4182

#### **MSHA MINE SPRAY HOSE**







**CONSTRUCTION:** SBR tube, smooth and black. Cover

of steel wire.

is CR, fabric impression, pin-pricked, yellow. Reinforcement is two plies

**TEMPERATURE:** 0°F (-18°C) to +200°F (+93°C)

**BRANDING:** Jason logo 4182 MINE SPRAY MSHA

IC-84-42 1000 PSI WP 69 BAR.

Black longitudinal stripe.

**APPLICATION:** For dust control in underground water spray operations.

#### **FEATURES:**

- Meets MSHA rating IC-84-42.
- Flame retardant.
- Visible yellow color.
- Cover is weather and abrasion resistant.

Part Number	in.	l.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.F PSI	P. @68°F BAR	Vacuum @68°F		ight KG/m		BR* mm	Std. Lgth. (ft)
4182-0050-050	1/2	12.70	0.97	24.60	2	1000	68.95	n/a	0.40	0.60	5.90	150.00	50
4182-0075-050	3/4	19.05	1.22	30.99	2	1000	68.95	n/a	0.60	0.89	8.30	210.00	50
4182-0075-100	3/4	19.05	1.22	30.99	2	1000	68.95	n/a	0.60	0.89	8.30	210.00	100
4182-0100-050	1	25.40	1.49	37.85	2	1000	68.95	n/a	0.80	1.19	11.00	280.00	50
4182-0100-100	1	25.40	1.49	37.85	2	1000	68.95	n/a	0.80	1.19	11.00	280.00	100
4182-0125-050	1-1/4	31.75	1.81	45.97	2	1000	68.95	n/a	1.05	1.56	14.00	355.00	50
4182-0125-100	1-1/4	31.75	1.81	45.97	2	1000	68.95	n/a	1.05	1.56	14.00	355.00	100
4182-0150-050	1-1/2	38.10	2.04	51.82	2	1000	68.95	n/a	1.24	1.85	16.50	420.00	50
4182-0150-100	1-1/2	38.10	2.04	51.82	2	1000	68.95	n/a	1.24	1.85	16.50	420.00	100
4182-0200-050	2	50.80	2.60	66.04	2	1000	68.95	n/a	1.80	2.68	22.00	560.00	50
4182-0200-100	2	50.80	2.60	66.04	2	1000	68.95	n/a	1.80	2.68	22.00	560.00	100

\*MBR = Minimum Bend Radius



# FOR IN-PLANT OR TANK TRUCK USE TO TRANSFER PETROLEUM PRODUCTS

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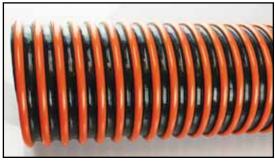
Hoses are constantly being upgraded. Jason Industrial reserves the right to make changes in construction without prior notice.





## 3058 NBR/PVC DROP HOSE FOR SUCTION AND DELIVERY OF GASOLINE - $S\Omega$







**CONSTRUCTION:** NBR/PVC tube, smooth bore with

embedded  $S\Omega$  ground wire in the hose wall with a sturdy clockwise PVC helix, one braid of high tensile polyester yarn reinforcement.

**TEMPERATURE:** -10°F (-23°C) to +140°F (+60°C)

**APPLICATION:** Used to deliver gasoline, diesel fuel, kerosene and fuels with aromatic

content to 40%.

#### **FEATURES:**

- Higher transfer pressures.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- $S\Omega$  ground wire embedded into hose wall to help prevent the build-up of static electricity. Wire must be secured to ground to dissipate static electricity.

Part				Rein.	Max W.	P. @68°F	Vacuum	Wei	ght	M	BR*	Std. Lgth.	
Number	in.	mm.	in.	mm.	Braids	PSI	BAR	@68°F	lb./ft.	KG/m	in.	mm	(ft)
3058-0200-100	2	50.80	2.68	68.07	1	70	4.83	29.9	1.13	1.68	5.00	127.00	100
3058-0300-100	3	76.20	3.68	93.47	1	65	4.48	29.9	1.37	2.04	6.00	152.40	100
3058-0400-100	4	101.60	4.80	121.92	1	65	4.48	29.9	2.16	3.21	8.00	203.20	100

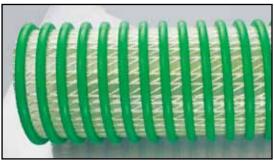
Note: Use JASON ORANGE banding sleeves only when securing coupling for 3" and 4" ID's. Discharge pressures and vacuum are temperature dependent.  $S\Omega$  = Safety Ohm

\*MBR = Minimum Bend Radius



# 3040 POLYURETHANE DROP HOSE FOR SUCTION AND DELIVERY OF GASOLINE AND ALTERNATIVE FUELS - $S\Omega$







**CONSTRUCTION:** Polyurethane tube, smooth bore

with embedded  $S\Omega$  ground wire in the hose wall with a sturdy clockwise PVC helix, one braid of high tensile polyester yarn reinforcement.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Used in the delivery of biofuels, gasoline, kerosene and fuel oil.

#### **FEATURES:**

- Higher transfer pressures.
- Clear visual flow.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- $S\Omega$  ground wire embedded into hose wall to help prevent the build-up of static electricity.  $S\Omega$  wire must be secured to ground to dissipate static electricity.
- Vacuum up to 29" of Hg.

Part Number	I.D. O.D. in. mm. in. mm.		Rein. Braids	Max W PSI	/.P. @68°F BAR		Wei lb./ft.	J	M in.	BR* mm	Std. Lgth. (ft)		
3040-0200-100	2	50.80	2.46	62.48	1	75	5.17	29.0	0.63	0.94	4.00	101.60	100
3040-0300-100	3	76.20	3.78	96.01	1	65	4.48	29.0	1.20	1.79	6.00	152.40	100
3040-0400-100	4	101.60	4.83	122.68	1	65	4.48	29.0	1.71	2.54	8.00	203.20	100

Note: Use JASON GREEN banding sleeves only when securing coupling for 3" and 4" ID's. Discharge pressures and vacuum are temperature dependent.

 $S\Omega$  = Safety Ohm

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

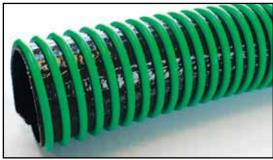
All sizes may not be stocked in all locations. Check with customer service for availability.

We disclaim any liability for use of our products in applications other than which they are designed.



# 3045 POLYURETHANE DROP HOSE FOR SUCTION AND DELIVERY OF GASOLINE AND ALTERNATIVE FUELS - $S\Omega$







**CONSTRUCTION:** Polyurethane tube, smooth bore

with embedded  $S\Omega$  ground wire in the hose wall with a sturdy clockwise PVC helix, one braid of high tensile polyester yarn reinforcement.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C) **APPLICATION:** Used in the delivery of biofuels,

gasoline, kerosene and fuel oil.

#### **FEATURES:**

- Higher transfer pressures.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- $S\Omega$  ground wire embedded into hose wall to help prevent the build-up of static electricity.  $S\Omega$  wire must be secured to ground to dissipate static electricity.
- Vacuum up to 29" of Hg.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Braids	Max W PSI	/.P. @68°F BAR			ght KG/m	M in.	BR* mm	Std. Lgth. (ft)
3045-0300-100	3	76.20	3.78	96.01	1	65	4.48	29.0	1.20	1.79	6.00	152.40	100
3045-0400-100	4	101.60	4.83	122.68	1	65	4.48	29.0	1.71	2.54	8.00	203.20	100

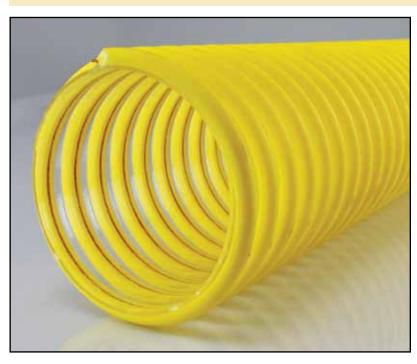
Note: Use JASON GREEN banding sleeves only when securing coupling for 3" and 4" ID's. Discharge pressures and vacuum are temperature dependent.  $S\Omega$  = Safety Ohm

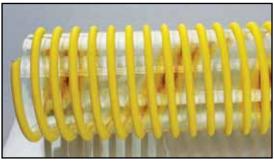
\*MBR = Minimum Bend Radius



**3050** 

## **POLYURETHANE GASOLINE AND ALTERNATIVE FUEL VAPOR RECOVERY** HOSE - $S\Omega$







**CONSTRUCTION:** Polyurethane tube with a sturdy

clockwise PVC helix with  $S\Omega$  ground wire embedded into the hose wall.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Used to remove vapors from gasoline and alternative fuels to recovery

system in tank truck operations.

#### **FEATURES:**

- Clear visual flow.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- $\bullet$  S $\Omega$  ground wire embedded into hose wall to help prevent the build-up of static electricity.  $S\Omega$  wire must be secured to ground to dissipate static electricity.

Part		I.D.			Rein.	Max W.	P. @68°F	Vacuum	We	ight	M	IBR*	Std. Lgth.
Number	in.	mm.	in.	mm.		PSI	BAR	@68°F	lb./ft.	KG/m	in.	mm	(ft)
3050-0200-100	2	50.80	2.45	62.23	PVC Helix	10	0.69	15.0	0.50	0.74	3.00	76.20	100
3050-0300-100	3	76.20	3.54	89.92	PVC Helix	8	0.55	15.0	0.79	1.18	4.00	101.60	100
3050-0400-100	4	101.60	4.57	116.08	PVC Helix	7	0.48	12.0	1.11	1.65	5.00	127.00	100

Note: Use JASON YELLOW banding sleeves only when securing coupling for 2", 3" and 4" ID's.  $S\Omega$  = Safety Ohm

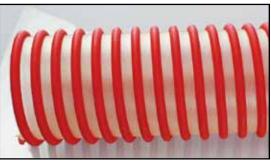
\*MBR = Minimum Bend Radius



#### 3053

# HD POLYURETHANE GASOLINE AND ALTERNATIVE FUEL VAPOR RECOVERY HOSE - $\mathbf{S}\Omega$







**CONSTRUCTION:** Polyurethane tube with a sturdy

clockwise PVC helix with  $S\Omega$  ground wire embedded into the hose wall.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Used to remove vapors from gasoline and alternative fuels to recovery

system in tank truck and terminal operations.

#### **FEATURES:**

- Clear visual flow.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- $S\Omega$  ground wire embedded into hose wall to help prevent the build-up of static electricity.  $S\Omega$  wire must be secured to ground to dissipate static electricity.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein.	Max W.I PSI	P. @68°F BAR	Vacuum @68°F		ight KG/m	l .	BR* mm	Std. Lgth. (ft)
3053-0300-100	3	76.20	3.57	90.68	PVC Helix	8	0.55	15.0	0.95	1.41	5.00	127.00	100
3053-0400-100	4	101.60	4.61	117.09	PVC Helix	7	0.48	12.0	1.27	1.89	6.00	152.40	100

Note: Use JASON YELLOW banding sleeves only when securing coupling for 3" and 4" ID's.  $S\Omega$  = Safety Ohm

\*MBR = Minimum Bend Radius



## **3085 OILFIELD CLEAN-UP & SPILL RECOVERY HOSE**







CONSTRUCTION: NBR/PVC tube with a PVC

clockwise helix.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**BRANDING:** None

**APPLICATION:** Great for the recovery of waste crude

oil, diesel fuel and salt water. Used for cleaning up tank bottoms and oil spills.

#### **FEATURES:**

- NBR/PVC tube is oil and gas resistant.
- Very flexible and easy to handle.
- All sizes are full vacuum.
- Cold weather resistant.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein.	Max W	'.P. @68°F BAR	Vacuum @68°F		ight KG/m	M in.	BR*	Std. Lgth. (ft)
3085-0200-100	2	50.80	2.43	61.72	PVC Helix	50	3.45	29.0	0.67	1.00	4.00	101.60	100
3085-0300-100	3	76.20	3.52	89.41	PVC Helix	45	3.10	29.0	1.10	1.64	6.00	152.40	100
3085-0400-100	4	101.60	4.60	116.84	PVC Helix	38	2.62	29.0	1.84	2.74	8.20	208.30	100

Note: Vacuum is temperature dependent.

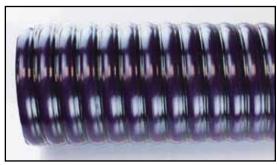
\*MBR = Minimum Bend Radius



### 3087

## SAFETY OILFIELD CLEAN-UP AND RECOVERY HOSE - $S\Omega$







**CONSTRUCTION:** NBR/PVC tube with a PVC

clockwise helix with an  $S\Omega$  ground

wire.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**BRANDING:** None

**APPLICATION:** Great for the recovery of waste crude oil, diesel fuel and salt water. Used for

cleaning up tank bottoms and oil spills.

#### **FEATURES:**

- NBR/PVC tube is oil and gas resistant.
- Very flexible and easy to handle.
- All sizes are full vacuum.
- Cold weather resistant.
- ullet S $\Omega$  ground prevents build-up of static electricity.

Part Number	in.	I.D. mm.	in.	O.D. mm.	Rein.	Max W PSI	.P. @68°F BAR			ight KG/m		IBR* mm	Std. Lgth. (ft)
3087-0200-100	2	50.80	2.43	61.72	PVC Helix	50	3.45	29.0	0.67	1.00	4.00	101.60	100
3087-0300-100	3	76.20	3.52	89.41	PVC Helix	45	3.10	29.0	1.10	1.64	6.00	152.40	100
3087-0400-100	4	101.60	4.60	116.84	PVC Helix	38	2.62	29.0	1.84	2.74	8.20	208.30	100

Note: Vacuum is temperature dependent.

 $S\Omega$  = Safety OHM

\*MBR = Minimum Bend Radius



## **4420 NITRILE PETROLEUM SUCTION HOSE - 150 PSI**







**CONSTRUCTION:** Tube nitrile, smooth and black.

ARPM Class A. Cover is CR, ARPM Class B. Reinforcement is two

**TEMPERATURE:** -25°F (-32°C) to +200°F (+93°C)

**BRANDING:** Jason logo 4420 PETROLEUM SUCTION

WP 150 PSI 10.35 BAR.

Red mylar longitudinal stripe.

**APPLICATION:** For suction or discharge of petroleum-

based products in truck and car

operations.

#### synthetic plies with a dual wire helix. FEATURES:

Increased flexibility due to the dual wire helix.

• Nitrile tube is highly oil resistant. Enables hose to handle petroleum products having an aromatic content up to 50%.

• Weather and ozone resistant.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P.	@68°F BAR	Vacuum @68°F		ight . KG/m	l	1BR* mm	Std. Lgth. (ft)
4420-0075-100	3/4	19.05	1.14	28.96	2	150	10.35	29.0	0.36	0.54	4.00	101.60	100
4420-0100-100	1	25.40	1.38	35.00	2	150	10.35	29.0	0.49	0.73	6.00	152.40	
4420-0125-100	1-1/4	31.75	1.69	42.93	2	150	10.35	29.0	0.81	1.21	6.00	152.40	100
4420-0150-100	1-1/2	38.10	2.00	50.80	2	150	10.35	29.0	0.91	1.35	6.50	165.10	100
4420-0200-100	2	50.80	2.52	64.01	2	150	10.35	29.0	1.14	1.70	8.00	203.20	100
4420-0200-200	2	50.80	2.52	64.01	2	150	10.35	29.0	1.14	1.70	8.00	203.20	200
4420-0250-100	2-1/2	63.50	3.06	77.72	2	150	10.35	29.0	1.76	2.62	12.00	304.80	100
4420-0300-100	3	76.20	3.54	89.92	2	150	10.35	29.0	2.42	3.60	16.00	406.40	100
4420-0300-200	3	76.20	3.54	89.92	2	150	10.35	29.0	2.42	3.60	16.00	406.40	200
4420-0400-100	4	101.60	4.60	116.84	2	150	10.35	29.0	2.69	4.00	18.00	457.20	100
4420-0400-200	4	101.60	4.60	116.84	2	150	10.35	29.0	2.69	4.00	18.00	457.20	200
4420-0600-020	6	152.40	6.86	174.24	2	150	10.35	29.0	6.28	9.35	30.00	762.00	20
4420-0600-100	6	152.40	6.86	174.24	2	150	10.35	29.0	6.28	9.35	30.00	762.00	100
4420-0800-020	8	203.20	8.90	226.06	2	150	10.35	29.0	7.12	10.60	48.00	1219.20	20
4420-0800-050	8	203.20	8.90	226.06	2	150	10.35	29.0	7.12	10.60	48.00	1219.20	50

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.



#### 4421

#### **TANK TRUCK HOSE - RED CORRUGATED**







**CONSTRUCTION:** Tube is nitrile, smooth, ARPM

Class A. Cover is CR, ARPM Class B, corrugated and red. Reinforcement is two synthetic plies with a wire helix.

**TEMPERATURE:** -30°F (-34°C) to +180°F (+82°C)

**BRANDING:** Jason logo 4421 PETROLEUM SUCTION

WP 150 PSI 10.35 BAR. White mylar longitudinal stripe.

**APPLICATION:** For the transfer of petroleum products, including gasoline under pressure, gravity flow and tank farms at oil/gas drilling sites.

#### **FEATURES:**

- Increased flexibility due to the corrugated cover.
- Lightweight, easier to handle.
- Cover is resistant to weathering and abrasion.

Part		I.D.	1	D.D.			_	Vacuum		ight		IBR*	Std. Lgth.
Number	in.	mm.	in.	mm.	Plies	PSI	BAR	@68°F	lb./ft.	KG/m	in.	mm	(ft)
4421-0200-100	2	50.80	2.48	63.00	2	150	10.35	29.0	1.18	1.76	4.00	101.60	100
4421-0300-100	3	76.20	3.50	89.00	2	150	10.35	29.0	1.99	2.96	6.00	152.40	100
4421-0400-100	4	101.60	4.57	116.00	2	150	10.35	29.0	2.66	3.96	9.00	228.60	100
4421-0600-100	6	152.40	6.77	172.00	2	150	10.35	29.0	6.30	9.41	25.00	637.50	100

<sup>\*</sup>MBR = Minimum Bend Radius



4423

## BIO-DIESEL/ETHANOL SUCTION AND DISCHARGE HOSE







**CONSTRUCTION:** Tube is ultra-high molecular weight

polyethylene (UHMWPE). Cover is

CR, smooth and black.

Reinforcement is a two-ply synthetic fabric with a dual wire helix and two

conductive copper wires.

**TEMPERATURE:** -31°F (-35°C) to +176°F (+80°C)

**BRANDING:** Jason logo 4423 BIO-DIESEL B-20 MAX

ETHANOL E-20 MAX SUCTION 150 PSI

10.35 BAR.

Red mylar longitudinal stripe

**APPLICATION:** For the suction and discharge of bio-diesel and ethanol blended fuels.

#### **FEATURES:**

- UHMWPE gives maximum resistance to today's bio-fuels.
- Cover is resistant to weathering and abrasion.
- Heat and ozone resistant.
- Dual conductive copper wires makes it easy to ground the hose.
- All sizes are full vacuum.

Part Number	in.	.D. mm.	in.	D.D. mm.	Rein. Plies	Max W	.P. @68°F BAR	Vacuum @68°F		ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4423-0100-100	1	25.40	1.42	36.00	2	150	10.35	29.0	0.49	0.73	6.00	101.60	100
4423-0125-100	1-1/4	31.75	1.68	42.67	2	150	10.35	29.0	0.62	0.92	7.00	127.00	100
4423-0150-100	1-1/2	38.10	1.93	49.00	2	150	10.35	29.0	0.75	1.12	8.00	152.40	100
4423-0200-100	2	50.80	2.48	63.00	2	150	10.35	29.0	1.16	1.72	12.00	228.60	100
4423-0300-100	3	76.20	3.50	89.00	2	150	10.35	29.0	1.81	2.69	14.00	637.50	100

<sup>\*</sup>MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

Consult with engine manufacturers for warranted blends (B-5 to B-100 & E-5 to E-100)

All sizes may not be stocked in all locations. Check with customer service for availability.

We disclaim any liability for use of our products in applications other than which they are designed.



## **4414 NITRILE PETROLEUM SUCTION HOSE - 300 PSI**







**CONSTRUCTION:** Tube nitrile, smooth and black.

ARPM Class A. Cover is CR, ARPM Class B. Reinforcement is two-ply synthetic fabric with a dual wire helix.

**TEMPERATURE:** -25°F (-32°C) to +200°F (+93°C)

**BRANDING:** Jason logo 4414 PETROLEUM SUCTION

WP 300 PSI 20.70 BAR. Red mylar longitudinal stripe. **APPLICATION:** For the transfer of petroleum products, including gasoline under pressure and

gravity flow.

#### **FEATURES:**

- HD construction that handles up to 300 PSI applications.
- Cover is resistant to weathering and abrasion.
- Heat and ozone resistant.
- All sizes are full vacuum.

Part Number	in.	l.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P. PSI	. @68°F BAR	Vacuum @68°F	_	ight . KG/m	in.	IBR* mm	Std. Lgth. (ft)
4414-0100-100	1	25.40	1.46	37.08	2	300	20.70	29.0	0.53	0.79	3.50	88.90	100
4414-0125-100	1-1/4	31.75	1.73	43.94	2	300	20.70	29.0	0.70	1.04	4.00	101.60	100
4414-0150-100	1-1/2	38.10	2.00	50.80	2	300	20.70	29.0	0.92	1.37	5.00	127.00	100
4414-0200-100	2	50.80	2.50	63.50	2	300	20.70	29.0	1.27	1.89	8.00	203.20	100
4414-0200-200	2	50.80	2.50	63.50	2	300	20.70	29.0	1.27	1.89	8.00	203.20	200
4414-0250-100	2-1/2	63.50	3.11	78.99	2	300	20.70	29.0	1.66	2.47	10.00	254.00	100
4414-0300-100	3	76.20	3.62	91.95	2	300	20.70	29.0	2.19	3.26	12.00	304.80	100
4414-0300-200	3	76.20	3.62	91.95	2	300	20.70	29.0	2.19	3.26	12.00	304.80	200
4414-0400-100	4	101.60	4.65	118.11	2	300	20.70	29.0	2.89	4.30	17.00	431.80	100
4414-0400-200	4	101.60	4.65	118.11	2	300	20.70	29.0	2.89	4.30	17.00	431.80	200
4414-0600-100	6	152.40	6.91	175.51	2	300	20.70	29.0	6.47	9.96	27.00	685.80	100
4414-0800-020	8	203.20	8.98	228.00	2	300	20.70	29.0	6.92	10.30	48.00	1219.20	20

<sup>\*</sup>MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.



### 4424 NITRILE PETROLUM SUCTION HOSE - 400 PSI







**CONSTRUCTION:** Tube is nitrile, black and smooth,

ARPM Class A. Cover is CR, black, ARPM Class B. Reinforcement is a two-ply synthetic fabric with a dual wire helix.

**TEMPERATURE:** -31°F (-35°C) to +158°F (+70°C)

**BRANDING:** Jason logo 4424 PETROLEUM SUCTION

WP 400 PSI 27.6 BAR. Red mylar longitudinal stripe **APPLICATION:** For the transfer of petroleum products, including gasoline under pressure or gravity flow (suction or discharge).

#### **FEATURES:**

- HD construction that handles up to 400 PSI applications.
- Cover is resistant to weathering and abrasion.
- Heat, sea water and ozone resistant.
- All sizes are full vaccum.
- Construction is with high tensile strength textile.
- Dual copper wires to ground the hose.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.F PSI	2. @68°F BAR	Vacuum @68°F		ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4424-0200-100	2	50.80	2.82	71.63	2	400	27.56	29.0	1.89	2.81	12.00	304.80	100
4424-0200-200	2	50.80	2.82	71.63	2	400	27.56	29.0	1.89	2.81	12.00	304.80	200
4424-0300-100	3	76.20	3.88	98.55	2	400	27.56	29.0	2.95	4.39	20.00	508.00	100
4424-0300-200	3	76.20	3.88	98.55	2	400	27.56	29.0	2.95	4.39	20.00	508.00	200
4424-0400-100	4	101.60	4.92	124.50	2	400	27.56	29.0	3.85	5.72	30.00	762.00	100
4424-0400-200	4	101.60	4.92	124.50	2	400	27.56	29.0	3.85	5.72	30.00	762.00	200

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.

We disclaim any liability for use of our products in applications other than which they are designed.



## 4328 NITRILE FUEL DISCHARGE HOSE - 300 PSI







**CONSTRUCTION:** Tube is nitrile, smooth, ARPM

Class A. Cover is CR, black, ARPM Class B. Reinforcement is two-ply synthetic fabric with a static wire.

**TEMPERATURE:** -25°F (-32°C) to +200°F (+93°C)

BRANDING: Jason logo 4328 FUEL DISCHARGE WP

300 PSI 20.7 BAR.

Red mylar longitudinal stripe.

**APPLICATION:** For discharge only. For petroleum-based products in truck and car applications.

#### **FEATURES:**

- HD construction that handles up to 300 PSI applications.
- Cover is resistant to weathering and abrasion.
- Class A tube is highly oil resistant and will handle gasoline and other petroleum products having an aromatic content of 50%.

Part Number	in.	I.D. mm.	in.	O.D. mm.	Rein. Plies	Max W.F PSI	P. @68°F BAR	Vacuum @68°F		ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4328-0200-100	2	50.80	2.64	67.06	2	300	20.68	n/a	1.35	2.01	11.00	275.00	100
4328-0250-100	2-1/2	63.50	3.13	79.50	2	300	20.68	n/a	1.55	2.30	12.00	300.00	100
4328-0300-100	3	76.20	3.67	93.22	2	300	20.68	n/a	1.88	2.80	14.00	350.00	100
4328-0400-100	4	101.60	4.61	117.09	2	300	20.68	n/a	2.57	3.82	18.00	450.00	100
4328-0500-100	5	127.00	5.67	144.02	2	300	20.68	n/a	4.09	6.08	24.00	600.00	100

<sup>\*</sup>MBR = Minimum Bend Radius



4348

## FRACK OILFIELD FUEL DISCHARGE HOSE - 400 PSI







**CONSTRUCTION:** Tube is nitrile, black and smooth,

ARPM Class C. Cover is an EPDM/ SBR blend. Reinforcement is a four-ply synthetic fabric with a

static wire.

**TEMPERATURE:** -25°F (-32°C) to +180°F (+82°C)

**BRANDING:** Jason logo 4348 FRAC DISCHARGE WP

400 PSI 27.6 BAR.

Red mylar longitudinal stripe.

**APPLICATION:** To discharge or convey water and oil slurry mixtures for the connections to

frack tanks.

#### **FEATURES:**

- HD construction that handles up to 400 PSI applications.
- Cover is resistant to weathering and abrasion.
- Class C tube is oil resistant and will handle gasoline and other petroleum products having an aromatic content of 50%.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W PSI	/.P. @68°F BAR	Vacuum @68°F		ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4348-0300-100	3	76.20	3.87	93.30	4	400	27.60	n/a	2.52	3.74	18.00	457.20	100
4348-0400-100	4	101.60	4.76	120.90	4	400	27.60	n/a	2.83	4.21	24.00	600.00	100

\*MBR = Minimum Bend Radius



#### 4410

### **BLUE LOW TEMP PETROLEUM SUCTION HOSE - CORRUGATED**







**CONSTRUCTION:** Tube is nitrile, black and smooth.

ARPM Class A. Cover is CR, blue, corrugated, ARPM Class B. Reinforcement is a two-ply

synthetic fabric with a double wire

helix.

**TEMPERATURE:** -65°F (-55°C) to +180°F (+82°C)

**BRANDING:** Jason logo 4410 LOW TEMP PETROLEUM

SUCTION -65°F (-55°C) 150 PSI WP 10.35 BAR.

White mylar longitudinal stripe.

**APPLICATION:** The transfer of petroleum products, including gasoline under pressure or gravity flow.

#### **FEATURES:**

- Cover is resistant to weathering, abrasion, and the exposure to oil.
- Compounded to resist extreme cold temperatures to -65°F.
- Remains flexible, even under extreme cold temperatures.
- All sizes are full vacuum.

Part Number in	I.D. n. mm.	in.	D.D. mm.	Plies	PSI	BAR	Vacuum @68°F		ight KG/m	in.	1BR* mm	Std. Lgth. (ft)
<b>4410-0300-100</b> 3	3 76.20	3.55	90.17	2	150	10.35	29.0	1.83	2.72	6.00	151.20	100
<b>4410-0400-100</b> 4	4 101.60	4.59	116.59	2	150	10.35	29.0	2.39	3.56	9.00	226.80	100

\*MBR = Minimum Bend Radius



### 4415

#### **OIL RETURN HOSE SAE 100R4**







**CONSTRUCTION:** Tube is nitrile, black and smooth,

ARPM Class A. Cover is CR, black, ARPM Class B. Reinforcement is a two-ply synthetic fabric with a

wire helix.

**TEMPERATURE:** -40°F (-40°C) to +212°F (+100°C)

**BRANDING:** Jason logo 4415 SAE 100R4 RETURN LINE. Red mylar longitudinal stripe.

**APPLICATION:** For oil return lines of hydraulic systems in industrial and agricultural systems.

#### **FEATURES:**

- Cover is resistant to weathering and abrasion.
- Class A tube is highly oil resistant and will handle petroleum products having an aromatic content of 50%.
- All sizes are full vaccum.

Part Number	in.	.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P. PSI	@68°F BAR	Vacuum @68°F	Weight lb./ft. KG/m	M in.	IBR* mm	Std. Lgth. (ft)
4415-0075-100	3/4	19.05	1.25	31.75	2	300	20.68	29.0	0.45 0.67	4.00	101.60	100
4415-0100-100	1	25.40	1.47	37.34	2	250	17.24	29.0	0.50 0.74	4.50	114.30	100
4415-0125-100	1-1/4	31.75	1.77	44.96	2	200	13.79	29.0	0.64 0.95	6.00	152.40	100
4415-0150-100	1-1/2	38.10	2.05	52.07	2	150	10.35	29.0	0.80 1.19	6.50	165.10	100
4415-0200-100	2	50.80	2.51	63.75	2	150	10.35	29.0	0.99 1.47	8.00	203.20	100

<sup>\*</sup>MBR = Minimum Bend Radius



#### 4418

## CRUDE OIL WASTE PIT SUCTION HOSE SMOOTH COVER - DO NOT USE WITH REFINED PETROLEUM







**CONSTRUCTION:** Tube and cover are EPDM.

Reinforcement is a two-ply synthetic fabric with a wire helix.

**TEMPERATURE:** -40°F (-40°C) to +150°F (+66°C)

BRANDING: Jason logo 4418 CRUDE OIL WASTE PIT

SUCTION WP 150 PSI 10.35 BAR. Do not

use with refined petroleum. Red mylar longitudinal stripe. **APPLICATION:** Used for applications where full suction is

required. Great for applications handling crude oil, salt and fresh water, tank bottoms

and diesel fuels.

#### **FEATURES:**

- Weather and abrasion resistant.
- All sizes are full vacuum.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P. PSI	@68°F BAR	Vacuum @68°F		ight KG/m	Mi in.	BR* mm	Std. Lgth. (ft)
4418-0150-100	1-1/2	38.10	2.01	51.00	2	150	10.35	29.0	0.77	1.15	5.30	135.00	100
4418-0200-100	2	50.80	2.50	63.50	2	150	10.35	29.0	0.99	1.47	7.90	200.00	100
4418-0300-100	3	76.20	3.56	90.50	2	150	10.35	29.0	1.76	2.62	13.40	340.00	100
4418-0400-100	4	101.60	4.57	116.00	2	150	10.35	29.0	2.29	2.29	17.70	450.00	100
4418-0600-100	6	152.40	6.61	168.00	2	150	10.35	29.0	4.69	7.00	26.80	680.00	100
4418-0800-020	8	203.20	8.82	224.00	2	150	10.35	29.0	8.34	12.46	37.80	960.00	20

\*MBR = Minimum Bend Radius

## POWERING GLOBAL INDUSTRY POWERING GLOBAL INDUSTRY

## 4419 CRUDE OIL WASTE PIT SUCTION HOSE CORRUGATED COVER - DO NOT USE WITH REFINED PETROLEUM







**CONSTRUCTION:** Tube and cover are EPDM.

Reinforcement is a two-ply synthetic fabric with a wire helix.

**TEMPERATURE:** -40°F (-40°C) to +150°F (+66°C)

BRANDING: Jason logo 4419 CRUDE OIL WASTE PIT

SUCTION WP 150 PSI 10.35 BAR. Do not

use with refined petroleum. Red mylar longitudinal stripe. **APPLICATION:** Used for applications where full suction is

required. Great for applications handling crude oil, salt and fresh water, tank bottoms

and diesel fuels.

#### **FEATURES:**

- Weather and abrasion resistant.
- All sizes are full vacuum.
- Corrugated cover makes this hose very flexible.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P PSI	. @68°F BAR	Vacuum @68°F	Weight lb./ft. KG/m	M in.	BR* mm	Std. Lgth. (ft)
4419-0150-100	1-1/2	38.10	2.01	51.00	2	150	10.35	29.0	0.77 1.15	5.30	135.00	100
4419-0200-100	2	50.80	2.50	63.50	2	150	10.35	29.0	0.99 1.47	7.90	200.00	100
4419-0300-100	3	76.20	3.56	90.50	2	150	10.35	29.0	1.76 2.62	13.40	340.00	100
4419-0400-100	4	101.60	4.57	116.00	2	150	10.35	29.0	2.29 2.29	17.70	450.00	100

<sup>\*</sup>MBR = Minimum Bend Radius



### 4429 HOT TAR & ASPHALT SUCTION HOSE - 150 PSI







**CONSTRUCTION:** Tube is a special elastomer

compound, black and smooth, that is synthetic oil, abrasion and heat resistant. Cover is a blend of synthetic elastomer compounds, black and smooth, and anti-static. Reinforcement is a two-or-four-ply high tensile cord with a steel wire helix.

**TEMPERATURE:** -22°F (-30°C) to +356°F (+180°C)

BRANDING: Jason logo 4429 HOT ASPHALT 356°F/180°C

150 PSI 4:1. Embossed brand.

**APPLICATION:** Hose is specially designed for conveying hot tar and asphalt.

#### **FEATURES:**

- Cover is resistant to weathering and abrasion.
- Cover is also anti-static, oil and heat resistant.
- Special tube compound is heat (up to 356°F) and abrasion resistant.
- All sizes are full vacuum.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.I	P. @68°F BAR	Vacuum @68°F		ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4429-0200-100	2	50.80	2.72	69.00	2	150	10.35	29.0	1.77	2.65	10.00	254.00	100
4429-0300-100	3	76.20	3.78	96.00	2	150	10.35	29.0	2.82	4.21	15.00	380.00	100
4429-0400-100	4	101.60	4.80	122.00	4	150	10.35	29.0	3.82	5.70	20.00	510.00	100

\*MBR = Minimum Bend Radius



## **STEAM HOSE**

# FOR THE TRANSFER OF SATURATED STEAM

SERIES PAGE
4815 EPDM Steam Hose 69
Steam Hose Safety Recommendations 70

Hoses are constantly being upgraded. Jason Industrial reserves the right to make changes in construction without prior notice.



## **STEAM HOSE**



### 4815

## **EPDM STEAM HOSE**







**CONSTRUCTION:** The tube and cover are EPDM. The

cover is pin-pricked with fabric impression. Reinforcement is two

plies of steel wire.

**TEMPERATURE:** To +450°F (+232°C)

BRANDING: Jason logo 4815 EPDM WP 250 PSI

17.25 BAR. DRAIN AFTER USE.

Reverse white mylar longitudinal stripe.

**APPLICATION:** For the conveyance of steam in chemical/petroleum, food, lumber, pulp

and processing industries.

#### **FEATURES:**

- High working pressure.
- High temperature rating.
- Cover is weather and ozone resistant.
- Cover is pin-pricked to allow venting to eliminate blistering and cover separation.

#### **WARNING: Do not use Universal Couplings with Steam Hose**

					I	I		l					
Part	l l	l.D.	0	).D.	Rein.	Max W.P	. @68°F	Vacuum	We	ight	M	BR*	Std. Lgth.
Number	in.	mm.	in.	mm.	Plies	PSI	BAR	@68°F	lb./ft.	KG/m	in.	mm	(ft)
4815-0050-050	1/2	12.70	1.00	25.40	2	250	17.25	n/a	0.40	0.60	5.90	150.00	50
4815-0050-100	1/2	12.70	1.00	25.40	2	250	17.25	n/a	0.40	0.60	5.90	150.00	100
4815-0075-050	3/4	19.05	1.25	31.75	2	250	17.25	n/a	0.51	0.76	8.30	210.00	50
4815-0075-100	3/4	19.05	1.25	31.75	2	250	17.25	n/a	0.51	0.76	8.30	210.00	100
4815-0100-050	1	25.40	1.50	38.10	2	250	17.25	n/a	0.67	1.00	11.00	280.00	50
4815-0100-100	1	25.40	1.50	38.10	2	250	17.25	n/a	0.67	1.00	11.00	280.00	100
4815-0125-050	1-1/4	31.75	1.81	46.04	2	250	17.25	n/a	0.87	1.29	14.00	355.00	50
4815-0125-100	1-1/4	31.75	1.81	46.04	2	250	17.25	n/a	0.87	1.29	14.00	355.00	100
4815-0150-050	1-1/2	38.10	2.13	54.61	2	250	17.25	n/a	1.11	1.65	16.50	420.00	50
4815-0150-100	1-1/2	38.10	2.13	54.61	2	250	17.25	n/a	1.11	1.65	16.50	420.00	100
4815-0200-050	2	50.80	2.64	67.07	2	250	17.25	n/a	1.80	2.68	22.00	560.00	50
4815-0200-100	2	50.80	2.64	67.07	2	250	17.25	n/a	1.80	2.68	22.00	560.00	100
4815-0300-050	3	76.20	3.81	96.84	2	250	17.25	n/a	3.17	4.72	30.00	762.00	50

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.



## STEAM HOSE

### STEAM HOSE SAFETY RECOMMENDATIONS

#### **Reprinted from ARPM-11-1 Steam Hose**

Handling steam is a very hazardous situation. Using care and some safety precaution can minimize or eliminate personal or property damage.

#### **SELECTING AND USING STEAM HOSE**

- Make sure steam hose is identified as a steam hose. It should be branded as such, stating working pressure and temperature rating.
- Make sure working pressure and temperature is not exceeded.
- 3. Do not allow hose to remain under pressure when not in use.
- Avoid excess bending or flexing of hose near the coupling. Straight line operation is preferred. If bends are necessary as a part of operation, spring guards may help.
- Be sure and use recommended steam hose couplings and clamps on hose.

#### **MAINTENANCE OF STEAM HOSE**

- Periodic inspection of hose should include looking for cover blisters and lumps.
- 2. Check for kinked areas that could damage hose.
- 3. Drain hose after each use to avoid tube damage before hose is put back in operation, to avoid "popcorning" of the tube.
- 4. Check tightness of clamps and bolts after each use.
- 5. Check to see if clamp halves are touching. If they are, recouple hose with smaller clamps to ensure proper tightness or grip around hose.
- 6. Do not store hose over hooks.
- 7. Steam hose laying on metal racks or installed around steel piping will dry out the hose, causing tube and cover cracking.

#### **CORROSIVE STEAM**

When the water used to generate steam contains dissolved air, oxygen or carbon dioxide, then these gases end up as contaminants in the steam. At high temperatures of steam, both oxygen and carbon dioxide are extremely corrosive.

Carbon dioxide is acidic and therefore attacks metals, whereas the oxygen corrodes metals and oxidizes rubbers. Corrosion of metals in the presence of both oxygen and acids is forty times faster than with either alone. Boiler water is therefore normally treated not only to remove the "hardness," which could cause "furring" of the boiler, but also to remove dissolved oxygen and carbon dioxide and to ensure that the steam is not only non-acidic, but even slightly alkaline. Boiler water treatment is a specialized subject beyond the scope of this technical sheet, but correct steam generation is important.

#### **DETERIORATION OF STEAM HOSE**

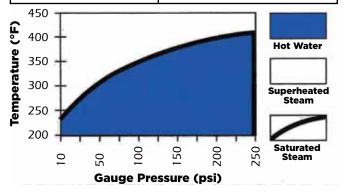
Like all rubber products, steam hoses have a finite life and are subject to gradual deterioration with use. However, it sometimes happens that hoses which have been giving a good life suddenly start failing without apparent reason. In such cases, it is often a change in the steam conditions causing a rapid acceleration of a normal failure mode. It is therefore useful to consider how steam hoses normally last and thus how the condition of the steam affects hose life

#### **SELECTING AND USING STEAM HOSE**

GAUGE PRESSURE PSI BAR		TEMPERATURE °C °F	
25	1.73	130	267
30	2.07	134	274
35	2.42	138	281
40	2.76	141	287
45	3.11	144	292
50	3.45	148	298
60	4.14	153	307
70	4.83	158	316
80	5.52	162	324
90	6.21	166	330
100	6.90	170	338
120	8.28	177	350
140	9.66	182	361
160	11.04	188	371
180	12.42	193	379
200	13.80	198	388
225	15.53	203	397
250	17.25	208	406
275	18.98	212	414
300	20.70	216	422
325	22.43	221	429
350	24.15	225	437

The chart represents the three forms of water when subjected to heat and pressure. Use only hoses specifically designed for the application.

GAUGE PRESSURE PSI	TEMPERATURE OF SATURATED STEAM (°F)
10	239
25	267
50	298
75	320
100	338
125	353
150	366
175	377
200	388
225	397
250	406





# FOR THE TRANSFER OF WATER, WASHDOWN JETTING & IRRIGATION

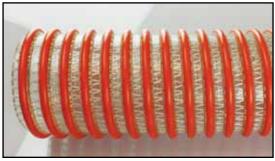
SERIES		PAGE
3074	HD Sub-Zero Cold Weather Clear PVC Suction Hose	74
3076	Heavy Duty PVC Suction and Transfer Hose	72
3080	EPDM Suction Hose	73
4352	Rubber 2-Ply Water Discharge Hose	79
4354	Rubber 4-Ply Water Discharge Hose	80
4358	Nitrile/PVC Oil Resistant Discharge Hose - Yellow	86
4359	Nitrile/PVC Oil Resistant Discharge Hose - Black	87
4380	Non-Conductive Furnace Door Hose	81
4449	Frac Water Suction Hose	78
4450	Rubber Water Suction Hose	77
4502	Blue PVC Water Discharge Bulk Hose & Assemblies	83
4504	Wine Red PVC Water Discharge Hose & Assemblies - Medium Duty	84
4515	Red PVC Water Discharge Hose - HD	85
4601	Green PVC Water Suction Hose	75
4615	Clear/White Helix PVC Water Suction Hose	76
4703	HD DJ Mill Discharge Hose & Assemblies	88
4705	Municipal Grade SJ Mill Discharge Hose & Assemblies	89
4735	MSHA Fire Hose Assemblies	90
5823	Mainstream™ Pressure Washer Assemblies	82

Hoses are constantly being upgraded. Jason Industrial reserves the right to make changes in construction without prior notice.



## **3076 HEAVY-DUTY PVC SUCTION & TRANSFER HOSE**







**CONSTRUCTION:** PVC tube and sturdy clockwise PVC **FEATURES:** 

helix with high tensile strength polyester yarn reinforcement.

**TEMPERATURE:** -13°F (-25°C) to +140°F (+60°C)

**APPLICATION:** HD fish suction and transfer. Also

HD water suction and transfer for rental, construction and trash pumps.

- Clear visual flow.
- Higher transfer pressures.
- Excellent flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- Vacuum up to 29" of Hg.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Braids	Max W.P PSI	2. @68°F BAR	Vacuum @68°F		ght KG/m	M in.	BR* mm	Std. Lgth. (ft)
3076-0150-100	1-1/2	38.10	2.03	51.56	1	110	7.58	29.0	0.47	0.70	2.50	63.50	100
3076-0200-100	2	50.80	2.60	66.04	1	100	6.89	29.0	0.69	1.03	4.00	101.60	100
3076-0250-100	2-1/2	63.50	3.01	76.45	1	100	6.89	29.0	0.74	1.10	5.00	127.00	100
3076-0300-100	3	76.20	3.70	93.98	1	100	6.89	28.0	1.13	1.68	6.00	152.40	100
3076-0400-100	4	101.60	4.78	121.41	1	80	5.52	28.0	1.74	2.59	7.00	177.80	100
3076-0500-100	5	127.00	6.04	153.42	1	80	5.52	28.0	2.99	4.45	9.00	228.60	100
3076-0600-020	6	152.40	7.17	182.12	1	70	4.83	28.0	2.99	4.45	9.00	228.60	20
3076-0600-100	6	152.40	7.17	182.12	1	70	4.83	28.0	3.88	5.77	10.00	254.00	100
3076-0800-020	8	203.20	9.34	237.24	1	60	4.14	28.0	5.55	8.26	16.00	406.40	20
3076-1000-020	10	254.00	11.63	295.40	1	40	2.76	28.0	8.90	13.24	25.00	635.00	20

Note: Discharge pressures and vacuum are temperature dependent.

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.

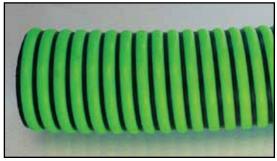
We disclaim any liability for use of our products in applications other than which they are designed.



## 3080

#### **EPDM SUCTION HOSE**







**CONSTRUCTION:** EPDM tube with polyethylene

clockwise helix.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Septic, waste water and liquid manure

handling; agricultural liquid fertilizers

construction and trash pumps.

and standard duty water suction, as well as suction and transfer for rental,

#### **FEATURES:**

- Mild EPDM chemical resistance.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Clockwise polyethylene helix.
- Vacuum up to 29" of Hg.

Part Number	in.	.D. mm.	in.	D.D. mm.	Rein. Braids	Max W.P PSI	. @68°F BAR	Vacuum @68°F		ight KG/m	Mi in.	BR* mm	Std. Lgth. (ft)
3080-0150-100	1-1/2	38.10	1.85	46.99	PE Helix	50	3.45	29.0	0.41	0.61	3.80	96.50	100
3080-0200-100	2	50.80	2.43	61.72	PE Helix	50	3.45	29.0	0.67	1.00	5.50	139.70	100
3080-0300-100	3	76.20	3.52	89.41	PE Helix	45	3.10	29.0	1.10	1.64	7.50	190.50	100
3080-0400-100	4	101.60	4.60	116.84	PE Helix	38	2.62	29.0	1.84	2.74	11.50	292.10	100

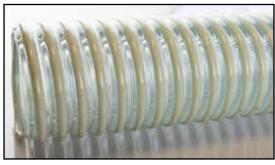
<sup>\*</sup>MBR = Minimum Bend Radius



3074

## HD SUB-ZERO COLD WEATHER CLEAR PVC SUCTION HOSE







**CONSTRUCTION:** PVC tube with sturdy clockwise

PVC helix.

**TEMPERATURE:** -40°F (-40°C) to +140°F (+60°C)

**APPLICATION:** Heavy duty water suction and transfer for rental, construction and trash pumps

in sub-zero weather conditions.

#### **FEATURES:**

- Clear visual flow.
- -40°F cold weather resistance.
- Sub-zero flexibility.
- Easy to drag with "Go-Glide" external clockwise PVC helix.
- Vacuum up to 29" of Hg.

			Π_	_		I			<del></del>				
Part	_	I.D.	_	.D.	Rein.		P. @68°F	Vacuum @68°F		ight	_	IBR*	Std. Lgth.
Number	in.	mm.	in.	mm.	Braids	PSI	BAR	@68°F	ID./It.	KG/m	in.	mm	(ft)
3074-0100-100	1	25.40	1.22	30.99	PVC Helix	43	2.97	29.0	0.15	0.22	2.00	50.80	100
3074-0125-100	1-1/4	31.75	1.48	37.59	PVC Helix	36	2.48	29.0	0.18	0.27	2.50	63.50	100
3074-0150-100	1-1/2	38.10	1.82	46.23	PVC Helix	36	2.48	29.0	0.28	0.42	2.50	63.50	100
3074-0200-100	2	50.80	2.35	59.69	PVC Helix	36	2.48	29.0	0.44	0.65	3.00	76.20	100
3074-0250-100	2-1/2	63.50	2.87	72.90	PVC Helix	28	1.93	29.0	0.60	0.89	5.00	127.00	100
3074-0300-100	3	76.20	3.50	88.90	PVC Helix	28	1.93	29.0	0.85	1.26	6.00	152.40	100
3074-0400-100	4	101.60	4.63	117.60	PVC Helix	21	1.45	29.0	1.34	1.99	9.00	228.60	100
3074-0500-100	5	127.00	5.63	143.00	PVC Helix	21	1.45	28.0	2.20	3.27	10.00	254.00	100
3074-0600-100	6	152.40	6.73	170.94	PVC Helix	21	1.45	28.0	2.72	4.05	11.00	279.40	100
3074-0800-020	8	203.20	9.04	229.62	PVC Helix	21	1.45	28.0	4.84	7.20	16.00	406.40	20
3074-1000-020	10	254.00	11.18	283.97	PVC Helix	14	0.97	28.0	7.06	10.51	30.00	762.00	20
3074-1200-020	12	304.80	13.30	337.82	PVC Helix	14	0.97	26.0	9.74	14.49	40.00	1016.00	20

\*MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.

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## 4601

#### **GREEN PVC WATER SUCTION HOSE**







CONSTRUCTION: Tube is PVC, smooth, green. Cover APPLICATION: Suction, discharge or gravity flow of

is also PVC, smooth to lightly corrugated. Reinforcement is a PVC helix.

**TEMPERATURE:** -14°F (-26°C) to +150°F (+66°C)

**BRANDING:** None.

water, salt water and oily water in construction, agriculture, mining or equipment rental.

#### **FEATURES:**

- Cover is weather, ozone and UV resistant.
- Lightweight and flexible.

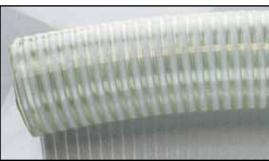
Part Number	l. in.	.D. mm.	in.	D.D. mm.	Rein. Braids	Max W PSI	/.P. @68°F BAR	Vacuum @68°F		ight KG/m		BR* mm	Std. Lgth. (ft)
4601-0750	3/4	19.05	0.95	24.13	PVC Helix	100	6.89	28.0	0.16	0.24	2.00	50.80	100
4601-1000	1	25.40	1.22	30.99	PVC Helix	100	6.89	28.0	0.20	0.30	5.00	127.00	100
4601-1250	1-1/4	31.75	1.41	35.81	PVC Helix	100	6.89	28.0	0.26	0.39	6.00	152.40	100
4601-1500	1-1/2	38.10	1.77	44.96	PVC Helix	100	6.89	28.0	0.35	0.52	7.00	177.80	100
4601-2000	2	50.80	2.32	58.93	PVC Helix	100	6.89	28.0	0.54	0.80	9.00	228.60	100
4601-2500	2-1/2	63.50	2.87	72.90	PVC Helix	80	5.52	26.0	0.70	1.04	11.00	279.40	100
4601-3000	3	76.20	3.35	85.09	PVC Helix	75	5.17	26.0	0.93	1.38	14.00	355.60	100
4601-4000	4	101.60	4.49	114.05	PVC Helix	60	4.14	26.0	1.48	2.20	18.00	457.20	100
4601-6050	6	152.50	6.46	164.08	PVC Helix	50	3.45	26.0	2.89	4.30	31.00	787.40	50

<sup>\*</sup>MBR = Minimum Bend Radius



## **4615** CLEAR/WHITE HELIX PVC WATER SUCTION HOSE







CONSTRUCTION: Tube is PVC, smooth, clear. Cover

is also PVC, smooth to lightly corrugated. Reinforcement is a

PVC helix.

**TEMPERATURE:** -14°F (-26°C) to +150°F (+66°C)

BRANDING: None.

**APPLICATION:** Suction, discharge or gravity flow of water, salt water and oily water in construction, agriculture, mining or equipment rental.

#### **FEATURES:**

- Cover is weather, ozone and UV resistant.
- Lightweight and flexible.
- Allows for visual flow inspection.

Part Number	in.	l.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.I PSI	P. @68°F BAR	Vacuum @68°F	Wei lb./ft.	•	M in.	BR* mm	Std. Lgth. (ft)
4615-0750	3/4	19.05	0.95	24.13	PVC Helix	100	6.89	28.0	0.16	0.24	2.00	50.80	100
4615-1000	1	25.40	1.22	30.99	PVC Helix	100	6.89	28.0	0.20	0.30	5.00	127.00	100
4615-1250	1-1/4	31.75	1.41	35.81	PVC Helix	100	6.89	28.0	0.26	0.39	6.00	152.40	100
4615-1500	1-1/2	38.10	1.77	44.96	PVC Helix	100	6.89	28.0	0.35	0.52	7.00	177.80	100
4615-2000	2	50.80	2.32	58.93	PVC Helix	100	6.89	28.0	0.54	0.80	9.00	228.60	100
4615-2500	2-1/2	63.50	2.87	72.90	PVC Helix	80	5.52	26.0	0.70	1.04	11.00	279.40	100
4615-3000	3	76.20	3.35	85.09	PVC Helix	75	5.17	26.0	0.93	1.38	14.00	355.60	100
4615-4000	4	101.60	4.49	114.05	PVC Helix	60	4.14	26.0	1.48	2.20	18.00	457.20	100
4615-6050	6	152.50	6.46	164.08	PVC Helix	50	3.45	26.0	2.89	4.30	31.00	787.40	50

<sup>\*</sup>MBR = Minimum Bend Radius



#### 4450

## **RUBBER WATER SUCTION HOSE**







CONSTRUCTION: Tube is EPDM blend, smooth and black. Cover is also a EPDM blend with a fabric impression.

> Reinforcement is either a two-ply or four-ply synthetic fabric with a double wire helix.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

BRANDING: Jason logo 4450 WATER SUCTION WP

PSI (BAR).

Yellow mylar longitudinal stripe.

**APPLICATION:** For suction, discharge or gravity flow of water in construction, mining, oil exploration, agriculture and equipment

rental.

#### **FEATURES:**

- Resistant to water-based ag fertilizers.
- Resistant to salt water.
- Cover is abrasion and weather resistant.
- Flexible and economical.

Part		.D.	C	).D.	Rein.	Max W.P.	@68°F	Vacuum	Weight	MBR*	Std. Lgth.
Number	in.	mm.	in.	mm.	Plies	PSI	BAR	@68°F	lb./ft. KG/m	in. mm	(ft)
4450-0100-100	1	25.40	1.42	36.00	2	150	10.35	28.0	0.50 0.75	3.75 95.00	100
4450-0125-100	1-1/4	31.75	1.70	43.18	2	150	10.35	28.0	0.75 1.12	6.00 152.40	100
4450-0150-100	1-1/2	38.10	1.96	49.78	2	150	10.35	28.0	0.80 1.19	6.50 165.10	100
4450-0200-100	2	50.80	2.49	63.25	2	150	10.35	28.0	1.11 1.65	8.00 203.20	100
4450-0200-200	2	50.80	2.49	63.25	2	150	10.35	28.0	1.11 1.65	8.00 230.20	200
4450-0250-100	2-1/2	63.50	2.99	75.95	2	150	10.35	28.0	1.75 2.60	10.00 254.00	100
4450-0300-100	3	76.20	3.50	88.90	2	150	10.35	28.0	2.24 3.33	12.00 304.80	100
4450-0300-200	3	76.20	3.50	88.90	2	150	10.35	28.0	2.24 3.33	12.00 304.80	200
4450-0400-100	4	101.60	4.53	115.06	2	150	10.35	28.0	2.79 4.15	18.00 457.20	100
4450-0400-200	4	101.60	4.53	115.06	2	150	10.35	28.0	2.79 4.15	18.00 457.20	200
4450-0500-100	5	127.00	5.68	144.27	2	150	10.35	28.0	3.25 4.84	26.00 660.40	100
4450-0600-020	6	152.40	6.54	166.12	2	150	10.35	28.0	5.75 8.56	31.00 787.40	20
4450-0600-050	6	152.40	6.54	166.12	2	150	10.35	28.0	5.75 8.56	31.00 787.40	50
4450-0600-100	6	152.40	6.54	166.12	2	150	10.35	28.0	5.75 8.56	31.00 787.40	100
4450-0800-020	8	203.20	8.79	223.27	4	100	6.89	28.0	6.59 9.81	42.00 1066.80	20
4450-1000-020	10	254.00	10.91	277.11	4	75	5.17	28.0	10.25 15.25	50.00 1270.00	20
4450-1200-020	12	340.80	12.91	327.91	4	75	5.17	25.0	13.50 20.09	60.00 1524.00	20
4450-1400-020	14	355.60	15.13	384.20	4	45	3.10	25.0	16.75 24.93	72.00 1828.80	20

<sup>\*</sup>MBR = Minimum Bend Radius



4449

#### **FRAC WATER SUCTION HOSE**







**CONSTRUCTION:** Tube and cover are an EPDM/SBR

blend, smooth and black. Reinforcement is a two-ply synthetic fabric with a wire helix.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

**BRANDING:** Jason logo 4449 FRAC WATER SUCTION

WP 75 PSI 5.18 BAR.

Red mylar longitudinal stripe.

**APPLICATION:** For suction, recycling or disposal of flowback water.

#### **FEATURES:**

- EPDM blend cover makes it resistant to heat, weather and abrasion.
- Lighter than standard water suction hose and more flexible.
- Economical.

Part Number	in.	I.D. mm.	in.	D.D. mm.	Rein. Plies	Max W. PSI	P. @68°F BAR	Vacuum @68°F	Weight lb./ft. KG/n	MBR* in. mm	Std. Lgth. (ft)
4449-0200-100	2	50.80	2.40	60.96	2	75	5.18	29.0	0.97 1.44	8.00 203.20	100
4449-0300-100	3	76.20	3.39	88.90	2	75	5.18	29.0	1.52 2.26	12.00 304.80	100
4449-0400-100	4	101.60	4.41	112.01	2	75	5.18	29.0	2.12 3.15	18.00 457.20	100
4449-0600-100	6	152.40	6.57	167.00	2	75	5.18	29.0	4.68 6.98	31.00 787.40	100

\*MBR = Minimum Bend Radius



### 4352 RUBBER 2-PLY WATER DISCHARGE HOSE







**CONSTRUCTION:** Tube and cover are SBR, black.

Reinforcement is a two-ply

synthetic fabric.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

BRANDING: Jason logo 4352 I.D. WATER DISCHARGE

WP PSI BAR.

Yellow mylar longitudinal stripe.

**APPLICATION:** For general construction, mines and

water discharge and equipment rental.

#### **FEATURES:**

- Cover compound makes it resistant to weather and ozone.
- Lays flat and rolls up for easy storage.
- Ideal for standard working pressure.

Part Number	in.	l.D. mm.	in.	D.D. mm.	Rein. Plies	Max W.P. PSI	@68°F BAR	Vacuum @68°F		eight . KG/m	1	IBR* mm	Std. Lgth. (ft)
4352-0150-100	1-1/2	38.10	1.81	45.97	2	150	10.35	n/a	0.60	0.89	15.00	380.00	100
4352-0200-100	2	50.80	2.31	58.67	2	150	10.35	n/a	0.84	1.25	20.00	508.00	100
4352-0250-100	2-1/2	63.50	2.75	69.85	2	150	10.35	n/a	0.91	1.35	25.00	635.00	100
4352-0300-100	3	76.20	3.38	85.85	2	150	10.35	n/a	1.12	1.67	30.00	762.00	100
4352-0400-100	4	101.60	4.37	111.00	2	150	10.35	n/a	1.25	1.86	40.00	1016.00	100
4352-0500-100	5	127.00	5.51	139.95	2	150	10.35	n/a	2.29	3.41	50.00	1270.00	100
4352-0600-050	6	152.40	6.50	165.10	2	150	10.35	n/a	3.45	5.13	60.00	1524.00	50
4352-0600-100	6	152.40	6.50	165.10	2	150	10.35	n/a	3.45	5.13	60.00	1524.00	100
4352-0800-050	8	203.20	8.50	215.90	2	100	6.89	n/a	4.30	6.40	80.00	2030.00	50
4352-0800-100	8	203.20	8.50	215.90	2	100	6.89	n/a	4.30	6.40	80.00	2030.00	100
4352-1000-050	10	254.00	10.50	266.70	2	100	6.89	n/a	5.40	8.04	100.00	2450.00	50
4352-1200-050	12	304.80	12.50	317.50	2	100	6.89	n/a	6.75	10.04	120.00	3058.00	50

<sup>\*</sup>MBR = Minimum Bend Radius



### 4354 RUBBER 4-PLY WATER DISCHARGE HOSE







**CONSTRUCTION:** Tube and cover are SBR, black.

Reinforcement is a four-ply

synthetic fabric.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

BRANDING: Jason logo 4354 I.D. WATER DISCHARGE

WP PSI BAR.

Yellow mylar longitudinal stripe.

**APPLICATION:** For water discharge in construction,

mines & quarries. Also for heavy duty

equipment rental.

#### **FEATURES:**

- Cover compound makes it resistant to weather and ozone.
- Lays flat and rolls up for easy storage.
- Ideal for high working pressure water discharge applications.
- Excellent for tough, rugged operating conditions.

Part Number	in.	.D. mm.	in.	D.D. mm.	Rein. Plies	Max W PSI	'.P. @68°F BAR	Vacuum @68°F		eight . KG/m	M in.	BR* mm	Std. Lgth. (ft)
4354-0150-100	1-1/2	38.10	2.00	50.80	4	250	17.24	n/a	0.83	1.24	15.00	380.00	100
4354-0200-100	2	50.80	2.56	65.02	4	250	17.24	n/a	1.11	1.65	20.00	508.00	100
4354-0250-100	2-1/2	63.50	3.07	77.98	4	250	17.24	n/a	1.24	1.85	25.00	635.00	100
4354-0300-100	3	76.20	3.58	90.93	4	225	15.51	n/a	1.50	2.23	30.00	762.00	100
4354-0400-050	4	101.60	4.61	117.09	4	200	13.79	n/a	1.85	2.75	40.00	1016.00	50
4354-0400-100	4	101.60	4.61	117.09	4	200	13.79	n/a	1.85	2.75	40.00	1016.00	100
4354-0600-100	6	152.40	6.57	166.88	4	150	10.35	n/a	3.90	5.80	60.00	1524.00	100
4354-0800-050	8	203.20	8.66	219.96	4	125	8.62	n/a	5.25	7.81	80.00	2030.00	50
4354-1000-050	10	254.00	10.66	270.76	4	125	8.62	n/a	6.29	9.36	100.00	2540.00	50
4354-1200-050	12	304.80	12.68	322.07	4	125	8.62	n/a	7.09	10.54	120.00	3048.00	50
4354-1400-050	14	355.60	14.61	371.00	4	100	6.89	n/a	7.62	11.32	120.00	3048.00	50

<sup>\*</sup>MBR = Minimum Bend Radius

Working pressure is temperature dependent. See page 5 for more information.

All sizes may not be stocked in all locations. Check with customer service for availability.





### 4380 NON-CONDUCTIVE FURNACE DOOR HOSE







CONSTRUCTION: Tube is EPDM, white, smooth and

non-conductive. Cover is a glass fiber ply impregnated with heat and flame-resistant synthetic rubber. Reinforcement is a two-ply synthetic fabric.

**TEMPERATURE:** -40°F (-40°C) to +266°F (+130°C)

Cover to +575°F (+302°C)

**BRANDING:** None

**APPLICATION:** Conveys cooling water to furnace doors in steel mills, glass plants and similar operations.

#### **FEATURES:**

- Superior heat resistant cover resists heat up to +575°F.
- Resists heat, open flame and splashes of white hot metal to +575°F (+302°C).
- EPDM tube is non-conductive.

Part Number	in.	l.D. mm.	in.	D.D. mm.	Rein. Plies	Max W. PSI	P. @68°F BAR	Vacuum @68°F		ight KG/m	M in.	BR* mm	Std. Lgth. (ft)
4380-0050-100	1/2	12.70	0.91	23.11	2	150	10.35	n/a	0.20	0.30	5.00	127.00	100
4380-0075-100	3/4	19.05	1.19	30.23	2	150	10.35	n/a	0.30	0.45	7.50	190.00	100
4380-0100-100	1	25.40	1.38	35.05	2	150	10.35	n/a	0.50	0.74	10.00	254.00	100
4380-0125-100	1-1/4	31.75	1.75	44.45	2	150	10.35	n/a	0.90	1.34	12.60	320.00	100
4380-0150-100	1-1/2	38.10	2.00	50.80	2	150	10.35	n/a	1.00	1.49	15.00	380.00	100
4380-0200-100	2	50.80	2.53	64.26	2	150	10.35	n/a	1.10	1.64	20.00	508.00	100

<sup>\*</sup>MBR = Minimum Bend Radius



## **5823** MAINSTREAM™ PRESSURE WASHER ASSEMBLIES







**CONSTRUCTION:** Tube and cover are made of special

synthetic rubber. Reinforcement is a

one wire braid.

**TEMPERATURE:** -40°F (-40°C) to +212°F (+100°C)

**BRANDING:** Jason logo 3/8 MAINSTREAM™ Pressure

Washer - 3000 PSI MAX WP. NOT FOR STEAM SERVICE

**APPLICATION:** Used in clean-up applications for

poultry plants, dairies, off road equipment, paper mills, construction, homes and patios to name a few.

#### **FEATURES:**

- Cover is oil, weather and abrasion resistant.
- Handles working pressures up to 3000 lbs.
- Can be used with hot or cold water and mild detergents.
- Ergonomic bend restrictors are included in each assembly.
- Available in the popular 50' and 75' lengths.

Part Number	I.D. x Length	Coupling	Rein. Braids	Max W.P. @68°F PSI BAR	Weight/LG lb. KG
5823-06-050	3/8" x 50'	3/8" MNPT x 3/8" MSPT w/ Ergonomic	1	3000 206.70	10.02 14.94
	9.5mm x 15.2m	Bend Restrictor Each End			
5823-06-075	3/8" x 75'	3/8" MNPT x 3/8" MSPT w/ Ergonomic	1	3000 206.70	15.48 23.08
	9.5mm x 22.9m	Bend Restrictor Each End			

**Note:** DO NOT USE FOR <u>ANY</u> STEAM APPLICATIONS



## 4502

## **BLUE PVC WATER DISCHARGE BULK HOSE & ASSEMBLIES**











**CONSTRUCTION:** Tube and cover are blue PVC.

Reinforcement is knitted

polyester yarn.

**TEMPERATURE:** -14°F (-26°C) to +150°F (+66°C)

BRANDING: Jason logo WP XX (PSI) ID.

**APPLICATION:** For general purpose water discharge

in construction, agriculture and drip

irrigation.

#### **FEATURES:**

- Light and easy to handle.
- Rolls flat for convenient storage.
- Homogeneous construction eliminates tube and cover separation.
- Maximum bonding is due to the tube and cover being extruded simultaneously.

#### **BULK**

Part Number	in.	I.D. mm.	Wall Ti in.	nickness mm.	Rein.	Max W.I PSI	P. @68°F BAR	Vacuum @68°F	Wei lb./ft.	ight KG/m	Standard Lengths (ft.)
4502-1000	1	25.40	0.056	1.42	Knitted	85	5.86	n/a	0.10	0.15	300
4502-1500	1-1/2	38.10	0.056	1.42	Knitted	85	5.86	n/a	0.21	0.31	300
4502-1500-050	1-1/2	38.10	0.056	1.42	Knitted	85	5.86	n/a	0.21	0.31	50
4502-2000	2	50.80	0.056	1.42	Knitted	85	5.86	n/a	0.25	0.37	300
4502-2000-050	2	50.80	0.056	1.42	Knitted	85	5.86	n/a	0.25	0.37	50
4502-2500	2-1/2	63.50	0.060	1.52	Knitted	75	5.17	n/a	0.29	0.43	300
4502-3000	3	76.20	0.062	1.57	Knitted	70	4.83	n/a	0.39	0.58	300
4502-3000-050	3	76.20	0.062	1.57	Knitted	70	4.83	n/a	0.39	0.58	50
4502-4000	4	101.60	0.062	1.57	Knitted	70	4.83	n/a	0.60	0.89	300
4502-6000	6	152.40	0.077	1.96	Knitted	50	3.45	n/a	1.15	1.71	300
4502-8000	8	203.20	0.089	2.26	Knitted	45	3.10	n/a	1.20	1.79	300

#### HOSE ASSEMBLIES CUT • COUPLED • COILED • TIED

Part Number	in.	.D. mm	Length (ft.)	Coupling	Rein.	Max W. PSI	P. @68°F BAR	Wei lb./ft.	_
4502-1500-050AB	1-1/2	38.10	50	1-1/2" AB Pin Lug (M x F)	Knitted	85	5.86	9.00	13.30
4502-2000-050AB	2	50.80	50	2" AB Pin Lug (M x F)	Knitted	85	5.86	12.00	17.80
4502-3000-050AB	3	76.20	50	3" AB Pin Lug (M x F)	Knitted	70	4.83	22.00	32.60
4502-1500-050CE	1-1/2	38.10	50	1-1/2" Aluminum Cam Lock (C x E)	Knitted	85	5.86	9.00	13.30
4502-2000-050CE	2	50.80		2" Aluminum Cam Lock (C x E)	Knitted	85	5.86	12.00	17.80
4502-3000-050CE	3	76.20		3" Aluminum Cam Lock (C x E)	Knitted	70	4.83	22.00	32.60



4504

## WINE RED PVC WATER DISCHARGE HOSE & ASSEMBLIES - MED. DUTY











**CONSTRUCTION:** Tube and cover are wine red PVC.

Reinforcement is knitted

polyester yarn.

**TEMPERATURE:** -14°F (-26°C) to +150°F (+66°C)

BRANDING: Jason logo WP XX (PSI) ID.

**APPLICATION:** For general purpose water discharge

in construction, agriculture and drip

irrigation.

#### **FEATURES:**

- Medium duty hose.
- Rolls flat for convenient storage.
- Homogeneous construction eliminates tube and cover separation.
- Maximum bonding is due to the tube and cover being extruded simultaneously.

#### **BULK**

Part Number	in.	I.D. mm.	Wall Ti in.	nickness mm.	Rein.	Max W. PSI	P. @68°F BAR	Vacuum @68°F	Wei lb./ft.	ght KG/m	Standard Lengths (ft.)
4504-1500	1-1/2	38.10	0.076	1.93	Knitted	115	7.93	n/a	0.21	0.31	300
4504-2000	2	50.80	0.076	1.93	Knitted	115	7.93	n/a	0.25	0.37	300
4504-2500	2-1/2	63.50	0.079	2.01	Knitted	115	7.93	n/a	0.29	0.43	300
4504-3000	3	76.20	0.079	2.01	Knitted	100	6.89	n/a	0.39	0.58	300
4504-4000	4	101.60	0.081	2.06	Knitted	100	6.89	n/a	0.60	0.89	300
4504-6000	6	152.40	0.112	2.84	Knitted	75	5.17	n/a	1.15	1.71	300
4504-8000	8	203.20	0.124	3.15	Knitted	60	4.14	n/a	1.20	1.79	300

#### HOSE ASSEMBLIES CUT • COUPLED • COILED • TIED

Part Number	in.	I.D. mm	Length (ft.)	Coupling	Rein.	Max W. PSI	P. @68°F BAR	Weig lb./ft.	_
4504-2000-050AB	2	50.80	50	2" AB Pin Lug (M x F)	Knitted	115	7.93	12.00	17.80
4504-3000-050AB		76.20	50	3" AB Pin Lug (M x F)	Knitted	100	6.89	22.00	32.60
4504-2000-050CE	2	50.80	50	2" Aluminum Cam Lock (C x E)	Knitted	115	7.93	12.00	17.80
4504-3000-050CE		76.20	50	3" Aluminum Cam Lock (C x E)	Knitted	100	6.89	22.00	32.60

Working pressure is temperature dependent. See page 5 for more information.

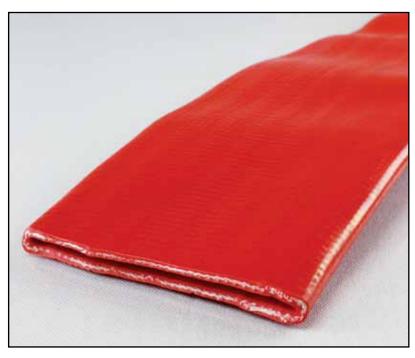
All sizes may not be stocked in all locations. Check with customer service for availability.

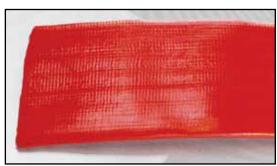
We disclaim any liability for use of our products in applications other than which they are designed.



## 4515

## RED PVC WATER DISCHARGE HOSE - HEAVY DUTY







CONSTRUCTION: Tube and cover are bright red PVC. FEATURES:

Reinforcement is knitted

polyester yarn.

**TEMPERATURE:** -14°F (-26°C) to +150°F (+66°C)

**BRANDING:** None

**APPLICATION:** For water discharge in construction,

agriculture and heavy duty equipment

rental.

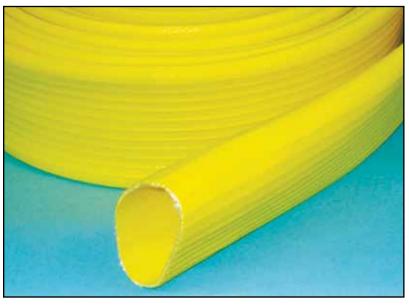
- High WP for heavy duty applications.
- Rolls flat for convenient storage.
- Homogeneous construction eliminates tube and cover separation.
- Maximum bonding is due to the tube and cover being extruded simultaneously.

Part Number	I.D. in. mm.	Wall Ti in.	nickness mm.	Rein.	Max W. PSI	P. @68°F BAR	Vacuum @68°F		ight KG/m	Standard Lengths (ft.)
4515-1500	1-1/2 38.10	0.090	2.29	Knitted	140	9.65	n/a	0.22	0.32	300
4515-2000	2 50.80	0.090	2.29	Knitted	130	8.96	n/a	0.26	0.38	300
4515-2500	2-1/2 63.50	0.098	2.49	Knitted	125	8.61	n/a	0.30	0.44	300
4515-3000	3 76.20	0.098	2.49	Knitted	125	8.61	n/a	0.40	0.59	300
4515-4000	4 101.60	0.110	2.79	Knitted	125	8.61	n/a	0.62	0.91	300
4515-6000	6 152.40	0.111	2.82	Knitted	115	7.92	n/a	1.18	1.75	300
4515-8000	8 203.20	0.111	2.82	Knitted	70	4.82	n/a	1.23	1.83	300



## 4358

## NITRILE/PVC OIL RESISTANT DISCHARGE HOSE - YELLOW







**CONSTRUCTION:** Tube and cover are bright yellow

NBR/PVC.

**TEMPERATURE:** -20°F (-29°C) to +210°F (+99°C)

**BRANDING:** None

**APPLICATION:** For use in industrial washdown, irrigation,

general dewatering, pump discharge and

drainage.

#### **FEATURES:**

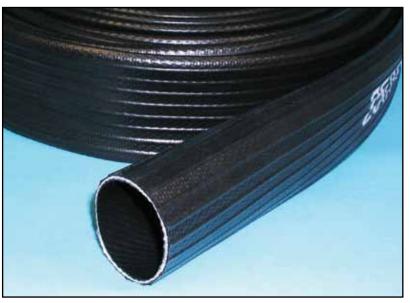
- Up to 250 PSI (17.24 BAR) working pressure.
- Oil resistant tube and cover.
- Resists heat, cold, ozone and UV light.
- Lightweight and flexible.

	<u> </u>	nage.									
Part Number	in.	.D. mm.	Wall Th in.	nickness mm.	Rein. Plies	Max W. PSI	P. @68°F BAR	Vacuum @68°F		ight KG/m	Standard Lengths (ft.)
4358-0075-050	3/4	19.05	0.110	2.79	n/a	250	17.25	n/a	0.10	0.15	50
4358-0075-100	3/4	19.05	0.110	2.79	n/a	250	17.25	n/a	0.10	0.15	100
4358-0100-050	1	25.40	0.110	2.79	n/a	250	17.25	n/a	0.14	0.21	50
4358-0100-100	1	25.40	0.110	2.79	n/a	250	17.25	n/a	0.14	0.21	100
4358-0150-050	1-1/2	38.10	0.110	2.79	n/a	250	17.25	n/a	0.26	0.39	50
4358-0150-100	1-1/2	38.10	0.110	2.79	n/a	250	17.25	n/a	0.26	0.39	100
4358-0200-050	2	50.80	0.110	2.79	n/a	250	17.25	n/a	0.34	0.51	50
4358-0200-100	2	50.80	0.110	2.79	n/a	250	17.25	n/a	0.34	0.51	100
4358-0250-050	2-1/2	63.50	0.110	2.79	n/a	250	17.25	n/a	0.47	0.70	50
4358-0250-100	2-1/2	63.50	0.110	2.79	n/a	250	17.25	n/a	0.47	0.70	100
4358-0300-050	3	76.20	0.110	2.79	n/a	250	17.25	n/a	0.65	0.97	50
4358-0300-100	3	76.20	0.110	2.79	n/a	250	17.25	n/a	0.65	0.97	100
4358-0400-050	4	102.40	0.110	2.79	n/a	200	13.79	n/a	0.83	1.24	50
4358-0400-100	4	102.40	0.110	2.79	n/a	200	13.79	n/a	0.83	1.24	100
4358-0600-050	6	152.40	0.110	2.79	n/a	150	10.35	n/a	1.60	2.39	50
4358-0600-100	6	152.40	0.110	2.79	n/a	150	10.35	n/a	1.60	2.39	100
4358-0800-050	8	204.80	0.110	2.79	n/a	150	10.35	n/a	2.30	3.43	50
4358-0800-100	8	204.80	0.110	2.79	n/a	150	10.35	n/a	2.30	3.43	100
4358-1000-050	10	254.00	0.160	4.06	n/a	150	10.35	n/a	3.20	4.77	50
4358-1000-100	10	254.00	0.160	4.06	n/a	150	10.35	n/a	3.20	4.77	100
4358-1200-050	12	304.80	0.170	4.32	n/a	150	10.35	n/a	3.50	5.22	50
4358-1200-100	12	304.80	0.170	4.32	n/a	150	10.35	n/a	3.50	5.22	100



### 4359

## NITRILE/PVC OIL RESISTANT DISCHARGE HOSE - BLACK







CONSTRUCTION: Tube and cover are black NBR/PVC. FEATURES:

**TEMPERATURE:** -20°F (-29°C) to +210°F (+99°C)

**BRANDING: None** 

**APPLICATION:** For use in industrial washdown, irrigation,

general dewatering, pump discharge and

drainage.

- Up to 250 PSI (17.24 BAR) working pressure.
- Oil resistant tube and cover.
- Resists heat, cold, ozone and UV light.
- Lightweight and flexible.
- 660 ft. lengths available in 4", 6" and 8" IDs.

Part	I.	.D.	Wall Th	nickness	Rein.	Max W.	P. @68°F	Vacuum	Wei	ght	Standard
Number	in.	mm.	in.	mm.	Plies	PSI	BAR	@68°F		KG/m	Lengths (ft.)
4359-0075-050	3/4	19.05	0.110	2.79	n/a	250	17.25	n/a	0.10	0.15	50
4359-0075-100	3/4	19.05	0.110	2.79	n/a	250	17.25	n/a	0.10	0.15	100
4359-0100-050	1	25.40	0.110	2.79	n/a	250	17.25	n/a	0.14	0.21	50
4359-0100-100	1	25.40	0.110	2.79	n/a	250	17.25	n/a	0.14	0.21	100
4359-0150-050	1-1/2	38.10	0.110	2.79	n/a	250	17.25	n/a	0.26	0.39	50
4359-0150-100	1-1/2	38.10	0.110	2.79	n/a	250	17.25	n/a	0.26	0.39	100
4359-0200-050	2	50.80	0.110	2.79	n/a	250	17.25	n/a	0.34	0.51	50
4359-0200-100	2	50.80	0.110	2.79	n/a	250	17.25	n/a	0.34	0.51	100
4359-0250-050	2-1/2	63.50	0.110	2.79	n/a	250	17.25	n/a	0.47	0.70	50
4359-0250-100	2-1/2	63.50	0.110	2.79	n/a	250	17.25	n/a	0.47	0.70	100
4359-0300-050	3	76.20	0.110	2.79	n/a	250	17.25	n/a	0.65	0.97	50
4359-0300-100	3	76.20	0.110	2.79	n/a	250	17.25	n/a	0.65	0.97	100
4359-0400-050	4	102.40	0.110	2.79	n/a	200	13.79	n/a	0.83	1.24	50
4359-0400-100	4	102.40	0.110	2.79	n/a	200	13.79	n/a	0.83	1.24	100
4359-0400-660	4	152.40	0.110	2.79	n/a	200	13.79	n/a	0.83	1.24	660
4359-0600-050	6	152.40	0.110	2.79	n/a	150	10.35	n/a	1.60	2.39	50
4359-0600-100	6	152.40	0.110	2.79	n/a	150	10.35	n/a	1.60	2.39	100
4359-0600-660	6	152.40	0.110	2.79	n/a	150	10.35	n/a	1.60	2.39	660
4359-0800-050	8	204.80	0.110	2.79	n/a	150	10.35	n/a	2.30	3.43	50
4359-0800-100	8	204.80	0.110	2.79	n/a	150	10.35	n/a	2.30	3.43	100
4359-0800-660	8	204.80	0.110	2.79	n/a	150	10.35	n/a	2.30	3.43	660
4359-1000-050	10	254.00	0.160	4.06	n/a	150	10.35	n/a	3.20	4.77	50
4359-1000-100	10	254.00	0.160	4.06	n/a	150	10.35	n/a	3.20	4.77	100
4359-1200-050	12	304.80	0.170	4.32	n/a	150	10.35	n/a	3.50	5.22	50
4359-1200-100	12	304.80	0.170	4.32	n/a	150	10.35	n/a	3.50	5.22	100



4703

## HEAVY DUTY DJ MILL DISCHARGE HOSE & ASSEMBLIES







**CONSTRUCTION:** Tube is SBR, smooth and black.

The cover is a double jacket made

with 100% polyester.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

**BRANDING:** Service Pressure 300 PSI.

**APPLICATION:** Municipal washdown or hydrant-to-truck

water supply line. Heavy duty equip ment/pump rental, ship/deck washdown.

#### **FEATURES:**

- Double cover gives heavy duty abrasion resistance.
- Rolls flat for easy storage.
- Economical, lightweight and flexible.
- Double cover increases service pressure rating.

#### **BULK**

Part Number	I.D. in. mm.	Cping Bowl			Press. BAR	Test PSI	Press. BAR	Vacuum @68°F	Wei lb./ft.	ght KG/m	Standard Lengths (ft.)
4703-1500 4703-2000 4703-2500	1-1/2 38.10 2 50.80 2-1/2 63.50	2.50 58.74	n/a	300	41.36 41.36 41.36	600 600 600	41.36 41.36 41.36	n/a n/a n/a	0.26 0.33 0.45	0.39 0.49 0.67	50 50 50
4703-1501 4703-2001 4703-2501	1-1/2 38.10 2 50.80 2-1/2 63.50	2.50 58.74	n/a	300 4	41.36 41.36 41.36	600 600 600	41.36 41.36 41.36	n/a n/a n/a	0.26 0.33 0.45	0.39 0.49 0.67	100 100 100

#### HOSE ASSEMBLIES CUT • COUPLED • COILED • TIED

Part Number	in.	.D. mm.	Rein. Plies	Thread	Wei (lb/ft.)	ght (kg/m)	Standard Lengths (ft.)
4703-1500-050ERNPS	1-1/2	38.10	n/a	NPS	15.00	22.32	50
4703-1500-050ERNST	1-1/2	38.10	n/a	NST	15.00	22.32	50
4703-2000-050ERNPS	2	50.80	n/a	NPS	20.00	29.76	50
4703-2500-050ERNPS	2-1/2	63.50	n/a	NPS	25.00	37.20	50
4703-2500-050ERNST	2-1/2	63.50	n/a	NST	25.00	37.20	50

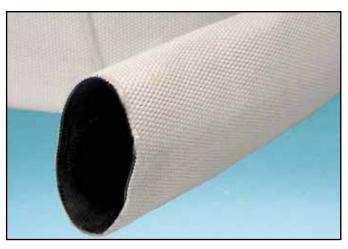
Couplings are internally expanded, aluminum, hardcoated NPS or NST Male x Female rocker lug

Note: Assembly is rated at 150 PSI. Working pressure is temperature dependent. See page 5 for more information.



### 4705

## MUNICIPAL GRADE SJ MILL DISCHARGE HOSE & ASSEMBLIES











**CONSTRUCTION:** Tube is SBR, smooth and black.

Cover is a single jacket made with

100% polyester.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

BRANDING: ID SJ Mill WP (PSI) (BAR).

**APPLICATION:** For water discharge service in rental yards,

fleet service, municipal washdown and

utility dewatering.

#### **FEATURES:**

- HD synthetic cover gives better abrasion resistance.
- Rolls flat for convenient storage.
- Economical, lightweight and flexible.
- Hose is designed for higher working pressures.

#### **BULK**

Part Number	in.	I.D. mm.	Cping in.	Bowl mm.	Rein. Plies	V PSI	V.P. BAR	Burst PSI	Press. BAR	Vacuum @68°F		ight KG/m	Standard Lengths (ft.)
4705-0150-050	1-1/2	38.10	1.81	46.04	n/a	230	15.86	345	23.79	n/a	0.23	0.34	50
4705-0150-100	1-1/2	38.10	1.81	46.04	n/a	230	15.86	345	23.79	n/a	0.23	0.34	100
4705-0200-050	2	50.80	2.31	58.74	n/a	230	15.86	345	23.79	n/a	0.28	0.42	50
4705-0200-100	2	50.80	2.31	58.74	n/a	230	15.86	345	23.79	n/a	0.28	0.42	100
4705-0250-050	2-1/2	63.50	2.81	71.44	n/a	200	13.79	300	20.68	n/a	0.39	0.58	50
4705-0250-100	2-1/2	63.50	2.81	71.44	n/a	200	13.79	300	20.68	n/a	0.39	0.58	100
4705-0300-050	3	76.20	3.38	85.73	n/a	200	13.79	300	20.68	n/a	0.50	0.74	50
4705-0300-100	3	76.20	3.38	85.73	n/a	200	13.79	300	20.68	n/a	0.50	0.74	100
4705-0400-050	4	101.60	4.38	111.13	n/a	200	13.79	300	20.68	n/a	0.66	0.98	50
4705-0400-100	4	101.60	4.38	111.13	n/a	200	13.79	300	20.68	n/a	0.66	0.98	100
4705-0600-050	6	152.40	6.38	161.93	n/a	200	13.79	300	20.68	n/a	1.00	1.49	50

#### HOSE ASSEMBLIES CUT • COUPLED • COILED • TIED

Part	l.	D.	Std.	Description	Max	W.P.	Wei	ght
Number	in.	mm.	Lgth. (ft.)		PSI	BAR	lb./ft.	KG/m
4705-0150-050AB	1-1/2	38.10	50	CPLD M x F AB Pin Lug w/5/8" Bands	230	15.86	8.00	11.90
4705-0200-050AB	2	50.80	50	CPLD M x F AB Pin Lug w/5/8" Bands	230	15.86	12.00	17.80
4705-0300-050AB	3	76.20	50	CPLD M x F AB Pin Lug w/5/8" Bands	200	13.79	22.00	32.80
4705-0150-050CE	1-1/2	38.10	50	CPLD M x F 1-1/2" AL Cam Lock (C x E)	230	15.86	8.00	11.90
4705-0200-050CE	2	50.80	50	CPLD M x F 2" AL Cam Lock (C x E)	230	15.86	12.00	17.80
4705-0300-050CE	3	76.20	50	CPLD M x F 3" AL Cam Lock (C x E)	200	13.79	22.00	32.80

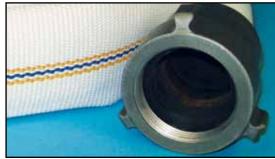
Note: Assembly is rated at 150 PSI. Working pressure is temperature dependent. See page 5 for more information. All sizes may not be stocked in all locations. Check with customer service for availability. We disclaim any liability for use of our products in applications other than which they are designed.



## 4735

#### **MSHA FIRE HOSE ASSEMBLIES**







**CONSTRUCTION:** Chloroprene (CR) tube with a

cover that is polyester.

**TEMPERATURE:** -25°F (-32°C) to +185°F (+85°C)

BRANDING: Jason logo 300 PSI Test,

MSHA #18-FHA08001.

**APPLICATION:** Underground mining fire hose.

#### **FEATURES:**

- Meets MSHA rating 18-FHA08001, therefore resistant to fire.
- Rolls flat for easy storage.
- Couplings are anodized aluminum M x F expansion ring with rocker lugs.
- 100% polyester jacket, which is free from defects, twists, knots and irregularities.

Part	ı.	D.	Coupling	Rein.	Serv.	Press.	Test	Press.	Vacuum	Wei	ight	Standard
Number	in.	mm.	Description	Plies	PSI	BAR	PSI	BAR	@68°F	lb./ft.	KG/m	Lengths (ft.)
4735-0150-050ERNPS	1-1/2	38.10	NPS EXP Ring	n/a	300	20.68	900	62.04	n/a	0.23	0.34	50
4735-0150-050ERNST	1-1/2	38.10	NST EXP Ring	n/a	300	20.68	900	62.04	n/a	0.23	0.34	50
4735-0150-100ERNPS	1-1/2	38.10	NPS EXP Ring	n/a	300	20.68	900	62.04	n/a	0.23	0.34	100
4735-0150-100ERNST	1-1/2	38.10	NST EXP Ring	n/a	300	20.68	900	62.04	n/a	0.23	0.34	100

## SKIRTBOARD RUBBER



# FOR USE ON CONVEYORS, SNOW PLOW BLADES & CHUTE LINING

SERIES		PAGE
6340	SBR Skirtboard Rubber - Beveled Edge	92
6341	SBR Skirtboard Rubber - Square Edge	93

Hoses are constantly being upgraded. Jason Industrial reserves the right to make changes in construction without prior notice.

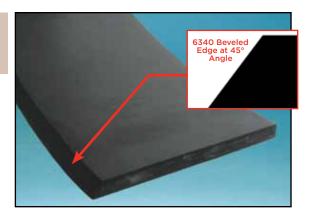




## SKIRTBOARD RUBBER

## 6340 SBR SKIRTBOARD RUBBER - BEVELED EDGE

- Abrasion and Weather Resistant
- 55-60 Durometer
- 1,000 PSI Tensile Strength, 300% Elongation
- Cut Widths (Not Extruded)
- Use with conveyor belt for fine material
- Temperature Range: -20°F (-29°C) to +180°F (+83°C)



PART NUMBER	GAUGE (in.) (mm.)	WIDTH (in.) (mm.)	ROLL LENGTH (ft.) (M)	WEIGHT 50 FT. LL (lbs.)
6340-1204	3/8 9.53	4 101.60	50 15.24	46
6340-1205	3/8 9.53	5 127.00	50 15.24	58
6340-1206	3/8 9.53	6 152.40	50 15.24	73
6340-1208	3/8 9.53	8 203.20	50 15.24	82
6340-1604	1/2 12.70	4 101.60	50 15.24	60
6340-1605	1/2 12.70	5 127.00	50 15.24	75
6340-1606	1/2 12.70	6 152.40	50 15.24	97
6340-1608	1/2 12.70	8 203.20	50 15.24	109
6340-1610	1/2 12.70	10 254.00	50 15.24	150





## SKIRTBOARD RUBBER



## 6341 SBR SKIRTBOARD RUBBER - SQUARE EDGE

- Abrasion and Weather Resistant
- 55-60 Durometer
- 1,000 PSI Tensile Strength, 300% Elongation
- Cut Widths (Not Extruded)
- Use with conveyor belt or as chute lining
- Temperature Range: -20°F (-29°C) to +180°F (+83°C)



PART	GAUGE	WIDTH	ROLL LENGTH	WEIGHT 50 FT. LL
NUMBER	(in.) (mm.)	(in.) (mm.)	(ft.) (M)	(lbs.)
6341-0802 6341-0803	1/4 6.35 1/4 6.35	2 50.80 3 76.20	50 15.24 50 15.24	16 24
6341-0804	1/4 6.35	4 101.60	50 15.24	31
6341-0805 6341-0806	1/4 6.35 1/4 6.35	5 127.00 6 152.40	50 15.24 50 15.24	38 47
6341-0807	1/4 6.35	7 177.80	50 15.24	56
6341-0808 6341-0810	1/4 6.35 1/4 6.35	8 203.20 10 254.00	50 15.24 50 15.24	65 78
6341-0812	1/4 6.35	12 304.80	50 15.24	97
6341-0848	1/4 6.35	48 1219.20	50 15.24	390
6341-1202 6341-1203	3/8 9.53 3/8 9.53	2 50.80 3 76.20	50 15.24 50 15.24	21 32
6341-1204	3/8 9.53	4 101.60	50 15.24	42
6341-1205 6341-1206	3/8 9.53 3/8 9.53	5 127.00 6 152.40	50 15.24 50 15.24	53 63
6341-1207	3/8 9.53	7 177.80	50 15.24	76
6341-1208 6341-1210	3/8 9.53 3/8 9.53	8 203.20 10 254.00	50 15.24 50 15.24	90 108
6341-1212	3/8 9.53	12 304.80	50 15.24	128
6341-1248	3/8 9.53	48 1219.20	50 15.24	520
6341-1602 6341-1603	1/2 12.70 1/2 12.70	2 50.80 3 76.20	50 15.24 50 15.24	30 45
6341-1604	1/2 12.70	4 101.60	50 15.24	60
6341-1605	1/2 12.70	5 127.00	50 15.24	74
6341-1606 6341-1607	1/2 12.70 1/2 12.70	6 152.40 7 177.80	50 15.24 50 15.24	89 104
6341-1608	1/2 12.70	8 203.20	50 15.24	121
6341-1610 6341-1612	1/2 12.70 1/2 12.70	10 254.00 12 304.80	50 15.24 50 15.24	150 181
6341-1648	1/2 12.70	48 1219.20	50 15.24	726
6341-2402	3/4 19.05	2 50.80	50 15.24	60
6341-2403 6341-2404	3/4 19.05 3/4 19.05	3 76.20 4 101.60	50 15.24 50 15.24	68 91
6341-2405	3/4 19.05	5 127.00	50 15.24	112
6341-2406	3/4 19.05 3/4 19.05	6 152.40 7 177.80	50 15.24	133
6341-2407 6341-2408	3/4 19.05 3/4 19.05	7 177.80 8 203.20	50 15.24 50 15.24	157 182
6341-2410	3/4 19.05	10 254.00	50 15.24	226
6341-2412 6341-2448	3/4 19.05 3/4 19.05	12 304.80 48 1219.20	50 15.24 50 15.24	270 1120
6341-3202	1 25.40	2 50.80	50 15.24	77
6341-3203	1 25.40	3 76.20	50 15.24	95
6341-3204 6341-3205	1 25.40 1 25.40	4 101.60 5 127.00	50 15.24 50 15.24	116 144
6341-3206	1 25.40	6 152.40	50 15.24	173
6341-3207 6341-3208	1 25.40 1 25.40	7 177.80 8 203.20	50 15.24 50 15.24	199 228
6341-3210	1 25.40	10 254.00	50 15.24	289
6341-3212	1 25.40	12 304.80	50 15.24	345
6341-3248	1 25.40	48 1219.20	50 15.24	1420



# COUPLINGS & ACCESSORIES



The value of a hose is enhanced by the proper selection of couplings.

Couplings attach to the end of the hose to facilitate connection to a pressure source. In order to make the transition successful, the coupling termination must provide a leak-proof seal and the hose/coupling interface must be properly matched.

**SAFETY WARNING -** Because the hose/coupling interface is critical to the hose assembly performance, always follow the specific instructions of the hose and coupling manufacturers regarding the match of hose/fittings and assembly procedures. Trained personnel using proper tools and procedures should make the hose assemblies. Failure to follow the manufacturers' instructions or failure to use trained personnel might be dangerous and could result in damage to property and serious bodily injury.

Jason offers a wide range of couplings & accessories that complement the hose line and the markets they serve.

#### **COUPLINGS INCLUDE:**

- Crimp Cam and Groove Couplings
- Crimp Combination Nipples
  - Sleeves
  - Ferrules
- Standard Cam and Groove Couplings
  - Anti-Leak C & G Couplings
  - Reducing C & G Couplings
  - Tank Truck API Adapters, Caps & Couplers
- Universal Couplings
- Ground Joint Couplings
- Sandblast Hose Couplings
- Locking Lever Pump Couplings
- Combination Hose Nipples

#### **ACCESSORIES INCLUDE:**

- Clamps Interlocking & Double Bolt
- Brass Ball Valves. Mini Ball Valves
- Foot Valves
- Nozzles
- Wrenches
- Strainers for Water Suction Hose
- Strainers for Oil & Gas Drilling
- Sight Glasses
- Grip Plugs & Caps
- Pump Plate Strainers
- Quick Connect Air Couplers

All sizes may not be stocked in all locations. Check with customer service for availability.

We disclaim any liability for use of our products in applications other than which they are designed.

# **COUPLINGS & ACCESSORIES**



#### JASON CRIMP METHODOLOGY

This brochure will introduce you to the "New Jason Crimp Methodology" for industrial hose and couplings. We believe that crimping offers a far superior assembly method for the following reasons:

- There is more retention along the shank or barb. More retention means a significant decrease in possible leaks.
- Provides a much higher safety factor than what bands can provide.
- No sharp edges. Banded assemblies can have four or more sharp edges that create the possibility that the assembler could be hurt.
- A crimped ferrule or sleeve has smooth edges which make it safe to handle and a better look to the overall assembly.
- The shank lengths of our cam and groove fittings are a match with the sleeves and ferrules. This creates better retention than banded or swaged assemblies and helps to avoid damage to the tube and/or cover.



Please do not mix Jason Industrial couplings with other products. We cannot recommend working pressures or crimp specifications for non-Jason parts. Please follow the safety recommendations as published in the NAHAD Industrial Hose Assembly Specification Guidelines.

We recommend that you refer to the NAHAD Industrial Hose Assembly Specification Guidelines for industry-accepted practices for assembling hoses and couplings, which include hydrostatic testing. Please note that Jason couplings, ferrules and sleeves are designed to work together.

Please do not mix and match with other products.

#### RECOMMENDED WORKING PRESSURES

Size	Combinati Sleeve	ion Nipples Ferrule	Cam &	Groove Ferrule
1-1/2"	300	350	250	250
2"	250	300	250	250
3"	200	300	125	150
4"	175	300	110	150

Working pressures are given in pounds per square inch (PSI) at 70°F ambient temperature.

**PLEASE NOTE:** The working pressure of an assembly is equal to the component with the least working pressure.



### **CAM & GROOVE CRIMP COUPLINGS**

**All Cam & Groove Fittings are Aluminum** 

### **PART C** FEMALE COUPLER x HOSE SHANK

Female end fits male adapter or Dust Plug. Shank fits into hose ID. Bowl has recess for washer replacement.



Part Number	Size (in.)	Shan (in.)	k O.D. (mm)	Serrations	Ste (in.)	m OD (mm)
C150AC	1-1/2	1.535	39.0	10	1.54	39.0
C200AC	2	2.027	51.5	12	2.03	51.5
C250AC	2-1/2	2.527	64.2	15	2.53	64.2
C300AC	3	3.031	77.0	14	3.03	77.0
C400AC	4	4.035	102.5	15	4.04	102.5
C600AC	6	6.047	153.6	22	6.05	153.6

### PART E MALE ADAPTER x HOSE SHANK

Male end fits female coupler or Dust Cap. Shank fits into hose ID.



Part Number	Size (in.)	Shank O.D. (in.) (mm)		Serrations	Ste (in.)	m OD (mm)
E150AC	1-1/2	1.535	39.0	10	1.54	39.0
E200AC	2	2.027	51.5	12	2.03	51.5
E250AC	2-1/2	2.527	64.2	15	2.53	64.2
E300AC	3	3.031	77.0	14	3.03	77.0
E400AC	4	4.035	102.5	15	4.04	102.5
E600AC	6	6.047	153.6	22	6.05	153.6

## COMBINATION HOSE NIPPLES MALE x HOSE SHANK

Combination Nipples are used in a variety of fluid applications. End (male) threads are NPT Will mate with Foot Valves, Strainers, Cam & Groove Part A & D, etc. and are the same size as the shank.



Part Number	Size (in.)	Ste	m OD (mm)
CN150PC	1-1/2	1.54	39.0
CN200PC	ź	2.03	51.5
CN250PC	2-1/2	2.53	64.2
CN300PC	3	3.03	77.0
CN400PC	4	4.04	102.5
CN600PC	6	6.05	153.6

## CRIMP COUPLINGS, FERRULES & SLEEVES



Jason Ferrules and Sleeves are designed to be used with Jason Combination Hose Nipples and the Part "C" and "E" Cam & Groove fittings (crimp style only). For crimp O.D.'s, please refer to pages 100 to 105.

Working pressures are determined by the type of hose and coupling used in the application.

#### **DO NOT mix with other products.**

\*Please Note - for any hose with a natural rubber tube, we recommend using a ferrule only. During the crimping process, couplings have a tendency to be squeezed out of proper crimp position if a crimp sleeve is being used.

## **CRIMP FERRULES (Plated Steel)**

**Warning - Do not use in steam applications** 



### **NOMENCLATURE**

Ferrule Part Number 212F20P

212 = 2-12/16" Ferrule I.D.

F = Ferrule

20 = 2" Hose I.D.

P = Plated Steel

Hose Size	Part No.	Ferrule I.D.	Hose Size	Part No.	Ferrule I.D.	Hose Size	Part No.	Ferrule I.D.
1-1/2"	115F15P	1-15/16"	2"	214F20P	2-14/16"	3"	315F30P	3-15/16"
1-1/2"	200F15P	2"	2"	215F20P	2-15/16"	4"	409F40P	4-9/16"
1-1/2"	201F15P	2-1/16"	2-1/2"	302F25P	3-2/16"	4"	410F40P	4-10/16"
1-1/2"	202F15P	2-2/16"	2-1/2"	303F25P	3-3/16"	4"	411F40P	4-11/16"
1-1/2"	203F15P	2-3/16"	2-1/2"	304F25P	3-4/16"	4"	412F40P	4-12/16"
1-1/2"	204F15P	2-4/16"	2-1/2"	305F25P	3-5/16"	4"	413F40P	4-13/16"
1-1/2"	205F15P	2-5/16"	2-1/2"	307F25P	3-7/16"	4"	414F40P	4-14/16"
1-1/2"	206F15P	2-6/16"	3"	308F30P	3-8/16"	4"	415F40P	4-15/16"
2"	208F20P	2-8/16"	3"	309F30P	3-9/16"	4"	500F40P	5 <sup>"</sup>
2"	209F20P	2-9/16"	3"	310F30P	3-10/16"	4"	501F40P	5-1/16"
2"	210F20P	2-10/16"	3"	311F30P	3-11/16"	6"	610F60P	6-10/16"
2"	211F20P	2-11/16"	3"	312F30P	3-12/16"	6"	614F60P	6-14/16"
2"	212F20P	2-12/16"	3"	313F30P	3-13/16"	6"	702F60P	7-2/16"
2"	213F20P	2-13/16"	3"	314F30P	3-14/16"	6"	706F60P	7-6/16"

See Page 98 for Ferrule/Sleeve Wall Thickness



## **CRIMP SLEEVES (Plated Steel)**

Warning - Do not use in steam applications



## **NOMENCLATURE**

Ferrule Part Number **305S25P** 

305 = 3-5/16" Sleeve I.D.

S = Sleeve

25 = 2-1/2" Hose I.D.

P = Plated Steel

Hose Size	Part No.	Ferrule I.D.	Hose Size	Part No.	Ferrule I.D.	Hose Size	Part No.	Ferrule I.D
1-1/2"	115S15P	1-15/16"	2"	215S20P	2-15/16"	3"	400S30P	4"
1-1/2"	200S15P	2"	2-1/2"	300S25P	3"	4"	409S40P	4-9/16"
1-1/2"	201S15P	2-1/16"	2-1/2"	302S25P	3-2/16"	4"	410S40P	4-10/16"
1-1/2"	202S15P	2-2/16"	2-1/2"	303S25P	3-3/16"	4"	411S40P	4-11/16"
1-1/2"	203S15P	2-3/16"	2-1/2"	304S25P	3-4/16"	4"	412S40P	4-12/16"
1-1/2"	204S15P	2-4/16"	2-1/2"	305S25P	3-5/16"	4"	413S40P	4-13/16"
1-1/2"	205S15P	2-5/16"	2-1/2"	307S25P	3-7/16"	4"	414S40P	4-14/16"
1-1/2"	206S15P	2-6/16"	2-1/2"	308S25P	3-8/16"	4"	415S40P	4-15/16"
2"	206S20P	2-6/16"	3"	308S30P	3-8/16"	4"	500S40P	5 <sup>"</sup>
2"	208S20P	2-8/16"	3"	309S30P	3-9/16"	4"	610S40P	6-10/16"
2"	209S20P	2-9/16"	3"	310S30P	3-10/16"	6"	610S60P	6-10/16"
2"	210S20P	2-10/16"	3"	311S30P	3-11/16"	6"	614S60P	6-14/16"
2"	211S20P	2-11/16"	3"	312S30P	3-12/16"	6"	702S60P	7-2/16"
2"	212S20P	2-12/16"	3"	313S30P	3-13/16"	6"	706S60P	7-6/16"
2"	213S20P	2-13/16"	3"	314S30P	3-14/16"	8"	807S80P	8-7/16"
2"	214S20P	2-14/16"	3"	315S30P	3-15/16"	8"	808S80P	8-8/16"

## FERRULE OR SLEEVE WALL THICKNESS

Hose ID		Ferrule Wall (mm)
1-1/2"	0.06	1.52
2"	0.06	1.52
2-1/2"	0.06	1.52
3"	0.09	2.29
4"	0.09	2.29
6"	0.12	3.05



#### **ASSEMBLY PROCEDURE RECOMMENDATIONS**

The following six pages will list the crimp OD's for 1-1/2" to 6" ID hoses. These crimp OD's are guides only. We recommend that you accurately measure the dimensions of each hose, test each assembly and document everything.

It is difficult to establish ironclad standards because of the many variables in hose construction. Hardwall versus softwall construction, corrugated versus smooth cover and differing compounds all play a part in the difficulty of establishing crimp-specific OD's.

Once again, do not mix other manufacturer's products (hose, ferrule, sleeve or coupling) with Jason Industrial products.

Before doing any assembly work, please do the following steps:

- 1. Make sure each hose end is cut square. Clean any debris from the tube interior.
- 2. Before the coupling is installed, check for any burrs or sharp edges. This will make the coupling insertion easier and prevent inner tube damage.
- 3. **This next step is vital!** Measure the Hose O.D. in at least three different locations on each end. This will ensure that the proper sized ferrule/sleeve is used.
  - a. Never try to enlarge the tube to make it easier to insert the coupling this could result in tearing the tube. Lubrication should only be used if necessary.
  - b. There is no need to buff the cover of the hose.
- 4. The fitting shank should be inserted into the hose to where the last serration is covered. Inserting past this point does not help hose/coupling retention. Do not insert hose against the stop on cam & groove parts C & E. The hose will extrude during the crimping process and will fill in that space.
- 5. Check the charts on the next six pages for the hose ID and find the correct crimp OD.
- 6. If a static charge needs to be maintained, then bend the helical wires inside the hose tube. Slide the sleeve or ferrule onto the hose. Insert the shank and complete the assembly.
- 7. In petroleum tank truck applications, it is recommended that the ends be sealed. After crimping, the ends will be exposed and will require a chloroprene cement to accomplish the seal.
- 8. Jason Industrial recommends that ferrules **ONLY** be used when crimping a hose with a natural rubber tube. These hoses have a tendency to squeeze out of the fitting during the crimping process.
- 9. Each assembly should be hydrostatically tested to two times the working pressure, unless otherwise specified by the customer. Otherwise, please refer to the NAHAD Assembly Guidelines industry-accepted guidelines for hose assembly practices.
- 10. Non-sparking materials like brass or aluminum should be used if the assembly is conveying flammable liquids.

Please do not mix Jason Industrial couplings with other products. We cannot recommend working pressures or crimp specifications for non-Jason parts. Please follow the safety recommendations as published in the NAHAD Industrial Hose Assembly Specification Guidelines.



## **CRIMPING SPECIFICATIONS - 1-1/2"**

		Ferrule/						
Hose	l.D.	Sleeve	Hose	O. D.	Wall Th	ickness	Crimp	O. D.
(in.)	(mm)	Part No.	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
1-1/2	38.10	115F15P	1.796	45.62	0.148	3.75	1.86	47.23
		115S15P	1.812	46.02	0.156	3.96	1.87	47.52
			1.828	46.43	0.164	4.17	1.88	47.83
			1.844	46.84	0.172	4.37	1.90	48.16
			1.860	47.24	0.180	4.57	1.91	48.41
			1.876	47.65	0.188	4.78	1.92	48.77
			1.890	48.01	0.195	4.95	1.93	49.02
			1.906	48.41	0.203	5.16	1.94	49.23
1-1/2	38.10	200F15P	1.922	48.82	0.211	5.36	1.96	49.78
		200S15P	1.938	49.23	0.219	5.56	1.97	50.01
			1.954	49.63	0.227	5.77	1.98	50.39
			1.968	49.99	0.234	5.94	2.00	50.80
1-1/2	38.10	201F15P	1.984	50.39	0.242	6.15	2.01	51.05
		201S15P	2.000	50.80	0.250	6.35	2.02	51.28
			2.016	51.21	0.258	6.55	2.03	51.59
			2.032	51.61	0.266	6.76	2.05	52.07
1-1/2	38.10	202F15P	2.046	51.97	0.273	6.93	2.06	52.22
		202S15P	2.062	52.37	0.281	7.14	2.07	52.53
			2.078	52.78	0.289	7.34	2.08	52.86
			2.094	53.19	0.297	7.54	2.09	53.16
1-1/2	38.10	203F15P	2.110	53.59	0.305	7.75	2.11	53.47
		203S15P	2.126	54.00	0.313	7.95	2.12	53.80
			2.140	54.36	0.320	8.13	2.13	54.10
			2.156	54.76	0.328	8.33	2.14	54.41
1-1/2	38.10	204F15P	2.172	55.17	0.336	8.53	2.16	54.74
		204S15P	2.188	55.58	0.344	8.74	2.17	55.04
			2.204	55.98	0.352	8.94	2.18	55.35
			2.218	56.34	0.359	9.12	2.19	55.68
1-1/2	38.10	205F15P	2.234	56.74	0.367	9.32	2.21	56.13
		205S15P	2.250	57.15	0.375	9.53	2.22	56.31
			2.266	57.56	0.383	9.73	2.23	56.62
			2.282	57.96	0.391	9.93	2.24	56.92
1-1/2	38.10	206F15P	2.296	58.32	0.398	10.11	2.25	57.24
		206S15P	2.312	58.72	0.406	10.31	2.27	57.55
			2.328	59.13	0.414	10.52	2.28	57.87
			2.344	59.54	0.422	10.72	2.29	58.18



## **CRIMPING SPECIFICATIONS - 2"**

		Ferrule/						
Hose	e I.D.	Sleeve	Hose	O. D.	Wall Th	ickness	Crimp	O. D.
(in.)	(mm)	Part No.	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
2	50.80	208F20P	2.360	59.94	0.180	4.57	2.41	61.16
		208S20P	2.376	60.35	0.188	4.77	2.42	61.47
			2.390	60.71	0.195	4.95	2.43	61.79
			2.406	61.11	0.203	5.16	2.44	62.10
			2.422	61.52	0.211	5.36	2.46	62.41
			2.438	61.93	0.219	5.56	2.47	62.73
			2.454	62.33	0.227	5.77	2.48	63.04
			2.468	62.69	0.234	5.94	2.49	63.36
2	50.80	209F20P	2.484	63.09	0.242	6.15	2.51	63.75
		209S20P	2.500	63.50	0.250	6.35	2.52	63.98
			2.516	63.91	0.258	6.55	2.53	64.30
			2.532	64.31	0.266	6.76	2.55	64.92
2	50.80	210F20P	2.546	64.67	0.273	6.93	2.56	65.02
		210S20P	2.562	65.07	0.281	7.14	2.57	64.24
			2.578	65.48	0.289	7.34	2.58	65.55
			2.594	65.89	0.297	7.54	2.59	65.86
2	50.80	211F20P	2.610	66.29	0.305	7.74	2.61	66.29
		211S20P	2.626	66.70	0.313	7.95	2.62	66.49
			2.640	67.06	0.320	8.13	2.63	66.80
			2.656	67.46	0.328	8.33	2.64	67.12
2	50.80	212F20P	2.672	67.87	0.336	8.53	2.66	67.56
		212S20P	2.688	68.28	0.344	8.74	2.67	67.74
			2.704	68.68	0.352	8.94	2.68	68.06
			2.718	69.04	0.359	9.12	2.69	68.37
2	50.80	213F20P	2.734	69.44	0.367	9.32	2.71	68.83
		213S20P	2.750	69.85	0.375	9.52	2.72	69.00
			2.766	70.26	0.383	9.73	2.73	69.31
			2.782	70.66	0.391	9.93	2.74	69.63
2	50.80	214F20P	2.796	71.02	0.398	10.11	2.75	69.94
		214S20P	2.812	71.42	0.406	10.31	2.77	70.36
			2.828	71.83	0.414	10.51	2.78	70.57
			2.844	72.24	0.422	10.72	2.79	70.88
2	50.80	215F20P	2.860	72.64	0.430	10.92	2.80	71.19
		215S20P	2.876	73.05	0.438	11.12	2.82	71.51
			2.890	73.41	0.445	11.30	2.83	71.82
			2.906	73.81	0.453	11.51	2.84	72.13



## **CRIMPING SPECIFICATIONS - 2-1/2"**

		Ferrule/						
Hose	e I.D.	Sleeve	Hose	O. D.	Wall Thickness		Crimp O. D.	
(in.)	(mm)	Part No.	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
2-1/2	63.50	302F25P	2.984	75.79	0.242	6.15	3.01	76.45
		302S25P	3.000	76.20	0.250	6.35	3.02	76.71
			3.016	76.61	0.258	6.55	3.03	76.96
			3.032	77.01	0.266	6.76	3.05	77.47
			3.048	77.42	0.274	6.96	3.06	77.72
			3.062	77.77	0.281	7.14	3.07	77.98
			3.078	78.18	0.289	7.34	3.08	78.23
			3.094	78.59	0.297	7.54	3.09	78.49
2-1/2	63.50	303F25P	3.110	78.99	0.305	7.75	3.11	78.99
		303S25P	3.126	79.40	0.313	7.95	3.12	79.25
			3.140	79.76	0.320	8.13	3.13	79.50
			3.156	80.16	0.328	8.33	3.14	79.76
2-1/2	63.50	304F25P	3.172	80.57	0.336	8.53	3.16	80.26
		304S25P	3.188	80.98	0.344	8.74	3.17	80.52
			3.204	81.38	0.352	8.94	3.18	80.77
			3.220	81.79	0.360	9.14	3.19	81.03
2-1/2	63.50	305F25P	3.234	82.14	0.367	9.32	3.21	81.53
		305S25P	3.250	82.55	0.375	9.53	3.22	81.79
			3.266	82.96	0.383	9.73	3.23	82.04
			3.282	83.36	0.391	9.93	3.24	82.30
2-1/2	63.50	307F25P	3.300	83.82	0.400	10.16	3.26	82.80
		307S25P	3.312	84.12	0.406	10.31	3.27	83.06
			3.328	84.53	0.414	10.52	3.28	83.31
			3.344	84.94	0.422	10.72	3.29	83.57
			3.360	85.34	0.430	10.92	3.31	84.07
			3.376	85.75	0.438	11.13	3.32	84.33
			3.390	86.11	0.445	11.30	3.33	84.58
			3.406	86.51	0.453	11.51	3.34	84.84



## **CRIMPING SPECIFICATIONS - 3"**

	Ferrule/							
Hose I.D.		Sleeve	Hose O. D.		Wall Thickness		Crimp O. D.	
(in.)	(mm)	Part No.	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
3"	76.20	308F30P	3.360	85.34	0.180	4.57	3.47	88.14
		308S30P	3.376	85.75	0.188	4.78	3.48	88.39
			3.392	86.16	0.196	4.98	3.49	88.65
			3.406	86.51	0.203	5.16	3.50	88.90
3"	76.20	309F30P	3.422	86.92	0.211	5.36	3.52	89.41
		309S30P	3.438	87.33	0.219	5.56	3.53	89.66
			3.454	87.73	0.227	5.77	3.54	89.92
			3.468	88.09	0.234	5.94	3.55	90.17
			3.484	88.49	0.242	6.15	3.57	90.68
			3.500	88.90	0.250	6.35	3.58	90.93
			3.516	89.31	0.258	6.55	3.59	91.19
			3.532	89.71	0.266	6.76	3.61	91.69
3"	76.20	310F30P	3.546	90.07	0.273	6.93	3.62	91.95
		310S30P	3.562	90.47	0.281	7.14	3.63	92.20
			3.578	90.88	0.289	7.34	3.64	92.46
			3.594	91.29	0.297	7.54	3.65	92.71
3"	76.20	311F30P	3.610	91.69	0.305	7.75	3.67	93.22
		311S30P	3.626	92.10	0.313	7.95	3.68	93.47
			3.640	92.46	0.320	8.13	3.69	93.73
			3.656	92.86	0.328	8.33	3.70	93.98
3"	76.20	312F30P	3.672	93.27	0.336	8.53	3.72	94.49
		312S30P	3.688	93.68	0.344	8.74	3.73	94.74
			3.704	94.08	0.352	8.94	3.74	95.00
			3.718	94.44	0.359	9.12	3.75	95.25
3"	76.20	313F30P	3.734	94.84	0.367	9.32	3.77	95.76
		313S30P	3.750	95.25	0.375	9.53	3.78	96.01
			3.766	95.66	0.383	9.73	3.79	96.27
			3.782	96.06	0.391	9.93	3.80	96.52
3"	76.20	314F30P	3.796	96.42	0.398	10.11	3.81	96.77
		314S30P	3.812	96.82	0.406	10.31	3.83	97.28
			3.828	97.23	0.414	10.52	3.84	97.54
			3.844	97.64	0.422	10.72	3.85	97.79
3"	76.20	315F30P	3.860	98.04	0.430	10.92	3.86	98.04
		315S30P	3.876	98.45	0.438	11.13	3.88	98.55
			3.890	98.81	0.445	11.30	3.89	98.81
0.11		1007007	3.906	99.21	0.453	11.51	3.90	99.06
3"	76.20	400F30P	3.922	99.62	0.461	11.71	3.91	99.31
		400S30P	3.938	100.03	0.469	11.91	3.93	99.82
			3.954	100.43	0.477	12.12	3.94	100.08
			3.968	100.79	0.484	12.29	3.95	100.33



## **CRIMPING SPECIFICATIONS - 4"**

		Ferrule/						
Hose I.D.		Sleeve	Hose	O. D.	Wall Thickness		Crimp O. D.	
(in.)	(mm)	Part No.	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
4	101.80	409F40P	4.422	112.32	0.211	5.36	4.52	114.81
		409S40P	4.438	112.73	0.219	5.56	4.53	115.06
			4.454	113.13	0.227	5.77	4.54	115.32
			4.468	113.49	0.234	5.94	4.55	115.57
			4.484	113.89	0.242	6.15	4.57	116.08
			4.500	114.30	0.250	6.35	4.58	116.33
			4.516	114.71	0.258	6.55	4.59	116.59
			4.532	115.11	0.266	6.76	4.61	117.09
4	101.80	410F40P	4.456	113.18	0.273	6.93	4.62	117.35
		410S40P	4.562	115.87	0.281	7.14	4.63	117.60
			4.578	116.28	0.289	7.34	4.64	117.86
			4.594	116.69	0.297	7.54	4.65	118.11
4	101.80	411F40P	4.610	117.09	0.305	7.75	4.67	118.62
		411S40P	4.626	117.50	0.313	7.95	4.68	118.87
			4.640	117.86	0.320	8.13	4.69	119.13
			4.656	118.26	0.328	8.33	4.70	119.38
4	101.80	412F40P	4.672	118.67	0.336	8.53	4.72	119.89
		412S40P	4.688	119.08	0.344	8.74	4.73	120.14
			4.704	119.48	0.352	8.94	4.74	120.40
			4.718	119.84	0.359	9.12	4.76	120.90
4	101.80	413F40P	4.734	120.24	0.367	9.32	4.77	121.16
		413S40P	4.750	120.65	0.375	9.53	4.78	121.41
			4.766	121.06	0.383	9.73	4.79	121.67
			4.782	121.46	0.391	9.93	4.80	121.92
4	101.8	414F40P	4.796	121.82	0.398	10.11	4.81	122.17
		414S40P	4.812	122.22	0.406	10.31	4.83	122.68
			4.828	122.63	0.414	10.52	4.84	122.94
			4.844	123.04	0.422	10.72	4.85	123.19
4	101.80	415F40P	4.860	123.44	0.430	10.92	4.86	123.44
		415S40P	4.876	123.85	0.438	11.13	4.88	123.95
			4.890	124.21	0.445	11.30	4.89	124.21
	404.00	<b>500 510 5</b>	4.906	124.61	0.453	11.51	4.90	124.46
4	101.80	500F40P	4.922	125.02	0.461	11.71	4.91	124.71
		500S40P	4.938	125.43	0.469	11.91	4.93	125.22
			4.954	125.83	0.477	12.12	4.94	125.48
			4.968	126.19	0.484	12.29	4.95	125.73



## **CRIMPING SPECIFICATIONS - 6"**

		Ferrule/						
Hose I.D.		Sleeve	Hose	O. D.	Wall Th	ickness	Crim	o O. D.
(in.)	(mm)	Part No.	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
6	152.40	610F60P	6.422	163.12	0.211	5.36	6.58	167.13
		610S60P	6.438	163.53	0.219	5.56	6.59	167.39
			6.454	163.93	0.227	5.77	6.60	167.64
			6.468	164.29	0.234	5.94	6.61	167.89
			6.484	164.69	0.242	6.15	6.63	168.40
			6.500	165.10	0.250	6.35	6.64	168.66
			6.516	165.51	0.258	6.55	6.65	168.91
			6.532	165.91	0.266	6.76	6.67	169.42
			6.546	166.27	0.273	6.93	6.68	169.67
			6.562	166.67	0.281	7.14	6.69	169.93
			6.578	167.08	0.289	7.34	6.70	170.18
			6.594	167.49	0.297	7.54	6.71	170.43
6	152.40	614F60P	6.610	167.89	0.308	7.82	6.73	170.94
		614S60P	6.626	168.30	0.313	7.95	6.74	171.20
			6.640	168.66	0.320	8.13	6.75	171.4
			6.656	169.06	0.328	8.33	6.76	171.70
			6.672	169.47	0.336	8.53	6.78	172.2
			6.688	169.88	0.344	8.74	6.79	172.4
			6.704	170.28	0.352	8.94	6.80	172.7
			6.718	170.64	0.359	9.12	6.81	172.9
			6.734	171.04	0.367	9.32	6.83	173.4
			6.750	171.45	0.375	9.53	6.84	173.7
			6.766	171.86	0.383	9.73	6.85	173.9
			6.782	172.26	0.391	9.93	6.86	174.2
			6.796	172.62	0.398	10.11	6.87	174.50
			6.812	173.02	0.406	10.31	6.89	175.0
			6.828	173.43	0.414	10.52	6.90	175.20
			6.844	173.84	0.422	10.72	6.91	175.5
6	152.40	702F60P	6.860	174.24	0.430	10.92	6.92	175.7
		702S60P	6.876	174.65	0.438	11.13	6.94	176.28
			6.890	175.01	0.445	11.30	6.95	176.5
			6.906	175.41	0.453	11.51	6.96	176.78
			6.922	175.82	0.461	11.71	6.97	177.04
			6.938	176.23	0.469	11.91	6.99	177.5
			6.954	176.63	0.477	12.12	7.00	177.80
			6.970	177.04	0.485	12.32	7.01	178.0
			6.984	177.39	0.492	12.50	7.02	178.3
			7.000	177.80	0.500	12.70	7.04	178.82
			7.016	178.21	0.508	12.90	7.05	179.07
			7.032	178.61	0.516	13.11	7.06	179.32
			7.046	178.97	0.523	13.28	7.07	179.58
			7.062	179.37	0.531	13.49	7.08	179.83
			7.078 7.094	179.78	0.539	13.69	7.10	180.3 <sup>4</sup> 180.59
				180.19	0.547	13.89	7.11	



## AT-A-GLANCE FERRULE/SLEEVE SELECTION CHART FOR JASON HOSE & COUPLINGS

Hos	Hose I.D.		Sleeve	Min	OD	Max OD	
(in.)	(mm)	Part No.	Part No.	(in.)	(mm)	(in.)	(mm)
1 1/2	38.10	115F15P	115S15P	1.796	45.62	1.906	48.41
1 1/2	38.10	200F16P	200S16P	1.922	48.82	1.968	49.99
1 1/2	38.10	201F15P	201S15P	1.984	50.39	2.020	51.31
1 1/2	38.10	202F15P	202S15P	2.046	51.97	2.094	53.19
1 1/2	38.10	203F15P	203S15P	2.110	53.59	2.156	54.76
1 1/2	38.10	204F15P	204S15P	2.172	55.17	2.218	56.34
1 1/2	38.10	205F15P	205S15P	2.224	56.49	2.282	57.96
1 1/2	38.10	206F15P	206S15P	2.296	58.32	2.344	59.54
2	50.80	208F20p	208S20P	2.360	59.94	2.468	62.69
2	50.80	209F20P	209S20P	2.484	63.09	2.532	64.31
2	50.80	210F20P	210S20P	2.546	64.67	2.594	65.89
2	50.80	211F20P	211S20P	2.610	66.29	2.656	67.46
2	50.80	212F20P	212S20P	2.672	67.87	2.718	69.04
2	50.80	213F20P	213S20P	2.734	69.44	2.782	70.66
2	50.80	214F20P	214S20P	2.796	71.02	2.844	72.24
2	50.80	215F20P	215S20P	2.860	72.64	2.906	73.81
2 1/2	63.50	302F25P	302S25P	2.984	75.79	3.094	78.59
2 1/2	63.50	303F25P	303S25P	3.110	78.99	3.156	80.16
2 1/2	63.50	304F25P	304S25P	3.172	80.57	3.220	81.79
2 1/2	63.50	305F25P	305S25P	3.234	82.14	3.282	83.36
2 1/2	63.50	307F25P	307S25P	3.300	83.82	3.406	86.51
3	76.20	308F30P	308S30P	3.360	85.34	3.406	86.51
3	76.20	309F30P	309S30P	3.422	86.92	3.532	89.71
3	76.20	310F30P	310S30P	3.546	90.07	3.594	91.29
3	76.20	311F30P	311S30P	3.610	91.69	3.656	92.86
3	76.20	312F30P	312S30P	3.672	93.27	3.718	94.44
3	76.20	313F30P	313S30P	3.734	94.84	3.782	96.06
3	76.20	314F30P	314S30P	3.796	96.42	3.844	97.64
3	76.20	315F30P	315S30P	3.860	98.04	3.906	99.21
3	76.20	400F30P	400S30P	3.922	99.62	3.968	100.79
4	101.80	409F40P	409S40P	4.422	112.32	4.532	115.11
4	101.80	410F40P	410S40P	4.546	115.47	4.594	116.69
4	101.80	411F40P	411S40P	4.610	117.09	4.656	118.26
4	101.80	412F40P	412S40P	4.672	118.67	4.718	119.84
4	101.80	413F40P	413S40P	4.734	120.24	4.782	121.46
4	101.80	414F40P	414S40P	4.796	121.82	4.844	123.04
4	101.80	415F40P	415S40P	4.860	123.44	4.906	124.61
4	101.80	500F40P	500S40P	4.922	125.02	4.968	126.19
6	152.40	610F60P	610S60P	6.422	163.12	6.594	167.49
6	152.40	614F60P	614S60P	6.610	167.89	6.844	173.84
6	152.40	702F60P	702S60P	6.860	174.24	7.094	180.19
6	152.40	706F60P	706S60P	7.110	180.59	7.344	186.54



#### **CAM & GROOVE COUPLING SPECIFICATIONS**

#### **Markets Served:**

Air • Chemical • Food • Material Handling • Mining • Petroleum (including Fracking) • Steam • Water

#### Working Pressures (maximum PSI) for Cam and Groove Couplers and Adapters

Size	Aluminum	Stainless Steel	Brass	Polypropylene
1/2		150		125
3/4	250	250	250	125
1	250	250	250	125
1-1/4	250	250	250	100
1-1/2	250	250	250	100
Ž	250	250	250	100
2-1/2	150	150	150	
3	125	125	125	75
4	100	100	100	60
5	75	75	75	
6	75	75	75	
8	50	50	50	

- \*Metal coupling pressures are based on ambient temperature (+70°F or +21°C) with standard NBR gasket.
- \*Plastic coupling pressures are based on ambient temperature (+70°F or +21°C) with standard NBR gasket.

#### **ALUMINUM**

#### **FEATURES:**

- Sizes 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4" and 6" are manufactured to comply with Mil Spec A-A-59326A. They will interchange with any coupling manufactured to the same standard.
- Size 5" complies to an ASTM spec. It will interchange to any other coupling manufactured to the same spec.
- The 1/2" size is not specified to any Mil spec.
- The 8" comes in two different styles. That size will interchange as follows:
  - Jason 800 series interchanges with PT Domestic, Kuriyama of America, Dixon Global and Campbell.
  - Jason 801 series interchanges with PT Import, NECO, Dixon Andrews, Evertite/APG, UPD and Sealfast.
- Aluminum body features being lightweight, rigid and having high tensile strength.
- Female couplers are supplied with safety pins.
- Cam arms are 304 Stainless.
- With the exception of the 1/2" size, all other sizes are supplied with safety pins, which will prevent disconnection during use.

#### **MATERIAL SPECS:**

- Aluminum alloy spec ASTM B85 Grade 383.
- 304 Type stainless steel handles.
- Steel handle pins, pull rings and safety clips are all zinc-plated.
- Gaskets are nitrile.

#### **BRASS**

#### **FEATURES:**

- Sizes 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4" and 6" are manufactured to comply with Mil Spec A-A-59326A. They will interchange with any coupling manufactured to the same standard.
- Size 5" complies to an ASTM spec. It will interchange to any other coupling manufactured to the same spec.
- The 1/2" size is not specified to any Mil spec.
- Brass body has high tensile strength and rigidity.
- With the exception of the 1/2" size, all other sizes are supplied with safety pins, which prevent disconnection during use.

#### **MATERIAL SPECS:**

- Brass material meets ASTM B584 Grade C85700 specs.
- 304 Type stainless steel handles and pull rings.
- Steel handle pins, pull rings and safety clips are all zinc-plated.
- Brass handles are forged.
- Gaskets are nitrile.



#### **CAM & GROOVE COUPLING SPECIFICATIONS**

#### **Markets Served:**

Air • Chemical • Food • Material Handling • Mining • Petroleum (including Fracking) • Steam • Water

#### **304 STAINLESS STEEL**

#### **FEATURES:**

- Sizes 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4" and 6" are manufactured to comply with Mil Spec A-A-59326A. They will interchange with any coupling manufactured to the same standard.
- Size 5" complies to an ASTM spec. It will interchange to any other coupling manufactured to the same spec.
- The 1/2" size is not specified to any Mil spec.
- With the exception of the 1/2" size, all other sizes are supplied with safety pins, which will prevent disconnection during use.
- Chemical composition of the alloy is analyzed on every melt.
- Especialy capable for chemical and food applications.

#### **MATERIAL SPECS:**

- Coupling body material meets ASTM A666 304 stainless steel specifications.
- 304 Type stainless steel handles, safety pins and rings.
- Gaskets are nitrile.

#### **316 STAINLESS STEEL**

#### **FEATURES:**

- Sizes 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4" and 6" are manufactured to comply with Mil Spec A-A-59326A. They will interchange with any coupling manufactured to the same standard.
- Size 5" complies to an ASTM spec. It will interchange to any other coupling manufactured to the same spec.
- The 1/2" size is not specified to any Mil spec.
- Chemical composition of the alloy is analyzed on every melt.
- Especialy capable for chemical and food applications.

#### **MATERIAL SPECS:**

- Coupling body material meets ASTM A666 316 stainless steel specifications.
- 304 Type stainless steel handles, safety pins and rings.
- Gaskets are nitrile.

#### **POLYPROPYLENE**

#### **FEATURES:**

- Sizes 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4" and 6" are manufactured to comply with Mil Spec A-A-59326A. They will interchange with any coupling manufactured to the same standard.
- The 1/2" size is not specified to any Mil spec.

#### MATERIAL SPECS:

- Black Schedule 80 polypropylene body.
- 304 Type stainless steel handles, safety pins and rings.
- Gaskets are nitrile.



## **PART A** MALE ADAPTER x FEMALE THREAD

Male end fits coupler or Dust Cap. Female thread end is NPT.



		PART NUMBER			Black SCH.80
Size	Aluminum	<b>304 Stainless</b>	316 Stainless	Brass	Polypropylene
1/2		A050S	A050SS		A050P
3/4	A075A	A075S	A075SS	A075B	A075P
1	A100A	A100S	A100SS	A100B	A100P
1-1/4	A125A	A125S	A125SS	A125B	A125P
1-1/2	A150A	A150S	A150SS	A150B	A150P
2	A200A	A200S	A200SS	A200B	A200P
2-1/2	A250A	A250S	A250SS	A250B	
3	A300A	A300S	A300SS	A300B	A300P
4	A400A	A400S	A400SS	A400B	A400P
5	A500A				
6	A600A	A600S	A600SS	A600B	
8	A800A**				
8	A801A**				

## PART B FEMALE COUPLER x MALE THREAD

Female end fits male adapter or Dust Plug. Male end thread is NPT. Bowl has recess for washer replacement.



	PART NUMBER Black SCH			Black SCH.80	
Size	Aluminum	304 Stainless	316 Stainless	Brass	Polypropylene
1/2		B050S	B050SS		B050P
3/4	B075A	B075S	B075SS	B075B	B075P
1	B100A	B100S	B100SS	B100B	B100P
1-1/4	B125A	B125S	B125SS	B125B	B125P
1-1/2	B150A	B150S	B150SS	B150B	B150P
Ź	B200A	B200S	B200SS	B200B	B200P
2-1/2	B250A	B250S	<b>B250SS</b>	B250B	
3	B300A	B300S	B300SS	B300B	B300P
4	B400A	B400S	B400SS	B400B	B400P
5	B500A				
6	B600A	B600S	B600SS	B600B	
8	B800A**				

## PART C FEMALE COUPLER x HOSE SHANK

Female end fits male adapter or Dust Plug. Shank fits into hose ID. Bowl has recess for washer replacement.

CRIMP WITH SLEEVES ONLY



	PART NUMBER			Black SCH.80	
Size	Aluminum	<b>304 Stainless</b>	316 Stainless	Brass	Polypropylene
1/2		C050S	CO5OSS		C050P
3/4	C075A	C075S	C075SS	C075B	C075P
1	C100A	C100S	C100SS	C100B	C100P
1-1/4	C125A	C125S	C125SS	C125B	C125P
1-1/2	C150A	C150S	C150SS	C150B	C150P
Ź	C200A	C200S	C200SS	C200B	C200P
2-1/2	C250A	C250S	C250SS	C250B	
3	C300A	C300S	C300SS	C300B	C300P
4	C400A	C400S	C400SS	C400B	C400P
5	C500A				
6	C600A	C600S	C600SS	C600B	
8	C800A**				
8	C801A**				

<sup>\*\*</sup>See Page 112 for interchange.



## **PART D** FEMALE COUPLER x FEMALE THREAD

Female end fits male adapter or Dust Plug. Female end thread is NPT. Bowl has recess for washer replacement.



	PART NUMBER Black SCH.80				
Size	Aluminum 3	04 Stainless	316 Stainless	Brass	Polypropylene
1/2		D050S	D050SS		D050P
3/4	D075A	D075S		D075B	D075P
1	D100A	D100S	D100SS	D100B	D100P
1-1/4	D125A	D125S	D125SS	D125B	D125P
1-1/2	D150A	D150S	D150SS	D150B	D150P
Ź	D200A	D200S	D200SS	D200B	D200P
2-1/2	D250A	D250S	D250SS	D250B	
3	D300A	D300S	D300SS	D300B	D300P
4	D400A	D400S	D400SS	D400B	D400P
5	D500A				
6	D600A	D600S	D600SS	D600B	
8	D800A**				
8	D801A**				

## PART E MALE ADAPTER x HOSE SHANK

Male end fits female coupler or Dust Cap. Shank fits into hose ID.

CRIMP WITH SLEEVES ONLY



		PART I	NUMBER		Black SCH.80
Size	Aluminum	304 Stainless	316 Stainless	Brass	Polypropylene
1/2		E050S	E050SS		E050P
3/4	E075A	E075S	E075SS	E075B	E075P
1	E100A	E100S	E100SS	E100B	E100P
1-1/4	E125A	E125S	E125SS	E125B	E125P
1-1/2	E150A	E150S	E150SS	E150B	E150P
Ź	E200A	E200S	E200SS	E200B	E200P
2-1/2	E250A	E250S	E250SS	E250B	
3	E300A	E300S	E300SS	E300B	E300P
4	E400A	E400S	E400SS	E400B	E400P
5	E500A				
6	E600A	E600S	E600SS	E600B	
8	E800A**				
8	E801A**				

## **PART F** MALE ADAPTER x MALE THREAD

Male end fits female coupler or Dust Cap. Male end thread is NPT.



		PART I	NUMBER		Black SCH.80
Size	Aluminum	<b>304 Stainless</b>	316 Stainless	Brass	Polypropylene
1/2		F050S	F050SS		F050P
3/4	F075A	F075S	F075SS	F075B	F075P
1	F100A	F100S	F100SS	F100B	F100P
1-1/4	F125A	F125S	F125SS	F125B	F125P
1-1/2	F150A	F150S	F150SS	F150B	F150P
Ź	F200A	F200S	F200SS	F200B	F200P
2-1/2	F250A	F250S	F250SS	F250B	
з́	F300A	F300S	F300SS	F300B	F300P
4	F400A	F400S	F400SS	F400B	F400P
5	F500A				
6	F600A	F600S	F600SS	F600B	
8	F800A**				

<sup>\*\*</sup>See Page 112 for interchange.



## **PART DC**

**DUST CAP** 

Fits male adapters.



	PART NUMBER Black SCH.80			Black SCH.80	
Size	Aluminum	<b>304 Stainless</b>	316 Stainless	Brass	Polypropylene
1/2		DC050S	DC050SS		DC050P
3/4	DC075A	DC075S	DC075SS	DC075B	DC075P
1	DC100A	DC100S	DC100SS	DC100B	DC100P
1-1/4	DC125A	DC125S	DC125SS	DC125B	DC125P
1-1/2	DC150A	DC150S	DC150SS	DC150B	DC150P
2	DC200A	DC200S	DC200SS	DC200B	DC200P
2-1/2	DC250A	DC250S	DC250SS	DC250B	
3	DC300A	DC300S	DC300SS	DC300B	DC300P
4	DC400A	DC400S	DC400SS	DC400B	DC400P
5	DC500A				
6	DC600A	DC600S	DC600SS	DC600B	
8	DC800A**				

### PART DP

**DUST PLUG** 

Fits male adapters.



	PART NUMBER Black SCH.			Black SCH.80	
Size	Aluminum	<b>304 Stainless</b>	316 Stainless	Brass	Polypropylene
1/2		DP050S	DP050SS		
3/4	DP075A	DP075S	DP075SS	DP075B	DP075P
1	DP100A	DP100S	DP100SS	DP100B	DP100P
1-1/4	DP125A	DP125S	DP125SS	DP125B	DP125P
1-1/2	DP150A	DP150S	DP150SS	DP150B	DP150P
Ź	DP200A	DP200S	DP200SS	DP200B	DP200P
2-1/2	DP250A	DP250S	DP250SS	DP250B	
3	DP300A	DP300S	DP300SS	DP300B	DP300P
4	DP400A	DP400S	DP400SS	DP400B	DP400P
5	DP500A				
6	DP600A	DP600S	DP600SS	DP600B	
8	DP800A**				

<sup>\*\*</sup>See Page 112 for interchange.



## SERIES 800 & SERIES 801 8" CAM & GROOVE INTERCHANGE

Not all cam and groove couplings are interchangeable. At the 8" size, there are now two distinct designs. Jason has you covered on both types. See the charts below to interchange to the proper style coupling.

800 Series Interchanges with: PT Domestic, Kuriyama of America, Dixon Global and Campbell			
Jason Part	Jason Part Numbers		
A800A	E800A		
B800A	F800A		
C800A DC800A			
D800A DP800A			

801 Series Interchanges with: Dixon Andrews, NECO, Evertite/APG, PT Import, UPD and Sealfast				
Jason Part Numbers				
A801A	E801A			
*B801A	*F801A			
C801A	C801A *DC801A			
D801A	*DP801A			

\*Check with customer service for availability.

#### ANTI-LEAK ALUMINUM C x E CAM-LOCK COUPLINGS

This unique cam-lock employs a patented design that relies on two bands of rubber that act as a type of gasket surrounding two specific grooves on the cam-lock shank. When the hose wall is compressed against the bands of rubber, a preventive barrier is formed reducing the chance for leaks around the couplings.



Size	Part No.
1-1/2" Part C	C150ALF
2" Part C	C200ALF
3" Part C	C300ALF
4" Part C	C400ALF
6" Part C	C600ALF
1-1/2" Part E	E150ALF
2" Part E	E200ALF
3" Part E	E300ALF
4" Part E	E400ALF
6" Part E	E600ALF

REPLACEMENT BANDS - NITRILE					
ID	1-1/2"	2"	3"	4"	6"
Part No.	RB15NBR	RB20NBR	RB30NBR	RB40NBR	RB60NBR

### **PART DCL** DUST CAP WITH LOCK OUT HANDLES

Handles fold over top of cap. Hole provided for padlock or seal. Padlock or seal not furnished.



	PART NUMBER	
Size	Aluminum with SS Handles	Stainless Steel with SS Handles
1-1/4	DCL125A	DCL125S
1-1/2	DCL150A	DCL150S
2	DCL200A	DCL200S
2-1/2	DCL250A	DCL250S
3	DCL300A	DCL300S
4	DCL400A	DCL400S
6	DCL600A	DCL600S



## **REDUCING CAM & GROOVE COUPLINGS & ADAPTERS**



Adapter x Female NPT

Size	Aluminum	Stainless Steel
2 x 1-1/2	A2015A	
2 x 2		A2020S
2 x 3	A2030A	
3 x 2	A3020A	
3 x 4	A3040A	
4 x 3	A4030A	
4 x 6	A4060A	
6 x 4	A6040A	

D



Coupler x Female NPT

Size	Aluminum	Stainless Steel
1-1/2 x 1	D1510A	
2 x 1-1/2	D2015A	
3 x 2	D3020A	
4 x 3	D4030A	

В



Coupler x Male NPT

Size	Aluminum	Stainless Steel
1-1/2 x 1	B1510A	
2 x 1-1/2	B2015A	
2 x 3	B2030A	
3 x 2	B3020A	
3 x 4	B3040A	
4 x 3	B4030A	
6 x 4	B6040A	

**Aluminum** 

C2015A

C3020A

C3025A

C3040A C4030A **Stainless** Steel

E



Adapter x Hose Shank

Size	Aluminum	Stainless Steel
2 x 1-1/2	E2015A	
2 x 2-1/2	E2025A	
2 x 3	E2030A	
3 x 2	E3020A	
3 x 2-1/2	E3025A	
3 x 4	E3040A	
4 x 2	E4020A	
4 x 3	E4030A	

C

Size

2 x 1-1/2

3 x 1-1/2

All sizes may not be stocked in all locations. Check

with customer service for availability. We disclaim

any liability for use of our products in applications

other than which they are designed.

3 x 2

3 x 4

4 x 3



Coupler x Hose Shank

_
_



Adapter x Male NPT

Size	Aluminum	Stainless Steel
1-1/2 x 2	F1520A	
2 x 1-1/2	F2015A	
2 x 3	F2030A	
3 x 2	F3020A	
3 x 4	F3040A	
4 x 3	F4030A	
4 x 6	F4060A	

AA



Adapter x Adapter

Size	Aluminum	Stainless Steel
1 x 1	AA1010A	AA1010S
1-1/2 x 1-1/2	AA1515A	AA1515S
1-1/2 x 2	AA1520A	AA1520S
2 x 2	AA2020A	AA2020S
2 x 2-1/2	AA2025A	
2 x 3	AA2030A	AA2030S
2-1/2 x 2-1/2	AA2525A	
3 x 3	AA3030A	AA3030S
3 x 4	AA3040A	AA3040S
4 x 4	AA4040A	AA4040S
4 x 6	AA4060A	
6 x 6	AA6060A	



Coupler x Adapter

DD



	Size	Aluminum	Stainless Steel
1			Steel
ш	1-1/2 x 2	DA1520A	
	2 x 1-1/2	DA2015A	
	2 x 3	DA2030A	DA2030S
ш	2 x 4	DA2040A	
ш	3 x 1-1/2	DA3015A	
ш	3 x 2	DA3020A	DA3020S
ш	3 x 4	DA3040A	
ш	4 x 2	DA4020A	
	4 x 3	DA4030A	DA4030S
	4 x 6	DA4060A	
	6 x 4	DA6040A	DA6040S
	6 x 5	DA6050A	
	8 x 6	DA8060A	

**Stainless** Size **Aluminum** Steel 1-1/2 x 1-1/2 DD1515A DD1515S **DD2020A DD2020S** 2 x 2 2 x 3 **DD2030A** 3 x 3 **DD3030A DD3030S** 3 x 4 **DD3040A DD4040A** 4 x 4 **DD4040S** 



## SAFETY-CAM COUPLINGS WITH LOCKING HANDLES

#### **FEATURES**

- 304 Stainless Arms.
- Aluminum Body.
- Available in Cam & Groove Types B, C, D and DC.
- Size range from 1-1/2" to 4".

#### **BENEFITS**

- No more dangling arms, no more snagging of the assembly.
- Prevents any disconnection during the transfer of solid or liquid products.
- Handles any rugged use. Resists disconnection if the assembly is being dragged.
- Easy-to-open just pull down on the cam arm ring to disengage the locking mechanism.
- Part C can be attached to the hose using bands, clamps or Jason Crimp Sleeves.

#### PART B



	Part No.	Part No.
Size	Aluminum	<b>304 Stainless</b>

- 1-1/2" B150A54S B150SS54S
- 2" B200A54S B200SS54S
- 2-1/2" **B250A54S**
- 3" **B300A54S B300SS54S**
- 4" **B400A54S B400SS54S**

#### PART C



Size	 Part No. 304 Stainless

- 1-1/2" C150A54S C150SS54S
- 2" C200A54S C200SS54S
- 2-1/2" **C250A54S**
- 3" **C300A54S C300SS54S**
- 4" C400A54S

#### PART D



Size	Part No. Aluminum	
1-1/2″	D150A54S	D150SS54S

- 2" D200A54S D200SS54S
- 2-1/2" **D250A54S**
- 3" **D300A54S D300SS54S**
- 4" **D400A54S**

#### **PART DC**



	Part No.	Part No.
Size	Aluminum	<b>304 Stainless</b>

- 1-1/2" DC150A54S DC150SS54S
- 2" DC200A54S DC200SS54S
- 2-1/2" DC250A54S
- 3" DC300A54S DC300SS54S
- 4" DC400A54S



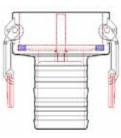
#### **CAM & GROOVE COUPLINGS - VAPOR RECOVERY**

To keep fumes from escaping into the atmosphere, use these fittings on the vapor return lines.

Aluminum Body ● Brass Handles ● Buna N Gasket ● Probe is Solid Brass ● Rated to 100 PSI WP

#### TYPE C FEMALE COUPLER x HOSE SHANK

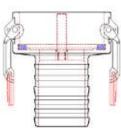




Part No.	Size	Size Description
C4030AVP	4" x 3"	4" Coupler w/Probe x 3" Hose Shank
C300AVP	3"	3" Coupler w/Probe x 3" Hose Shank
C400AVP	4"	4" Coupler w/Probe x 4" Hose Shank

## **TYPE C FEMALE COUPLER x HOSE SHANK - CRIMP FITTING**

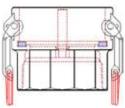




Part No.	Size	Size Description
C4030AVPC	4" x 3"	4" Coupler w/Probe x 3" Hose Shank
C300AVPC	3"	3" Coupler w/Probe x 3" Hose Shank
C400AVPC	4"	4" Coupler w/Probe x 4" Hose Shank

## TYPE D FEMALE COUPLER x FEMALE THREAD

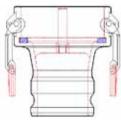




Part No.	Size	Size Description	
D4030AVP	4" x 3"	4" Coupler w/Probe x 3" Female Thread	
D300AVP	3"	3" Coupler w/Probe x 3" Female Thread	
D400AVP	4"	4" Coupler w/Probe x 4" Female Thread	

## **TYPE DA FEMALE COUPLER x HOSE SHANK**





Part No.	Size	Size Description
DA4030AVP	4" x 3"	4" Coupler w/Probe x 3" Adapter



## TANK TRUCK API ADAPTERS, CAPS, COUPLERS & GASKETS - For offloading through the API adapter and coupler.



## DUST CAP

Used to protect the face of poppet side of the API adapter. Comes with a nitrile gasket. Suitable for all API valves that meet API RP-1004 specs.

Size	Part No.	Description	Material
4"	DC400ATC	API Dust Cap	Aluminum
4"	DC400PPTC	API Dust Cap	Polypropylene



#### **COUPLER X ADAPTER**

Used in the process of unloading in order to connect the 4" API adapter to the 3" or 4" hose connection. Used primarily in gravity flow applications. Mates with 4" API RP-1004 tank truck adapters. Adapter comes with aluminum body and nitrile gasket. Angled down for better drainage.

Size	Part No.	Description	Material	
4" x 3"	DA4030ATC	4" API Coupler x 3" Adapter	Aluminum	
4" x 4"	DA4040ATC	4" API Coupler x 4" Adapter	Aluminum	



#### **COUPLER x COUPLER**

This gravity drop coupler is designed to use gravity for quick and complete off-loading. Mates with all API RP-1004 bottom loading adapters. This coupler has an aluminum body and nitrile gaskets. Angled down for better drainage.

Size	Part No.	Description	Material
4" x 4"	DD4040ATC	4" API Coupler x 4" Coupler	Aluminum

### **REPLACEMENT GASKET**

Size	Part No.	Description	Material
4"	G400NBRTC	Gasket for 4" API Coupler	Nitrile



## TANK TRUCK ACCESSORIES & FLAT FACE FLANGE COUPLINGS

## **GRIP PLUGS & GRIP CAPS**

GRIP PLUG/GRIP CAP have been designed to ease the removal of hose assemblies from side storage tubes. Just grab the handle and pull. The GRIP PLUG/GRIP CAP are made from a polypropylene compound with a NBR bumper. Polypropylene is anti-static and can be used in petroleum applications. The bumper protects the coupling from damage due to drops or during transport. Environmentally, the GRIP PLUG/GRIP CAP prevents any leakage from the residual product left in the hose assembly.

Part Number	Ho: in.	se Size mm	Description
GP200PN	2	50.80	Grip Plug
GP300PN	3	76.20	Grip Plug
GP400PN	4	101.60	Grip Plug
GC200PN	2	50.80	Grip Cap
GC300PN	3	76.20	Grip Cap
GC400PN	4	101.60	Grip Cap
BG200NBR	2	50.80	NBR Bumper
BG300NBR	3	76.20	NBR Bumper
BG400NBR	4	101.60	NBR Bumper



Polypropylene body, anti-static • NBR bumper • 125 PSI WP @ 70°F (21°C)
Replacement bumpers can be ordered as needed







## **FLAT FACE FLANGE COUPLINGS**

#### **PART A x Flat Face Flange**



Part No.	Size
A300A3F	3″
A400A3F	4″
A600A3F	6″
A800A3F	8″

**ASTM BOLT SIZES** 

#### **PART D x Flat Face Flange**



D400A3F	4″
D600A3F	6"
D800A3F	8"

Size

Part No.

D300A3F

**ASTM BOLT SIZES** 



## REPLACEMENT GASKETS FOR CAM & GROOVE COUPLINGS

						GASKET D	IMENSIC	NS	
SIZE	BLACK	WHITE	STANDARD	I.	.D.	C	D.D.	THIC	KNESS
	NBR P/N	NBR FDA	BIO-FUEL	in.	mm	in.	mm	in.	mm
1/2	S050N			0.688	17.46	1.031	26.19	0.156	3.96
3/4	S075N			0.875	22.23	1.375	34.93	0.218	5.54
1	S100N			1.063	27.00	1.563	39.70	0.250	6.35
1-1/4	S125N			1.359	34.52	1.938	49.23	0.250	6.35
1-1/2	S150N	S150NF	S150BFR	1.625	41.28	2.188	55.58	0.250	6.35
2	S200N	<b>S200NF</b>	S200BFR	2.000	50.80	2.625	66.68	0.250	6.35
2-1/2	S250N			2.375	60.33	3.125	79.38	0.250	6.35
3	S300N	<b>S300NF</b>	S300BFR	3.000	76.20	3.719	94.46	0.250	6.35
4	S400N	<b>S400NF</b>	S400BFR	4.000	101.60	4.875	123.83	0.250	6.35
5	S500N			4.875	123.83	5.938	150.83	0.250	6.35
6	S600N		S600BFR	6.000	152.40	7.063	179.40	0.250	6.35
8	N0082			8.125	206.38	9.313	236.55	0.343	8.71

**NOTE:** Standard Bio-Fuel Gasket comes with one red stripe.

SIZE	HEAVY DUTY		.D.	C	).D.	THICK	NESS
	BIO-FUEL	in.	mm	in.	mm	in.	mm
2	S200HBFR	2.000	50.80	2.625	66.68	0.278	7.05
3	S300HBFR	3.000	76.20	3.719	94.46	0.278	7.05
4	S400HBFR	4.000	101.60	4.875	123.83	0.278	7.05

NOTE: Heavy Duty Bio-Fuel Gasket comes with two blue stripes.

## REPLACEMENT HANDLES FOR CAM & GROOVE COUPLINGS

	1	1-1/4	1-1/2	2	2-1/2	3
BRASS	HRP10B	HRP12B	HRP15B	HRP20B	HRP25B	HRP30B
STAINLESS STEEL (304)	HRP10S	HRP12S	HRP15S	HRP20S	HRP25S	HRP30S
LOCK OUT STAINLESS			LHP150S	LHP200S	LHP250S	LHP300S

4 6 8

BRASS	HRP40B	HRP60B	HRP80B
STAINLESS STEEL (304)	HRP40S	HRP60S	
LOCK OUT STAINLESS	LHP400S	LHP600S	

### **ACCESSORIES FOR CAM & GROOVE COUPLINGS**

		Part No.		Part No.
SAFETY PIN	FITS SIZES 1/2" THRU 5"	SPWS	FITS SIZES 6" AND 8"	SPXS
SECURITY CHA	AIN, STAINLESS STEEL; 12"	CH12S		

## PIN LUG COUPLINGS



Threaded couplings for suction or discharge of water or other fluids. Standard threading is NPSM; National Pipe Straight Mechanical. 1-1/2" and 2-1/2" are available with additional NST thread; American National Fire Hose Straight Thread. (NST does not interchange). Pin lugs are on all sizes of female end. 2-1/2" through 6" also have pin lugs on male end.

### **SET (M x F) PIN LUG SHANK COUPLINGS**



Size	Thread	Aluminum W Brass Swivel	Brass W Brass Swivel
1-1/2	NPSM	AB150	BR150
1-1/2	NST	AB150NST	BR150NST
2	NPSM	AB200	BR200
2-1/2	NPSM	AB250	BR250
2-1/2	NST	AB250NST	<b>BR250NST</b>
3	NPSM	AB300	BR300
4	NPSM	AB400	BR400
6	NPSM	AB600	BR600

Iron Pin Lug Couplings available by special order.

#### **FEMALE PIN LUG SHANK COUPLINGS**



Size	Thread	Aluminum W Brass Swivel	Brass W Brass Swivel
1-1/2	NPSM	AB150F	BR150F
1-1/2	NST	AB150NSTF	BR150NSTF
2	NPSM	AB200F	BR200F
2-1/2	NPSM	AB250F	BR250F
2-1/2	NST	AB250NSTF	<b>BR250NSTF</b>
3	NPSM	AB300F	BR300F
4	NPSM	AB400F	BR400F
6	NPSM	AB600F	BR600F

#### **ANTI-LEAK PIN LUG COUPLINGS - FOR LAYFLAT HOSE**



Size	Thread	Aluminum W Brass Swivel
1-1/2	NPSM	AB150LF
2	NPSM	AB200LF
3	NPSM	AB300LF
4	NPSM	AB400LF

## REPLACEMENT WASHERS FOR PIN LUG SHANK COUPLINGS

COUPLING SIZE	1-1/2	2	2-1/2	2-1/2 NST	3	4	6
PART NUMBER	HW150	HW200	HW250	HW250NST	HW300	HW400	HW600



## UNIVERSAL AIR COUPLINGS

#### **UNIVERSAL AIR COUPLINGS - 2 LUG**

Used to connect air lines from compressors or other air source to all types of pneumatic tools and equipment. All 2 lug head connections are of one size for easy interchange. Hose shank or threaded end is coupling size. Male and Female threads are NPT. Malleable iron plated. (European style universals available special order.)

#### **Application of Universal Crowfoot Air Hose Couplings**

Universal crowfoot couplings are recommended to be used in the transfer of air and or water. The application should be in an open system where the air or water is in motion (dynamic) and not in a closed pressurized (static) condition. This dynamic application involves continuous flow, therefore, back pressure would be relieved by the very nature of the application. The applicable system should contain pressure relief valves to relieve any excess pressure. Safety clips and safety cables should be installed on either side of the coupling connection.

The rated, maximum working pressure of Universal Crowfoot Air Hose Couplings is 150 psi (at ambient temperature [70°F]) for all parts: HE, ME, FE.

#### WARNING: Universal Air Hose Couplings should NEVER be used for steam service.



**HOSE END** 

Hose End	Iron
Size	Part No
3/8	HE038
1/2	HE050
3/4	HE075 HE100



**MALE END** 

Hose End Size	Iron Part No
1/4	ME025
3/8	ME038
1/2	ME050
3/4	ME075
1	ME100



**FEMALE END** 

Hose End Size	Iron Part No
1/4	FE025
3/8 1/2	FE038 FE050
3/4	FE075
1	FE100

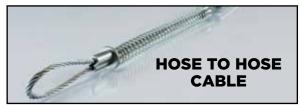
**WASHER** for 2 Lug Universal

Part No. UG2



### WHIPCHECK SAFETY CABLES

Prevent hose whip in case of accidental separation of coupling or clamp device.



Cable	Hose I.D.	Part No
1/8" x 20"	1/2" to 1-1/4"	HHWC1
1/4" x 38"	1-1/2" to 3"	HHWC2



Cable	Hose I.D.	Part No
1/8" x 20"	1/2" to 1-1/4"	HTWS1
1/4" x 38"	1-1/2" to 3"	HTWS2

## UNIVERSAL AIR COUPLINGS



## **UNIVERSAL AIR COUPLINGS - 4 LUG**



**HOSE END** 

Hose End Size	Iron Part No
1-1/4	HE125
1-1/2	HE150 HE200

**FEMALE END** 

Hose End Size	Iron Part No
1-1/4	FE125
1-1/2	FE150
2	FE200

**WASHER** for 4 Lug Universal **Part No. UG4** 



### **UNIVERSAL AIR COUPLING ACCESSORIES**



#### 3 WAY CONNECTOR PART NO. TWC

Uses 3 sets of 2 lug connectors to provide an extra outlet from one air source. Malleable Iron Plated.



#### DEAD END PART NO. BEC

Fits 2 lug head on universal couplings to block line. Hole in flat portion allows for securing dead end when not in use.

Malleable Iron Plated.



SAFETY PIN & LANYARD PART NO. SPL



## **AIR COUPLERS**

## **INDUSTRIAL QUICK CONNECT AIR COUPLERS**

#### **FEMALE**





#### **MALE**





#### **HOSE END**





#### **FEATURES**

- Meets MIL-C-4109.
- All brass.
- Max inlet pressure is 300 PSI (20.7 BAR).
- Air flow is 40 SCFM.
- Seals are Buna-N.

Part No.	Description			
QCF04B	Quick Connect x Female 1/4" NPT			
QCM04B	Quick Connect x Male 1/4" NPT			
QCF06B	Quick Connect x Female 3/8" NPT			
QCM06B	Quick Connect x Male 3/8" NPT			
QCH04B	Quick Connect x Hose End 1/4" (Barbed)			
QCH06B	Quick Connect x Hose End 3/8" (Barbed)			
QPF04B	Plug x Female 1/4" NPT			
QPM04B	Plug x Male 1/4" NPT			
QPF06B	Plug x Female 3/8" NPT			
<b>QРМ06В</b>	Plug x Male 3/8" NPT			
QPH04B	Plug x Hose End 1/4" (Barbed)			
<b>QPH06B</b>	Plug x Hose End 3/8" (Barbed)			

## **COMPETITIVE INTERCHANGE**

Jason Part No.	Milton Part No.	AMFLO Part No.	ARO Part No.	Coil Hose Part No.	Dixon Part No.	Forney Part No.	Lincoln Part No.	NAPA Part No.	Parker Part No.	Truflate Part No.
QCF04B	715	C20	MSCF22-000	150	DC20	75317	632004	90-670	B23	13-235
QCM04B	716	C21	MSCM22-000	152	DC21	75316		90-672	B22	13-224
QCF06B	718	C20-23	MSCF23-000	151	DC2023	75479		90-667	B23E	13-236
QCM06B	719	C21-03	MSCM23-000	155	DC2103			90-657	B22E	13-226
QCH04B	717	C20-42	MSCH22-000	153	DC2042	75480		90-671	B20-3B	13-264
QCH06B	717-6	C20-44	MSCH23-000		DC2044					13-266
QPF04B	728	CP20	23902-200	1502	DCP20	75302	630204	90-676	H3C	12-234/12-235
QPM04B	732	CP20-23	23902-300	1505	DCP2023			90-659	Н3С-Е	12-236
QPF06B	727	CP21	23902-210	1501	DCP21	75301	630104	90-674	H2C	12-224/12-225
QPM06B	733	CP21-03	23902-310	1503	DCP2103	75471		90-677	H2C-E	12-226
QCH04B	736	CP21-42	23902-220	1506	DCP2142			90-673	H8C	12-264
QCH06B	736-6	CP21-44	23902-420	1508	DCP2144				H9C	12-266

# GROUND JOINT COUPLINGS



#### **GROUND JOINT COUPLINGS**

An all purpose coupling, the female ground joint consists of a MALE STEM, WING NUT and FEMALE SPUD. The female spud has NPT threads to accept the NPT threads of a rigid connection or male NPT nipple. Widely used for air, water or steam, the ground joint is secured with an interlocking clamp.

By replacing the female spud of a ground joint coupling with a double or male spud, hose to hose ground joint connections or hose to rigid connections are simplified. Double spuds for hose to hose connections are threaded NPS MALE X NPS MALE. (GJ wing nut is also NPS). For hose to rigid connection, the male spud is threaded NPS MALE X NPT MALE.



GROUND JOINT FEMALE



**FEMALE SPUD** 

Hose Size*	Part No.
1/2	GJ050F
3/4	GJ075F
1	GJ100F
1-1/4	GJ125F
1-1/2	GJ150F
2	GJ200F
2-1/2	GJ250F
3	GJ300F
4	GJ400F

<sup>\*</sup>Size also represents Wing Nut and Spud thread size.

Hose Size*	Part No.
1/2	GFS050
3/4	GFS075
1	GFS100
1-1/4	GFS125
1-1/2	GFS150
2	GFS200
2-1/2	GFS250
3	GFS300
4	GFS400



NPS SEE NPT

DOUBLE SPUD MALE SPUD

Spud Size	Double Spud Part No.	Male Spud Part No.
1/2	GDS050	GMS050
3/4	GDS075	GMS075
1	GDS 100	GMS100
1-1/4	GDS125	GMS125
1-1/2	GDS150	GMS150
2	GD\$200	GMS200



## SANDBLAST HOSE COUPLINGS

#### SANDBLAST HOSE COUPLINGS

There are three active sandblast system couplings; HOSE ENDS which are used to make hose to hose connections or hose to blast pot connections, NOZZLE HOLDERS that accept the male threaded end of a sandblast nozzle, and the THREADED POT END that is connected to the combination air and abrasive mix from the sandblast pot. All three are available in aluminum or brass. Hose ends are also available in Iron.



**HOSE ENDS** are sleeve type couplings that fit over the OD of the sandblast hose. They are secured to the hose with wood screws. Countersunk holes on the hose end ensure that the screws fit correctly and will not be snagged while the hose is in operation. Within the ID of the hose end is a corkscrew ridge that helps to twist the coupling onto the hose and more importantly, helps to minimize the force of blow-back. Hose-to-hose or hose-to-pot connections are made by the 2 lug crowfoot design. No matter what the hose size, the 2 log hose ends interchange for common connections.



type couplings, secured to the hose with wood screws and have the same features as the sandblast hose end. The exception is that the end of the nozzle holder is NPT threaded to accept the sandblasting nozzle.



THREADED POT ENDS do not fit the hose, but rather are threaded (NPT or NPS) onto the sandblast pot. Once properly threaded to the discharge pipe on the pot, the 2 lug crowfoot design can now be connected to the 2 lug crowfoot design of the hose end. Now the pot can supply mix to the operator by way of the hose to the sandblast nozzle.

Hose	Hose		Quick End Nozzle Holder		older
ID	OD	Aluminum	Brass	Aluminum	Brass
3/4	1-1/2	Q1A	Q1B	NH1A	NH1B
1	1-7/8	Q2A	Q2B	NH2A	NH2B
1-1/4	2-5/32	Q3A	Q3B	NH3A	NH3B
1-1/2	2-3/8	Q4A	Q4B	NH4A	NH4B

Thread		Threaded Pot End	
Size	Туре	Aluminum	Brass
1-1/4	NPT	SB1A	SB1B
1-1/4	NPS	SB10A	SB10B
1-1/2	NPT	SB2A	SB2B
1-1/2	NPS	SB20A	SB20B

Replacement **GASKETS** for metal hose end/pot end. One size fits all.

Part No QW

# LOCKING LEVER PUMP COUPLINGS



## **LOCKING LEVER PUMP COUPLINGS**

- Full Vacuum Rated
- Type B Industrial
- Lock Pin Lever
- Galvanized

- 30° Articulation
- NBR O-Ring
- Interchangeable
- Quick and Easy Connections

#### **MALE BALL x SHANK**



Size (in.)	Part Number
2	BMS200
3	BMS300
4	BMS400
6	BMS600
8	BMS800

#### **FEMALE SOCKET\* x SHANK**



Siz (in	
2	BFS200
3	BFS300
4	BFS400
6	BFS600
8	BFS800
11	

<sup>\*</sup> includes O-Ring

#### **MALE BALL x THREAD\***



Size (in.)	Part Number
2	BMT200
3	BMT300
4	BMT400
6	BMT600
8	BMT800
l	

\* NPT

#### **FEMALE SOCKET x THREAD\*\***



Size	Part
(in.)	Number
2	BFT200
3	BFT300
4	BFT400
6	BFT600
8	BFT800

\* includes O-Ring \*\* NPT

#### O-RING\*



Size (in.)	Part Number
2	BOR200
3	BOR300
4	BOR400
6	BOR600
8	<b>BOR800</b>

\* NBR







# LOCKING LEVER PUMP COUPLINGS

### **LOCKING LEVER PUMP COUPLINGS**

- Full Vacuum Rated
- Type B Industrial
- Lock Pin Lever
- Galvanized

- 30° Articulation
- NBR O-Ring
- Interchangeable
- Quick and Easy Connections

#### **FULL ASSEMBLY\***



Size (in.)	Part Number
2	BGA200
3	BGA300
4	BGA400
6	BGA600
8	BGA800

<sup>\*</sup> includes O-Ring

#### **LEVER RING\***



,	Size (in.)	Part Number
	2	BLR200
	3	BLR300
	4	BLR400
	6	BLR600
	8	BLR800

<sup>\*</sup> with safety clip

#### **MALE BALL x FLANGE (150 ASA)**



Size	Part
(in.)	Number
4	BMF400
6	BMF600
8	BMF800

Not recommended for chemicals or hazardous materials.

#### FEMALE SOCKET\* x FLANGE (150 ASA)



Size	Part
(in.)	Number
4	BFF400
6	BFF600
8	BFF800

\*Includes O-Ring

1	150 ASA FLANGE DIMENSIONS										
in	Size . mm.	Bolt Circle Dia. in. mm	No. of Bolts	Diamet in.	er of Bolts mm.	Diameter of in.	of Bolt Holes mm	Flang in.	ge O.D. mm.	Wei lbs.	ght kg.
4	101.60	7-1/2 190.50	8	5/8	15.88	3/4	19.05	9	228.60	13	29.25
6	152.40	9-1/2 241.30	8	3/4	19.05	7/8	22.23	11	279.40	19-1/2	43.88
8	203.20	11-3/4 298.45	8	3/4	19.05	7/8	22.23	13-1/2	342.90	30	67.50

## INTERLOCKING CLAMPS



## 2, 4 AND 6 BOLT INTERLOCKING CLAMPS

These clamps are used on any fitting with a collar to engage the forward gripping fingers of the interlocking clamp. However, they are most commonly used on ground joint females and male collared nipples. Smaller sizes provide a safe and economical securing method for universal hose ends. The forward gripping fingers engage the collar preventing the shank or stem from pulling out. Tightening the bolts secures the clamp around the O.D. of the hose.







2 BOLT

4 BOLT

6 BOLT

	ange		Number				
F	From To		Of Torque Part No.			Ref No.	
ln.	Decimal	ln.	Decimal	Bolts	lbs./ft.		
11/16	0.69	3/4	0.75	2	6	2BS038	CD
15/16	0.94	1-1/16	1.06	2	12	2BC050	В4
1	1.00	1-1/8	1.13	2	12	2B S050	A4
1-1/16	1.06	1-3/16	1.19	2	12	2BC051	B5
1-1/8	1.13	1-5/16	1.31	2	21	2BS075	A9
1-3/16	1.19	1-5/16	1.31	2	21	2BC075	BU9
1-5/16	1.31	1-1/2	1.50	2	21	2BC076	В9
1-1/2	1.50	1-11/16	1.69	2	21	2BC077	B10
1-17/32	1.53	1-23/32	1.72	4	21	4BC100	BU14
1-13/32	1.41	1-9/16	1.56	4	21	4BC100A	156
1-5/8	1.63	1-27/32	1.84	4	21	4BC101	
1-7/8	1.88	2-1/16	2.06	4	21	4BC102	B15
2-1/16	2.06	2-1/4	2.25	4	40	4BC125	B19
2-3/32	2.09	2-9/32	2.28	4	40	4BC150	BU24
2-1/4	2.25	2-7/16	2.44	4	40	4BC151	B24
2-15/32	2.47	2-23/32	2.72	4	40	4BC152	
2-1/2	2.50	2-25/32	2.78	4	60	4BC200	BU29
2-3/4	2.75	3-1/16	3.06	4	60	4BC201	306
3-3/32	3.09	3-7/16	3.44	4	60	4BC202	B30
3-1/2	3.50	3-15/16	3.94	4	150	4BC250	B34
3-13/16	3.81	4-3/16	4.19	4	150	4BC300	B35
4-1/16	4.06	4-7/16	4.44	4	200	4BC301	B39
4-1/4	4.25	4-13/16	4.81	6	150	6BC400	BS39
4-7/8	4.88	5-5/16	5.31	6	150	6BC401	
5-1/4	5.25	5-19/32	5.59	6	150	6BC402	



## DOUBLE BOLT CLAMPS

## **DOUBLE BOLT HOSE CLAMPS**



Reusable, these clamps provide an efficient means of securing couplings for low pressure discharge or suction service. Double bolt hose clamps are sized for hose OD's from 1-5/8" through 17-1/2". As the bolts are tightened, the double-tongue saddles fill the gap between the bolt lugs preventing pinching of the hose OD. Fully tightened, the double bolt clamps secure the full circumference of the hose. Plated malleable iron.

Hose OD Range			Torque	- 1			
From	То	Part No	lbs./ft.	From	То	Part No	lbs./ft.
1-5/8	1-15/16	DB049	20	7-11/16	8-3/16	DB818	125
1-7/8	2-3/8	DB060	20	8-1/4	8-7/8	DB875	125
2-3/8	3-7/16	DB076	20	8-15/16	9-7/8	DB988	125
3-1/2	3-11/16	DB094	40	9-15/16	11-3/8	DB1125	125
3-1/2	4	DB400	40	11-3/16	13	DB1275	125
4-1/16	4-7/16	DB463	40	12-3/16	14	DB1360	200
4-3/16	5	DB525	60	13-3/16	15	DB1450	200
5	5-1/2	DB550	60	15-1/16	17-1/2	DB1700	260
5-1/2	6-1/16	DB600	60				
6-1/8	6-7/8	DB675	60				
6-15/16	7-5/8	DB769	60				

## DOUBLE BOLT HOSE CLAMPS FOR CORRUGATED HOSE



Clamps (for corrugated hose) manufactured in either clockwise (right hand) or counter clockwise (left hand) design, the spiral double bolt clamp fits between the convolutions on corrugated hose. When fully tightened, the wire secures the full circumference of the outside hose wall - not the convolutions, for a safe, economical and efficient securing method. Consult hose manufacturer for correct convolution direction. Direction of clamp spiral and hose convolution are the same.

Hose ID	1-1/2	2	2-1/2	3	4
Part No*	SDB150	<b>SDB200</b>	SDB250	<b>SDB300</b>	SDB400
Hose ID	5	6	8	10	12
Part No*	<b>SDB500</b>	SDB600	SDB800	<b>SDB1000</b>	<b>SDB1200</b>

<sup>\*</sup>Specify clockwise -cw or counterclockwise - ccw

# NIPPLES & ACCESSORIES



#### **COMBINATION HOSE NIPPLES**









PLATED STAINLESS POLYPROPYLENE VICTAULIC

CN's are used in a variety of fluid applications. They are available in unplated steel, plated steel, polypropylene, victaulic and 304 stainless steel. End (male) threads are NPT (will mate with foot valves, strainers, cam and groove part A, D etc.) and are the same size as shank. **Not for use with crimp ferrule.** 

Hose ID	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
Part No							
Unplated	CN050	CN075	CN100	CN125	CN150	CN200	CN250
Plated	CN050P	CN075P	CN100P	CN125P	CN150P	CN200P	CN250P
304 Stainless	CN050S	CN075S	CN100S	CN125S	CN150S	CN200S	CN250S
Polypropylene*	CN050PP	CN075PP	CN100PP	CN125PP	CN150PP	CN200PP	CN250PP
Victaulic	CN050V	CN075V	CN100V	CN125V	CN150V	CN200V	CN250V
Hose ID	3	4	5	6	8	10	12
Part No							
Unplated	CN300	CN400	CN500	CN600	CN800	CN1000	CN1200
Plated	CN300P	CN400P	CN500P	CN600P	CN800P	CN1000P	CN1200P
304 Stainless	CN300S	CN400S	CN500S	CN600S			
Polypropylene*	CN300PP	CN400PP					
Victaulic	CN300V	CN400V	CN500V	CN600V	CN800V		

<sup>\*</sup>Black Schedule 80



## NIPPLES & ACCESSORIES

### **HEX AIR HOSE NIPPLES**

For air or many other applications, MS nipples are economical and reusable. The MS nipple accepts bands or clamps. However, each MS is especially designed with a collar behind the hex to engage the gripping fingers of an interlocking clamp. MS threads are NPT. Steel Plated. Use also as companion end of female ground joint.



**MS NIPPLE** 

Hose Size	Thread Size	Part No.
1/4	1/4	MS4-4
1/4	3/8	MS4-6
3/8	1/4	MS6-4
3/8	3/8	MS6-6
3/8	1/2	MS6-8
1/2	1/4	MS8-4
1/2	3/8	MS8-6
1/2	1/2	MS8-8
1/2	3/4	MS8-12
3/4	1/2	MS12-8
3/4	3/4	MS12-12
3/4	1	MS12-16
1	3/4	MS16-12
1	1	MS16-16
1-1/4	1-1/4	MS20-20
1-1/2	1-1/2	MS24-24
2	2	MS32-32
2-1/2	2-1/2	MS40-40
3	3	MS48-48
4	4	MS64-64

### **TUBE HOSE MENDER**



Type SM hose menders repair hose up to and including ID's of 12". After cutting out the damaged hose portion, insert each end of the mender (shanks) into the remaining good ends of the hose. Secure the SM type mender with bands or DB double bolt clamps. Each end will accommodate two or more bands or two clamps for an economical and efficient return to service. Plated Steel.

HOSE ID	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
PART NO	<b>SM050</b>	<b>SM075</b>	<b>SM 1 0 0</b>	<b>SM125</b>	<b>SM150</b>	<b>SM200</b>	<b>SM250</b>
HOSE ID	3	4	5	6	8	10	12
PART NO	<b>SM300</b>	<b>SM400</b>	<b>SM500</b>	<b>SM600</b>	<b>SM800</b>	<b>SM1000</b>	<b>SM1200</b>



## **BRASS BALL VALVES**





Number         Size         A mm         Thread           BV025BF         1/4         6.4         1/4 NPT
<b>BV025BF</b> 1/4 6.4 1/4 NPT
<b>BV038BF</b> 3/8 9.9 3/8 NPT
<b>BV050BF</b> 1/2 14.0 1/2 NPT
<b>BV075BF</b> 3/4 19.0 3/4 NPT
<b>BV100BF</b> 1 24.0 1 NPT
<b>BV125BF</b> 1-1/4 31.0 1-1/4 NPT
<b>BV150BF</b> 1-1/2 38.0 1-1/2 NPT
<b>BV200BF</b> 2 49.0 2 NPT
<b>BV250BF</b> 2-1/2 64.0 2-1/2 NPT
<b>BV300BF</b> 3 79.0 3 NPT
<b>BV400BF</b> 4 99.0 4 NPT

	Ball Valve	e Components
1	Valve Body	Brass
2	Valve Cap	Brass
3	O-Ring	PTFE
4	Ball	Brass, chrome-plated
5	StemSpacer/	
	Gasket	PTFE
6	O-Ring	PTFE
7	Stem	Brass
8	Nut	Brass
9	Cap	Brass
11	Handle	Carbon Steel

#### **FEATURES:**

- Sizes to 2" rated 600 WOG,
- 2-1/2", 3" and 4" rated 400 WOG Ball seat is Teflon."
- Brass ball is chromium plated.



## **MINI BALL VALVES**



#### **FEATURES:**

- Valve body is plated brass.
- Temperature range up to 150°F (66°C).
- Handles working pressures up to 150 PSI.

Size	Part No.	Port Type
1/8	MBV018BS	Standard
1/4	MBV025BF	Full
3/8	MBV038BF	Full
1/2	MBV050BS	Standard

Female NPT x Female NPT

#### **FOOT VALVES FOR WATER SUCTION HOSE**



Foot valves are used on the submersed end of the water suction hose to prevent the pump from losing it's prime when shut down. The foot valve stops the water from draining by a closing leather flapper gate. Each valve has a built in strainer that prevents debris from entering during operation. All sizes have NPS threads and complete valves are painted red.

Part No.	Size
FV150	1-1/2
FV200	2
FV250	2-1/2
FV300	3

Size	Part No.
4	FV400
6	FV600
8	FV800



#### STRAIGHT STREAM BRASS NOZZLES



Made from cast brass with satin finish. Orifice tip sizes are standard.

All sizes, for use at 100 PSI, water only at 70°F.

Size	Length	Size	Length
3/4	6″	1-1/2	10"
1	8″	2	12"
1-1/4	9″		

Thread Size	Туре	Tip Size	Part No	Thread Size	Туре	Tip Size	Part No
3/4	GHT	1/4	BN075	1-1/2	NST	1/2	BN150NST
3/4	NPSH	1/4	BN076	2	NPSH	9/16	BN200
1	NPSH	5/16	BN100	2-1/2	NPSH	3/4	BN250
1-1/4	NPSH	3/8	BN125	2-1/2	NST	3/4	BN251
1-1/2	NPSH	1/2	BN150				

### **COMBINATION PLASTIC OR BRASS FOG NOZZLES**





Plastic nozzles are made of high impact bright red plastic with corrosion resistant metal parts. Brass nozzles are high quality heavy brass. These nozzles allow for straight stream or fog spray pattern in industrial, utility or commercial use.

Thread Size	Type	Part No Plastic	Part No Brass
1-1/2	NPS	FN150	FN150B
1-1/2	NST	FN150NST	FN150BNST
2	NPS		FN200B
2-1/2	NPS		FN250B
2-1/2	NST		FN250BNST

Red Nozzles for use at 100 PSI, water only at 70°F Brass Nozzles for use at 100 PSI, water only at 70°F



### **SPANNER WRENCH FOR PIN LUG COUPLINGS**



Made from ductile iron with easy grip handle, contour head to fit the coupling curve and special round hole to engage the pinlug.



Part No	SW150	SW200	SW250	SW2025	SW300	SW400
Size	1-1/2	2	2-1/2	2 x 2-1/2	3	4

#### **UNIVERSAL SPANNER WRENCH**



Ductile iron painted red. Complete with pry bar end and gas cock shut off/on feature. Other end used as pinlug or rocker lug wrenching.

PART NO. US-1

## **ADJUSTABLE HYDRANT WRENCH**



A complete tool for the fire hydrant operation. The pentagonal nut head is adjustable to fit hydrant valves to 1-3/4" for on/off operation. The head also operates pin lug or rocker lug connections from 1-1/2" to 6"

PART NO. HYD-1



Lighter in weight than the HYD-1 with the same adjustable features. Fits 1-3/4" pentagonal nuts. The head will operate hydrant cap and adapter pin or rocker lugs. Handle is plated. **PART NO. HYD-3** 



#### STRAINERS FOR WATER SUCTION HOSE

Used on the submersed end of suction hose to prevent debris from entering the pump during operation. All threads are NPS (trash strainers are square hole).







**TUBE** 





**ROUND HOLE** 

**SQUARE HOLE** 

TOP HOLE

**BOTTOM HOLE** 

Size	Round Hole Part No	Square Hole Part No	Tube Part No	Top Hole Part No	Bottom Hole Part No
1-1/2	RHS150	SHS150	TRHS 150	THS150	BHS150
2	RHS200	SHS200	TRHS200	THS200	BHS200
2-1/2	RHS250				
3	RHS300	SHS300	TRHS300	THS300	BHS300
4	RHS400	SHS400			
6	RHS600	SHS600			
8	RHS800				

#### **HYDRANT ADAPTERS - BRASS**



For industrial utility and fire department applications, these adapters allow easy connections from hydrant to smaller size hose. Made of heavy duty cast brass with satin finish, all female ends are supplied with pin lug wrenching. All threads are V cut.

Part No	Male End Thread	Male Size	Female Thread	Female Size
HAB1516	NST	1-1/2	NPT	1-1/2
HAB1615	NPT	1-1/2	NST	1-1/2
HAB2016	NST	1-1/2	NPT	2
HAB075	GHT	3/4	NST	2-1/2
HAB076	NPSM	3/4	NST	2-1/2
HAB100	NPSM	1	NST	2-1/2
HAB150	NPSM	1-1/2	NST	2-1/2
HAB150NPT	NPT	1-1/2	NST	2-1/2
HAB150NST	NST	1-1/2	NST	2-1/2
HAB200	NPSM	2	NST	2-1/2
HAB200NPT	NPT	2	NST	2-1/2
HAB250NPT	NPT	2-1/2	NST	2-1/2

Other thread combinations and particular city/municipal hydrant threads are available in brass with minimal factory order. **Replacement Gasket: HAG250** 



## ACCESSORIES FOR OIL & GAS DRILLING

#### **STRAINERS - SUGAR CONE TYPE**



Applications include - water, oil or gas and steam where protection from foreign matter is required in a pipeline. For water, oil and gas applications, the strainer is normally inserted into a sight glass.

#### **FEATURES:**

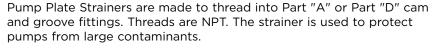
- 304 Stainless Steel
- Permanently attached envelope gasket that makes the assembly with the sight glass and cam & groove fittings much easier.
- Gasket is a nitrile compound.



Part No.		Size
	(in.)	(mm)
CS200SS	2.00	50.80
CS300SS	3.00	76.20
CS400SS	4.00	101.60

#### **PUMP PLATE STRAINERS**





#### **FEATURES:**

- NPT thread.
- 1/4" holes.
- 0.20" thick.
- Aluminum.
- Easy to assemble with Parts A and D cam and groove couplings.



Part No.	(in.)	Size (mm)
25PS150A	1.50	38.10
25PS200A	2.00	50.80
25PS300A	3.00	76.20
25PS400A	4.00	101.60



### **SIGHT GLASSES - POLYCARBONATE**



Sight Glasses enable the water hauler and pumper to view, at any time, what is streaming through the storage tank drain lines.

Part No.	s	ize
	(in.)	(mm)
SGT200	2.00	50.80
SGT300	3.00	76.20
SGT400	4.00	101.60

#### **WARNING!**

- DO NOT TIGHTEN OR LOOSEN WHILE UNDER PRESSURE
- AVOID DIRECT CONTACT WITH STRONG ACIDS OR CHEMICALS
- ALWAYS PLACE THE PIPE WRENCH ON THE METAL CONNECTIONS AND NOT THE SIGHT GLASS ITSELF WHEN TIGHTENING.
- USE ON DRAIN LINES ONLY. NEVER USE ON FLOW LINES.
- ALWAYS USE AN OILY RAG WHEN CLEANING THIS PRODUCT.

#### **FEATURES:**

- Temperature range from -76°F to 185°F greater range than the poly-acrylic versions.
- Heavier than Schedule 80.
- Working pressure up to 500 PSI for both sizes.
- NPT pipe threads on both ends.
- Comes with thread protectors on both ends.
- High impact resistant polycarbonate material.
- Excellent UV ray resistance.
- Excellent resistance to most acids, low concentrations of alcohol and alkalis. Compatible with aliphatic hydrocarbons, aromatic hydrocarbons, mild detergents and cleaners, greases and oils & silicone greases and oils.

#### SIGHT GLASS FLANGES



Sight Glass Flanges make it easier to see what is flowing through. Used in petroleum (fracking), water and oil tankers.

Part No.	(in.)	Size (mm)
SGF300	3.00	76.20
SGF400	4.00	101.60



3098

#### **BANDING COILS**

**CONSTRUCTION:** Clear FDA PVC.

**APPLICATION:** Clockwise coils allow for a better

coupling securing surface on the

hose O.D.

#### **FEATURES:**

- Made with clear FDA PVC, 3098 can be used on any thermoplastic cover compound.
- Fits high profile clockwise O.D. corrugations for a smooth coupling securing surface.
- Fits low profile clockwise O.D. corrugations for a slightly raised coupling securing surface.
- Cut one length in half to accommodate both ends of one hose assembly.

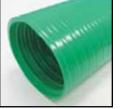
Part	Fits H	lose ID	Coil	Length
Number	in.	mm.	in.	mm.
3098-0150	1-1/2	38.1	6	152.4
3098-0200	2	50.8	7	177.8
3098-0250	2-1/2	63.5	8	203.2
3098-0300	3	76.2	8	203.2
3098-0400	4	101.6	9	228.6
3098-0500	5	127.0	10	254.0
3098-0600	6	152.4	14	355.6

## 3099

### **BANDING SLEEVES**



Cut to 12" sleeves for each end of the assembly.







CONSTRUCTION: Green, yellow or orange PVC.

APPLICATION: Banding sleeves are made to thread over the outside of Jason thermoplastic petroleum hoses to allow better coupling securing surface on the O.D. of the hose.

#### **FEATURES:**

- Color-coded to fit specific Jason petroleum hoses
- Clockwise threading
- All sleeve lengths are 3 ft.

Part	Fits	Hose ID	Use On	Sleeve
Number	in.	mm.	Hose Series	Color
3099-03-3040	3	76.2	3040	Green
3099-04-3040	4	101.6	3040	Green
3099-03-3045	3	76.2	3045	Green
3099-04-3045	4	101.6	3045	Green
3099-02-3050	2	50.8	3050	Yellow
3099-03-3050	3	76.2	3050	Yellow
3099-04-3050	4	101.6	3050	Yellow
3099-03-3053	3	76.2	3053	Yellow
3099-04-3053	4	101.6	3053	Yellow
3099-02-3058	2	50.8	3058	Orange
3099-03-3058	3	76.2	3058	Orange
3099-04-3058	4	101.6	3058	Orange

**WARNING:** The following data has been compiled from generally available sources and should not be relied upon without consulting and following the hose manufacturer's specific chemical recommendations. Neglecting to do so might result in failure of the hose to fulfill it's intended purpose, and may result in possible damage to property and serious bodily injury.

	ELASTOMER / PLASTICS									
NR	Natural Rubber	EPDM	Ethylene-propylene-diene-terpolymer							
IR	Isoprene (synthetic)	FKM	Fluorocarbon rubber (Viton)							
SBR	Styrene-butadiene	UHMW	Ultra High Molecular Weight Polyethylene							
CR	Chloroprene (Neoprene*)	XLPE	Cross-linked polyethylene							
NBR	Nitrile-butadiene (Buna-N)	CSM	Chloro-sulfonyl-polyethylene (Hypalon)							
IIR	Isobutene-isoprene (Butyl)									

<sup>\*</sup>Trademark of DuPont Inc.

RESISTANCE RATING									
Е	EXCELLENT	С	ACCEPTABLE						
G	GOOD	Х	UNSATISFACTORY						
F	FAIR	N	NO DATA						

Maximum temperature 100°F (38°C) unless otherwise specified.





Part										U										U
No.										Н										Н
No.																			X	
Name						I										1				
Searchesten   C						ı										-				
Section	Absorpton Oil		1	_	_	_					Aluminum Phosphate	1								
Acestabelyne	·										·									
Acetante Source																				
Accessed Solutions	,																			
American 1976																				
Acade Acade 30%																				
American Asing 1906																				
Asset Activity of the Section of the Section of Section																				
Aceste Deskleyde  X X X G X X G G G G G G G G G G G G G	Acetic Acid, Glacial	Х	Х	С	Х	G	Х	Х	G	G	· ·	Х	N	N	Е	Е	Е	Е	Е	Е
Ammonium Acedite	Acetic Aldehyde	Х	N	N	N	G	Х	Е	Е	Е		G	G	Е	Е	Е	Е	Е	Е	Е
Acestic Environmental Control (Architect Carloy Accordance)  X X X X X X X X X X X X X X X X X X X	Acetic Anhydride	Х	Х	G	Х	Е	G	Е	Е	G	Ammonia, in Water	G	G	G	G	G	G	Е	Е	Е
Acetor Acetor (Agene Carphydride)    X	Acetic Ester (Ethyl Acetate)	Х	Х	Х	Х	G	Х	G	Е	Е	Ammonium Acetate	Е	Е	G	Е	Е	Е	Е	Е	Е
Acctors of Condition	Acetic Ether (Ethyl Acetate)	Х	х	х	х	G	С	G	Е	Е	Ammonium Bicarbonate	Е	N	N	N	N	N	N	N	N
Acetophenome  C	Acetic Oxide (Acetic Anhydride)	X	Х	Х	Х	С	G	G	Е	Е	Ammonium Bisulfate (50%)	N	N	N	N	G	N	G	G	G
Acetgly Acetgl	Acetone	С	С	F	Х	Е	F	Е	Е	Е	Ammonium Carbonate	Е	Е	Е	С	Е	Е	Е	Е	Е
Acady Chloride	Acetone Cyanohydrin	X	Х	N	N	G	N	G	Е	G	Ammonium Chloride	Е	Е	Е	Е	Е	Е	Е	Е	Е
Aceyl Chloride	Acetophenone	С	Х	Х	Х	Е	Х	Е	G	G	Ammonium Flouride	Е	N	N	N	N	N	N	N	N
Acady-Production	Acetyl Acetone	X	Х	Х	Х	G	Х	Е	Е	Е	Ammonium Hydroxide	G	G	Е	G	Е	G	Е	Е	Е
Acetylen-Totuding	Acetyl Chloride	Х	Х	Х	Х	С	Х	С	G	G	Ammonium Metaphosphate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Acetykene ( ) C. B. C. B. C.	Acetyl Oxide	Х	N	N	Х	Е	G	Е	Е	G	Ammonium Nitrate	G	Е	Е	Е	Е	Е	Е	Ε	Е
Acetylene Dichloride (Dichlorethylene)  X	Acetyl-P-Toluidine	Х	Х	N	N	Х	Ν	Х	Е	Е	Ammonium Nitrite	Е	Е	Е	Е	Е	Е	Е	Е	Е
Acergleme Tetrachloride  X	Acetylene	Е	Е	G	Е	Е	Е	Е	Е	Е	Ammonium Persulfate	Е	Х	Ε	Х	Е	Ε	G	Е	Е
Acrolein (hydroquinine inhibited)  N N N N N N N N N N N N N N N N N N	Acetylene Dichloride (Dichlorethylene)	Х	Х	N	N	Х	N	Х	Х	Х	Ammonium Phosphate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Acrylamide	Acetylene Tetrachloride	X	Х	N	N	Х	N	Х	Х	X	Ammonium Sulfate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Acryslates (HEA or HPA)  N N N N N N N N N N N N N N N N N N N	Acrolein (hydroquinine inhibited)	N	N	N	N	G	N	Х	Е	Е	Ammonium Sulfide	Е	Е	Е	Е	Е	Е	Е	Е	Е
Acrylic Acid	Acrylamide	N	N	N	Х	N	N	X	Е		Ammonium Sulfite	Е	Е	Е	Е	Е	Е	Е	Е	Е
Acrysonitrile  Acryso	Acrylates (HEA or HPA)	N	N	N	N	N	N	Х	Е		Ammonium Thiocyanate	Е		Е	Е					Е
Adiplic Acicid  APPROVIDED ACIDICAL COLOR OF STATES ACTION OF STATES ACTIO	Acrylic Acid	N	N	N	N	N	N	N	N		Ammonium Thiosulfate		Е	Е	Е	Е			Ε	Е
Aeroshell 7A. 17 Grease	Acrylonitrile	G							G	G	· ·									
Air 300° F  X X X X X X N N X X N N N Amylbenzene  X X X G G G X N X G G G A N X G G G A N X G G G A Amylbenzene  X X X G G G X N X G G G A N X G G G A Amylbenzene  X X X G G G X N X X G G G G A N X G G G A Amylbenzene  X X X G G G X N X X G G G A Amylbenzene  X X X G G G X N X X G G G A Amylbenzene  X X X G G G X N X X G G G A Amylbenzene  X X X G G G X N X X Z E E E Amylbenzene  X X X X X X X X X X X Z E E E Alcholos, Alighatic  E G E E E E E E E E E E Amyl Aphlbenzene  Alcoholos, Aromatic  C X C C X X X X E E E Amyl Amylbenzene  X X X X X X X X X X Z E E E Alcholos, Aromatic  C X X C C C X X X X E E E Amyl Amylbenzene  X X X X X X X X X X Z E E E Alcholos, Aromatic  C X X C C C X X X X E E E Amyl Amylbenzene  X X X X X X X X X X X E E E Amyl Amylbenzene  X X X X X X X X X X Z E E E Amyl Amylbenzene  X X X X X X X X X X E E E Amyl Amylbenzene  X X X X X X X X X X E E E Amyl Amylbenzene  X X X X X X X X X X E E E Amyl Amylbenzene  X X X X X X X X X X E E E Amyl Amylbenzene  X X X X X X X X X X X E E E Amyl Amylbenzene  X X X X X X X X X X X X E E E Amyl Amylbenzene  X X X X X X X X X X X X X E E E Amylbenzene  X X X X X X X X X X X X X X X X X X X	· ·	N																		
Air, 300° F  Air,											· ·									
Aircraft Hydraulic Oil AA  N N N N N N N N N N N N N N N N N E N Amyl Borate  Alachlor (Lasso)  E N N N N N N N N N N N N N N N N E E R Amyl Chloride  X X X X X X X X X X X X X X X E E E E																				
Alachlor (Lasso)  E N N N N N N N N E E R Amyl Chloride  X X X X X X X X X X X E E E Alachols, Aliphatic  E G E E E E E E E E E E E Amyl Chloronapthalene  X X X X X X X X X X X E E E Amyl Mapthalene  X X X X X X X X X X X X X E E E Amyl Mapthalene  X X X X X X X X X X X X X X X E E E Amyl Mapthalene  X X X X X X X X X X X X X X X X X X X											· ·									
Alcohols, Aliphatic  E G E E E E E E E E E Amyl Chloronapthalene  X X X X G X X X E E E  Alcohols, Aromatic  C X C C X X X X E E  Almyl Napthalene  X X X X X X X X X X X E E  Alkaline Liquid (NOS)  N N N N N N E E N E N E N Amyl Oleate  X X X X X X X X X X X X X E E  Alkaline Liquid (NOS)  N N N N N N N N N N N N N N N N N N N	· ·																			
Alcohols, Aromatic  C X C C X X X X X X X X X X X X X X E E E Amyl Napthalene  AlkAline Liquid (NOS)  N N N N N N N E E N E N E N Amyl Oleate  X X X X X X X X X X X X X E E E AlkAline Liquid (NOS)  N N N N N X X X X N E N Amyl Oleate  X X X X X X X X X X X X X X X E E E Amyl Oleate  X X X X X X X X X X X X X X X X X X X											· ·									
Alkaline Liquid (NOS)  N N N N N N N R E E N E N E N Amyl Oleate  X X X X X X X X X X X X E E E  Alk-Tri (Trichloroethylene)  X N N N X X X X N E N Amyl Phenol  X X X X X X X X X X X X X E E  Alkyaryl Polyether Alcohol  N N N N N N N N N N N N N N N N N N N																				
Alk-Tri (Trichloroethylene)  X N N N X X X X N E E Alkyaryl Polyether Alcohol  N N N N N N N N N N N N N N N N N N N																				
Alkyaryl Polyether Alcohol  N N N N N N N N N N N N N N N N N N N	, , , ,										· ·									
Alkyary Sulfonate Alkybenzenee Sulfonate    E											· ·									
Allyll Alcohol  Allyll Alcohol  Allyll Alcohol  Allyl Bromide  X X X X X X X X X X X X X X X X X X X											· ·									
Allyl Bromide       X       <																				
Allyl Chloride         X         G         E																				
Alpha Methylstyrene       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       G       E	·																			
Alpha Olefin Sulfonate         E         N																				
Alum (Ammonium Potassium Sulfate)       E											•									
Aluminum																				
Aluminum Acetate																				
Aluminum Alkyl       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       C       C       X       C       E																				
Aluminum Bromide         E																				
Aluminum Chloride         E	· ·																			
Aluminum Chlorohydrate Solution (to 50%)  N  N  N  N  E  E  E  E  E  E  E  E  E																				
Aluminum Flouride         E																				
Aluminum Formate         X         N         N         X         G         X         N         E         E         N         N         N         N         N         G         E         N         E         E         N         G         E         E         E         N           Aluminum Hydroxide         E																				
Aluminum Hydroxide   E   E   E   E   E   E   E   E   E																				
														G						Е
	·										Aqua Regia				Х				Χ	

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							E	X	M								E	X	M
		S		N	ı	С	Р	L	W			S		N	I	С	Р	L	W
	N	В	C	В	1	s 	D	P _	P -		N	В	C	В	-	s 	D	P _	P -
Ta	R	R	R	R	R	M	M	E	E	December	R	R	R	R	R	M	M	E	E X
Argon	X	X	X	С	G	X	E	N	N	Bromine Bromine Water	X	X	X	X	X	С	X	X	
Arguad Aromatic Hydrocarbons	E	E X	E X	E C	E X	E X	E X	E	E	Bromobenzene	X	X	G	C X	C	E X	C X	E C	E C
Aromatic Tar	X	N	N	X	X	X	X	E	E	Bromochloroethane	X	X	X N	N	X	X	X	X	X
Arsenic Acid	E	E	E	E	E	E	E	E	E	Bromochloromethane	X	X	X	X	X	X	X	X	X
Arsenic Chloride	X	X	E	С	X	X	G	X	X	Bromotoluene	X	X	N	N	X	N	X	N	N
Arsenic Trichloride	X	Х	E	С	Х	Х	G	Х	Х	Bubble Bath Compounds	N	N	N	N	N	N	N	N	Е
Asphalt	X	Х	G	Е	Х	Х	G	G	G	Bunker Oil	Х	Х	G	Е	Х	Х	Х	Е	Е
ASTM Fuel A	х	х	Е	Е	Х	G	Х	N	N	Butadiene	Х	Х	F	Х	Х	С	Х	F	F
ASTM Fuel B	Х	Х	Х	Е	Х	Х	Х	N	N	Butandiol (Butylene Glycol)	N	N	N	N	N	N	N	Е	G
ASTM Fuel C	Х	х	х	G	Х	х	Х	N	N	Butane	х	Х	Е	Е	Е	G	х	Е	N
ASTM Oil No. 1	Х	Х	Е	Е	Х	G	Х	Е	Е	Butanoic Acid	N	N	N	N	N	N	N	N	N
ASTM Oil No. 2	Х	х	G	Ε	Х	F	Х	Е	Е	Butanol	Е	Е	Е	Е	Е	Ε	Е	Е	Е
ASTM Oil No. 3	X	X	G	Е	Х	F	Х	Е	Е	Butraldehyde (Butanal)	Х	Х	Х	Х	Х	Х	Х	G	N
ASTM Oil No. 4	х	Х	Х	G	Х	Х	Х	N	N	Butter (Non FDA)	С	С	G	Е	Е	Е	G	Е	Е
Automatic Trans. Fluid	X	Х	G	Е	Х	С	Х	N	N	Butyl Acetate	Х	Х	Х	Х	G	Χ	С	G	G
Aviation Gasoline	X	Х	С	Е	Х	Х	Х	Е	Е	Butyl Acetoacetate	Х	N	N	Х	Х	Х	N	Е	Е
Baltic Types 100, 150, 200, 300, 500	N	N	N	Е	Х	N	Х	Е	N	Butyl Acrylate	Х	Х	Х	Х	Х	Х	Х	G	G
Bardol B	Х	Х	Х	Х	Х	х	Х	Е	N	Butyl Alcohol	Е	Е	Е	Е	Е	Е	Е	Е	Е
Barium Carbonate	Е	Е	Е	Е	Е	Е	Е	Е	Е	Butyl Aldehyde	Х	N	N	Х	Х	Χ	Х	Е	Е
Barium Chloride	Е	E	Е	Е	Е	Е	Е	Е	Е	Butylamine	G	С	Х	С	С	С	С	Е	Е
Barium Hydroxide	Е	Е	Е	Е	Е	Е	Е	Е	Е	Butyl Benzene	Х	Х	Х	Х	Х	Χ	Х	Е	Е
Barium Sulfate	Е	Е	Е	Е	Е	Е	Е	Е	Е	Butyl Benzyl Phthalate (BBP)	Х	Ν	Ν	Х	Е	Х	Ν	Ν	N
Barium Sulfide	Е	Е	Е	Е	Е	Е	Е	Е	Е	Butyl Bromide	Х	Х	Х	Х	Х	Χ	Х	G	G
BBP (Butyl Benzyl Phthalate)	Х	N	N	Х	Е	Х	Ν	N	N	Butyl Butyrate	Х	Х	Х	Х	С	Χ	G	G	G
Beer	Е	Е	G	С	Е	Е	G	N	N	Butyl Carbitol	Х	Х	G	G	Е	Е	Е	Е	Е
Beet Sugar Liquors	Е	Е	Е	Е	Е	Е	Е	Е	Е	Butyl Cellosolve	Х	Х	G	G	Е	G	Е	Е	Е
Bellows 80-20 Hydraulic Oil	N	N	N	Е	Х	N	Х	Е	N	Butyl Chloride	Х	Х	Х	X	С	Χ	С	G	G
Benzaldehyde	Х	N	N	Х	G	Х	G	Е	Е	Butylate	N	Ν	Ν	Ν	N	N	Е	Ν	Е
Benzal Chloride	N	N	N	Х	G	N	N	Е	Е	Butylene	Х	X	G	G	С	G	С	Е	E
Benzene (Benzol)	Х	Х	Х	Х	Х	Х	Х	Е	G	Butyl Ether	Х	Х	G	G	С	G	С	Е	Е
Benzene Sulfonic Acid	X	Х	X	N	G	G	N	Е	Е	Butyl Ethyl Acetaldehyde	Х	Х	Х	Х	С	Х	Х	Е	Е
Benzidine	Е	Х	Х	G	Х	N	Х	G	N	Butyl Ethyl Ether	Х	Х	Х	Х	С	G	С	Е	Е
Benzine	X	X	G	Е	Х	Х	Х	Е	Е	Butyl Formate	Х	N	Х	Х	N	N	N	N	N
Benzene Solvent (Ligroin)	Х	N	N	Е	Х	Х	Х	Е	Е	Butyl Mercaptan (2-Methyl - 2 Butanathiol)	Х	Х	N	Х	Х	N	Х	Е	N
Benzoic Acid	G	X	E	X	Ε	G	G	E	E	Butyl Oleate	X	X	X	X	G	X	G	E	Ε
Benzoic Aldehyde	Х	Х	Х	Х	Х	Х	Х	Е	E	Butyl "Oxiol" tm for EG Monobutyl Ether	N	N	N	N	N	N	Е	E	N
Benzophenone	E	N	N	N	N	N	N	E	N	Butyl Phthalate	X	X	X	X	С	X	С	E	E
Benzotrichloride	X	X	X	X	X	X	X	G	G	Butyl Stearate	X	X	X	G	С	X	С	E	E
Benzoyl Chloride	X	X	X	X	X	X	X	G	G	Butylene Glycol	N	N	N	N	N	N	N	E	G
Benzyl Alcehol	X	X G	X C	X	G	G F	G G	E	E	Butyraldehyde  Butyric Acid	X	N G	N	X	G	X	X	E	E
Benzyl Alcohol Benzyl Benzoate	G N	N	N	X N	G	N	G	E	N	Butyric Anhydride	G C	X	X	N C	G C	X G	G C	E E	E
Benzyl Chloride	X	X	X	X	С	X	X	E	E	Cadmium Acetate	X	N	N	X	G	N	N	N	N
Bichromate of Soda	X	X	G	X	E	G	C	E	E	Calcine Liquor (Radioactive Waste)	N	N	N	E	E	N	E	E	N
(Sodium Dichromate)	^	^	G	^	-	G		_	-	Calcium Acetate	C	X	X	X	E	X	E	E	E
Bismuth Carbonate	Е	N	Х	N	N	N	N	N	N	Calcium Aluminate	E	N	E	E	E	E	N	N	N
Bisphenol A	E	N	N	N	N	N	N	N	N	Calcium Aresenate	N	N	N	N	N	N	N	E	N
Bitumastic	X	X	G	G	X	X	X	N	X	Calcium Bisulfate	E	E	E	E	E	E	E	E	E
Black Sulfate Liquor	G	G	E	G	E	G	E	E	E	Calcium Bisulfide	G	G	E	E	E	E	N	E	N
Blast Furnace Gas	X	X	G	С	С	G	С	E	E	Calcium Bisufite	С	E	E	E	G	E	С	E	E
Bleach	X	X	С	Х	Х	F	G	E	E	Calcium Bromide Solution	N	N	N	N	N	N	N	E	E
Borax Solution	G	G	E	C	E	E	E	E	E	Calcium Bichromate	N	N	N	N	E	F	N	G	F
Bordeaux Mixture	G	G	E	E	E	E	E	E	E	Calcium Carbonate	E	E	E	E	E	E	E	E	E
Boric Acid	E	E	E	E	E	E	E	E	E	Calcium Chlorate	G	G	E	E	G	E	G	E	N
Brake Fluid (HD-557)	N	E	G	С	G	G	E	N	N	Calcium Chloride	E	E	E	E	E	E	E	E	E
Brine	E	E	E	E	E	E	E	E	E	Calcium Hydroxide	E	G	E	E	E	G	E	E	E
<u> </u>																<u> </u>			<u> </u>

N   B   C   B   I   S   D   P   P   N   B   C   B   I   S   D   P   P   N   B   C   Calcium Hydrosulfide   G   G   G   E   E   E   E   E   E   E
N   B   C   B   S   D   D   P   E   W   N   B   E   E   E   E   E   E   E   E   E
N
R
Action   Hydrosulfide
Calcium Hypochlorite
Acid cum Metasilicate
alcium Stearate
Action   Suffate
Action   Suffrydrate
alcium Sulfide    E   E   E   E   E   E   E   E   E
alcium Sulfite    E
Crude Sodium Nitrate)
(Crude Sodium Nitrate) amphene (Liquid above 115° F) amphene (Liquid above 116° F) amphene (Liquid above 116° F) aprolactam  E E E E E E E E E E E E E E E E E E E
amphene (Liquid above 115° F)  N N N N N N N N N N N N N N N N N N
ane Sugar Liquors (Non F.D.A.)    E   E   E   E   E   E   E   E   E
aproic Acid
proio Acid
E
Aprylic Acid
Arbamates
Arbitol
Debitol Acetate
Cobalt Chloride
N
(See Carbon Disulfide)         E
E   E   E   E   E   E   E   E   E   E
Copper Arsenate
E
E   E   E   E   E   E   E   E   E   E
Thon Tetrachloride
The property of the property
X
N
Stor Oil   C   X   G   E   G   C   G   E   E   Copper Sulphate   F   E   Copper Sulphate   C   C
ustic Potash         E         G         G         E         Corm Oil         X
(Potassium Hydroxide)         E         G         G         E         G         E         G         E         G
September   Common   Common
(Sodium Hydroxide)         X         N         N         X         E         Creosote         X         N
Selection   Sele
Illsolve
C
Ellulube
ement, Portland         N         N         N         N         N         N         N         N         E         N         N         N         E         Cresols         X         X         X           hina Wood Oil (Tung Oil)         X         X         G         E         G         G         G         E         E         Cresylic Acid         X         X
nina Wood Oil (Tung Oil) X X G E G G G E E Cresylic Acid X X
nlordane
X   X   X   X   X   X   N   N   N
N N N N N N N N Cumene
Iorine, Water Solutions (2%)         C         X         X         X         C         G         C         E         E         Cupric Arsenate         G         G         G
loroacetic Acid G X X X C X C E E Cupric Carbonate C C
X   X   X   X   X   X   G   G
lorobromomethane X X X X X X X X G X Cupric Nitrate C C
nlorobutane X X X X X X X G G Cupric Nitrite C C
lorobutadiene X X X X X X X G G Cupric Sulfate F E
lloroethylbenzene X X X X X X X E E

									U											U
									Н											Н
							E	X	M									E	X	М
		s		N	ı	С	P	L	W				s		N	ı	С	P	L	W
	N	В	С	В	ı	S	D	Р	Р			N	В	С	В	I	s	D	Р	Р
	R	R	R	R	R	М	М	Е	Е	1		R	R	R	R	R	M	M	E	E
Cutting Oil	Х	Х	G	Е	Х	Х	Х	G	N		Dichloroisopropyl Ether	Х	X	Х	Х	Х	X	Х	Е	Е
Cutting Oil (Sulfur Base)	N	N	Х	Е	N	N	N	N	N		Dichloromethane	Х	Х	Х	Х	Х	Х	Х	Е	E
Cutting Oil (Water Solutions)	N	N	Х	Е	N	N	N	N	N		Dichloropentane	Х	Х	Х	Х	Х	Х	X	Е	Е
Cyanisde, Copper	G	G	G	G	G	G	G	Е	N		Dichloropropane	Х	Х	N	N	Х	Х	N	Е	E
Cyanide Mercuric	G	G	Е	G	G	Е	G	Е	N		Dichlorotoluene	N	N	N	N	Ν	N	N	N	N
Cyanide, Silver	N	N	Е	N	N	N	N	Е	N		Dicyclohexylamine	N	N	N	N	Ν	N	N	N	N
Cyanide, Sodium	Е	Е	Е	Е	Е	Е	Е	Е	N		DIDA (Diisodecyl Adipate)	Х	N	N	Х	Е	Х	N	N	N
Cyclohexane	Х	Х	X	G	X	X	X	Е	E		Dieldrin Xylene	Х	Х	Х	Х	Х	Х	Х	Е	E
Cyclohexanol	Х	Х	G	С	Х	Х	Х	Е	E		Dieidrin in Xylene	Х	X	G	G	Х	X	Х	Е	E
Cyclohexanone	Х	Х	X	X	X	X	X	Е	E		And Water Spray									
Cyclohexlamine	N	Х	N	N	Е	N	Е	N	N		Diesel Fuel	Х	Х	G	Е	Х	Х	Х	Е	E
Cyclopentane	Х	Х	G	G	Х	X	Х	Е	Е		Diesel Oil	Х	Х	G	Е	Х	С	Х	Е	E
Cyclopentanol	Х	Х	N	N	Х	Х	N	Е	Е		Diethanol Amine	G	G	G	G	Е	F	F	Е	Е
Cyclopentanone	Х	N	N	Х	Х	Х	N	N	N		Diethyl Benzene	Х	Х	Х	Х	Х	Х	Х	Е	Е
P-Cymene	х	х	Х	С	Х	Х	Х	Е	Е		Diethyl Carbonal	Е	N	N	Е	Е	Е	N	Е	Е
DDT in Kerosene	Х	Х	G	Е	F	Х	Х	Е	Е		Diethyl Ether	Х	Х	С	G	X	Х	Х	Е	Е
Decaline	х	х	х	х	х	х	Х	Е	Е		Diethyl Ketone	F	х	N	N	G	х	N	Е	Е
Decanal	Х	N	N	Х	Х	Х	N	N	N		Diethylphthalate	х	Х	Х	Х	Е	Х	G	Е	Е
Decanol	х	N	х	Е	х	G	N	N	N		Diethyl Oxalate	С	х	х	х	С	Х	Е	Е	Е
Decane	Х	Х	Х	G	Х	Х	Х	Е	Е		Diethyl Sebacate	Х	Х	Х	Х	Е	Х	С	Е	Е
Decyl Alcohol	х	N	N	Е	Е	Е	Е	Е	Е		Diethyl Sulfate	х	х	х	х	G	Х	G	Е	Е
Decyl Aldehyde	Х	N	N	Х	X	Х	N	N	N		Diethyl Sulfide	N	N	N	N	N	N	N	Е	N
Decyl Butyl Phthalate	х	N	N	x	Е	Х	N	Е	Е		Diethyl Triamine	G	С	G	G	Е	С	G	Е	Е
Deicing Fluid	N	N	Е	Е	Е	G	Е	Е	Е		Diethylacetaldehyde	N	N	N	N	N	N	N	Е	N
Denatured Alcohol	E	E	E	E	E	E	E	E	E		Diethylamine	N	N	N	N	N	N	N	N	G
Detergent, Water Solutions	G	G	G	E	G	G	E	E	E		Diethylene Dioxide	X	X	X	X	G	Х	G	E	N
Developing Fluid (plctures)	E	G	E	E	E	E	G	N	N		Diethylene Glycol	E	Е	E	E	E	E	E	E	Е
Dextrin	N	N	E	E	X	N	X	Х	N		Diethylene Glycol Methyl Ether	N	N	N	N	N	N	Е	E	N
Dextron	N	N	N	E	X	N	Х	X	N		Diethylene Glycol Monobutyl Ether	N	N	N	N	N	N	E	E	N
DHSO Butylene	X	Х	X	G	X	X	X	E	N		Diethylene Glycol Monobutyl Ether Acetate	N	N	N	N	N	N	E	E	N
Diacetone Alcohol	X	X	G	Х	E	G	G	E	E		Diethylenetriamine	G	G	С	G	E	С	E	E	E
Diammonium Phosphate	N	N	N	N	N	N	N	N	N		Dihydroxyacetone	N	N	N	N	N	N	E	E	N
Diamylamine	G	С	E	G	E	С	С	E	E		Dihydroxydiethyl Ether	E	E	E	E	E	N	E	E	E
Diamyl Naphthalene	X	X	N	N	X	X	N	E	N		Dihydroxyethyl Amine	G	С	G	G	E	С	G	E	E
Diamyl Phenol	X	N	N	X	X	X	X	E	E		Dihydroxyethyl Ether	E	E	G	E	E	E	G	E	E
Diamylene	X	N	N	X	X	X	N	E	E		Diisobutylene	X	X	G	E	X	X	X	E	E
Diazonin	_		NI NI	N	NI	NI.	E	NI.	N		Diisobutyl Ketone	Ŷ	· ·	\ \ \		<u>^</u>	^ v	^ C	_	_
Dibenzyl Ether	X	X	X	X	G	X	X	E	E		Diisobutyl Phenol	E	N	N	N	N	N	N	N	N
Dibenzyl Sebacate	C	X	X	X	G	X	G	E	E		Diisocyanate	X	X	X	X	X	X	X	X	X
Dibromobenzene	X	X	X	X	X	X	Х	G	G		Diisoctyl Phthalate	X	N	N	X	E	X	E	N	N
								G	G		*				X					E
Dibromomethane	X	X	X	X	X	X	X				Diisoctyl Adipate	X	N	N	X	E	X	N	E	E
Dibutyl Ether	X	X F	X G	X	X	X F	C	E	E		Diisodecyl Adipate	X	X	E		X E	C	Е	E	E
Dibutylamine	G			E	F		G	E	E		Diisodecyl Phthalate	X	X	X	X			E	E	E
Dybutylphthalate	X	X	X	X	G	X	E	E	E		Diisooctyl Adipate	X	X	X	X	E	X	E	E	
Dibutyl Sebacate	X	X	X	X	G	X	G	G	G		Diisooctyl Phthalate	X	X	X	X	E	С	E	E	E
Dicalcium Phophate	Ε	Ε	E	E	E	E	E	E	E		Diisopropanolamine	G	N	N	G	E	N	N	N	N
Dicamba	N	N	N	N	N	N	E	E	E		Diisopropyl Benzene	X	X	X	С	X	X	X	E	E
Dichloroacetic Acid	X	N	N	X	X	X	X	Ε	Ε		Diisopropyl Ether	X	X	X	G	X	X	X	E	E
Dichloroaniline	N	X	X	X	X	N	X	N	N		Diisopropyl Ketone	X	X	X	X	E	X	E	E	E
Dichlorobenzene	X	X	X	X	X	X	X	G	G		Diisopropylidene Acetone	X	X	X	X	G	X	G	E	N
Dichlorobenzyl	Х	Х	X	Х	Х	Х	Х	G	N		Dilauryl Ether	Х	Х	Х	С	Х	С	Х	Е	Е
Dichlorobutane	X	X	X	X	X	X	X	E	E		Dimethyl Aniline	X	X	X	X	G	X	X	E	N
Dichlorodifluorometh	Х	Х	Е	G	Х	Х	Х	Е	E		Dimethyl Benzene	Х	N	N	Х	Χ	Х	Х	Е	Е
Dichloroethane	Х	Х	Х	Х	С	Х	Х	Е	С		Dimethyl Carbonal	Е	N	N	Е	Е	Е	Е	Е	Е
Dichloroethyl Ether	Х	Х	Х	Х	Х	Х	Х	Е	Ε		Dimethyl Ether	Х	Х	Х	Х	G	Х	Е	Е	E
Dichloroethylene	Х	Х	X	X	С	X	Х	Е	Х		Dimethyl Formamide	N	N	N	Ν	N	N	G	Е	N
Dichlorohexane	Х	Х	Х	Х	Χ	Х	Χ	Е	Е		Dimethyl Ketone	G	F	F	Χ	Е	F	Е	Е	Е

									U										U
									Н										Н
							Е	X	M								E	X	M
		S		N	1	С	P -	L	W			S		N -		С	P -	L	W
	N	В	С	В	I	S	D	P	P E		N	В	С	В	I	S	D	P	P E
Dimethyl Phenol	R X	R N	R N	R X	R X	X	X	E	E	Ethyl Aldehyde	R F	R N	R N	R N	R E	M E	M N	E E	E
Dimethyl Phthalate	X	X	X	X	E	X	G	E	E	Ethyl Aluminum Dichloride 90°F	X	N	N	X	X	X	N	N	N
Dimethyl Sulfate	X	X	X	X	G	X	X	E	E	Ethyl Benzene	X	X	X	F	X	X	X	G	G
Dimethyl Sulfide	X	X	X	X	С	X	X	G	G	Ethyl Benzoate	X	X	C	G	G	C	G	E	E
Dimethyl Terephthalate	N	X	X	X	X	N	N	N	N	Ethyl Bromide	X	X	X	X	X	X	X	G	N
Dimethylamine	G	F	G	G	E	F	E	E	E	Ethyl Butanol	E	E	E	E	E	E	E	E	E
Dimethylaminoethanol	N	N	N	N	N	N	G	E	N	Ethyl Butyrate	X	X	X	X	G	N	N	E	N
Dimethylaniline	X	X	X	X	X	X	С	G	G	Ethyl Butyl Acetate	X	N	N	X	E	G	N	E	E
Dimethylbenzene	X	X	X	X	X	X	X	E	E	Ethyl Butyl Alcohol	E	E	E	E	E	E	E	E	E
Dimethylcarbinol	G	G	G	E	E	G	E	E	E	Ethyl Butyl Amine	G	С	G	G	E	С	G	E	E
Dimethylformamide (DMF)	С	С	С	X	С	С	С	E	E	Ethyl Butyl Ketone	X	X	Х	X	G	Х	G	E	E
DMP (Dimethylaminoethyl Phenol)	N	N	N	N	N	N	N	E	N	Ethyl Butyraldehyde	X	N	N	X	G	X	N	E	E
Dinitrobenzene	X	X	С	X	С	X	С	E	E	Ethyl Cellulose	G	G	G	G	G	G	G	E	E
Dinitrotoluene	X	X	Х	X	Х	X	Х	E	E	Ethyl Chloride	F	F	F	F	Х	Х	Х	E	G
Dioctyl Adipate (DOA)	X	X	X	X	E	X	G	E	E	Ethyl Chloroformate	N	N	N	X	N	N	X	G	G
Dioctylamine	G	G	X	G	E	c	G	E	E	Ethyl Dichloride	X	X	X	X	X	X	X	G	G
Dioctyl Phosphite	N	N	N	N	N	N	X	E	N	Ethylene	X	X	G	E	X	C	X	E	E
Dioctyl Phthalate (DOP)	X	X	X	X	G	X	G	E	E	Ethyl Ether	X	X	X	С	C	X	X	E	E
Dioctyl Sebacate (DOS)	X	X	X	X	G	X	G	E	E	Ethyl Ether Acetate	N	N	N	X	N	N	G	E	N
Dioxane	X	X	X	X	G	X	G	E	E	Ethyl Formate	X	N	N	X	G	Х	G	E	E
Dioxolane	X	X	X	X	С	X	G	E	E	Ethyl Hexoic Acid	X	N	N	X	X	G	N	E	E
Dipentene	X	X	N	X	N	N	X	G	N	Ethyl Hexyl Acetate	X	N	N	X	E	G	N	E	E
Dipentene (Limonene)	X	X	X	X	С	X	X	E	E	Ethyl lodine	X	N	X	X	X	Х	X	N	N
Diphenyl (Biphenyl)	X	X	X	X	Х	X	X	E	E	Ethyl Isobutyl Ether	X	N	N	G	X	G	X	E	E
Diphenyl Oxide (Phenyl Ether)	X	X	X	X	X	C	X	E	E	Ethyl Isobutyrate	X	N	X	X	X	N	X	E	N
Diphenyl Phthalate	X	N	N	X	E	Х	N	E	E	Ethyl Mercaptan	X	X	X	X	X	Х	X	E	N
Dipropylene Glycol	E	N	N	E	E	N	N	E	E	Ethyl Pentachlorobenzene	X	X	X	X	X	X	X	E	N
Dipropyl Ketone	X	X	X	X	G	X	G	E	E	Ethyl Phthalate	X	X	N	X	G	N	N	E	N
Dipropylamine	G	G	G	G	E	C	E	E	E	Ethyl Propionate	X	N	X	X	Х	N	X	N	N
Dirco Oils	N	N	N	E	X	N	X	E	N	Ethyl Silicate	G	G	E	E	N	N	G	E	N
Disodium Phosphate	E	E	E	E	E	E	E	E	E	Ethylamine	F	F	N	N	G	F	N	N	E
Distillate Fuel Oil	N	N	N	N	N	N	X	G	N	Ethylbutanol	N	N	E	E	E	G	E	E	E
Divinyl Benzene	X	X	X	X	X	X	X	E	E	Ethylene Bromide	X	X	X	X	X	Х	X	G	G
Dodecyl Benzene	X	X	X	X	X	X	X	E	E	Ethylene Chloride	X	X	X	X	X	X	X	G	G
Dodecylphenol	N	N	N	N	N	N	E	E	N	Ethylene Chlorohydrin	N	N	X	X	G	N	X	E	N
Dodecyl Toluene	X	X	X	X	X	X	X	E	E	Ethylene Diamine	G	G	E	E	E	F	E	E	E
Dolomite	N	N	E	N	N	E	G	N	N	Ethylene Dibromide	X	Х	X	X	X	X	X	G	F
Dowfume W 40, 100%	X	X	С	X	X	С	С	G	G	Ethylene Dichloride	X	X	X	X	X	X	X	G	G
Dow-Per (perchloroethylene)	X	X	X	C	X	X	X	E	E	Ethylene Glycol	E	E	E	E	E	E	E	E	E
Dowtherm Oil, A and E	X	X	X	X	X	C	X	E	E	Ethylene Glycol Monoethylether	N	N	N	N	N	N	E	E	N
Dowtherm S. R. I.	E	E	E	E	E	E	E	E	E	Ethylene Glycol Monoethylether Acetate	N	N	N	N	N	N	E	E	N
Dry Cleaning Fluids	X	X	X	С	X	X	X	E	G	Ethylene Glycol Monomethyl Ether	N	N	N	N	N	N	E	E	N
Duro Oils	N	N	N	E	X	N	X	E	N	Ethylene Glycol N-Butyl Ether	N	N	N	N	N	N	E	E	N
EDTA (Ethylenediaminetetraacetic Acid)	N	N	N	N	N	N	E	E	N	Ethylene Oxide	X	X	X	X	X	X	С	С	C
Emulsion (Oil in Water)	N	N	N	N	N	N	E	E	E	Ethylenediaminetetraacetic Acid (EDTA)	N	N	N	N	N	N	E	E	N
Enamels	N	N	N	N	N	N	X	E	N	Ethylene Trichloride (trichloroethylene)	X	X	X	Х	С	X	X	G	G
Epichlorohydrin	X	X	X	X	C	C	G	G	G	Ethyl Formate	X	X	X	X	G	X	C	E	E
Epoxy Resin	N	N	E	N	G	N	E	N	N	Ethyl Hexanol	E	E	E	^ E	E	^ E	E	Е	E
Essential Oils	X	X	G	E	N	N	X	G	N	Ethyl Methyl Ketone	C	X	X	X	G	X	G	E	E
Ethanoic Acid	N	N	N	N	N	N	N	N	N	Ethyl Oxalate	E	E	X	X	E	X	G	Е	E
							X	N	G					X				E	E
Ethanol (Grain Alcohol)	X	X G	X	X	X	X C				Ethyl Propyl Ketone	X	X	X		X G	X	X		
Ethanolamine	G		G	G	E F	F	E	C	E	Ethyl Propyl Ketone	X	X		X		X	G	Е	E
Ethers Ethyl Acetate	X	X	X	X			C	E	E	Ethyl Sulfate	X	X	X	X	G	X	G	E	
Ethyl Acetate	X	X	X	X	G	X	С		E	Ethylhexanediol	N	N	N	N	N	N	G	Е	N
Ethyl Acetoacetate	X	X	X	X	G	X	G	E	E	Ethylhexoic Acid	N	N	N	N	N	N	G	E	N
Ethyl Alcohol	X	X	X	X	C	X	X	G	G	Ethylhexyl Acetate	N	N	X	X	N	X	E	E	N
Ethyl Alcohol	Х	Х	Χ	X	Χ	Χ	X	N	G	Ethylhexyl Acrylate	N	N	N	Х	N	N	N	G	N

									Н											Н
							E	X	M									E	X	М
		S		N	I	С	Р	L	W				s		N	I	С	Р	L	W
	N	В _	C -	В _	1	S	D 	P _	P _			N	В _	C -	В _	I -	S	D 	P _	P _
Ethydhaud Alashal	R	R	R	R	R	M N	M	E	E	1	Fire C (ACTA)	R	R	R	R	R	M	M	E	E
Ethylhexyl Alcohol	E X	E	E	N	E X		E X	E			Fuel C (ASTM) Fuel Oil	X	X	C G	G E	X	X E	X	G E	G E
Ethylhexyl Phosphorodieth  EX. TRI (Trichloroethylene)	X	N	N X	E C	X	X	X	G	N G		Fuer Oil Fumaric Acid	X E	X E	G	E	X	G	X	E	E
Fatty Acids	X	X	C	С	X	X	X	E	E		Furan	X	X	X	X	C	Х	C	E	E
Fatty Alcohol, Blend	E	E	E	E	E	N	E	E	E		Furfural	X	X	C	X	G	G	G	E	E
Fatty Petroleum Alcohol	N	N	N	E	E	N	E	E	E		Furfuryl Alcohol	X	X	С	X	С	С	С	E	E
Ferric Bromide	E	N	N	N	N	N	N	N	N		Fyrguard 150, 200	N	N	N	E	E	N	E	E	N
Ferric Chloride	E	E	E	E	E	E	E	E	E		Fyrquel 15R & O, 220 R&O, 550R&O	N	N	N	E	E	N	E	E	N
Ferric Nitrate	N	N	G	G	G	G	G	E	N		Fyrquel 90, 150, 220, 550, 1000	N	N	N	E	E	N	E	E	N
Ferric Sulfate	E	E	E	E	E	E	E	E	E		Gallic Acid	E	E	G	G	G	G	G	E	E
Ferrous Acetate	X	X	X	X	Е	X	G	E	E		Gasohol	X	X	G	G	Х	Х	Х	G	E
Ferrous Ammonium Sulfate	Е	Е	E	Е	E	Е	E	E	E		Gasoline (oxgenated-blended with MTBE)	X	Х	G	G	Х	Х	Х	G	E
Ferrous Chloride	E	Е	Е	E	E	Е	E	E	E		Gasoline - Regular	Х	Х	E	E	Х	С	Х	E	E
Ferrous Hydroxide	G	С	E	G	E	G	E	E	E		Gasoline - Hi-Test	X	Х	G	E	Х	Х	Х	Е	E
Ferrous Nitrate	N	N	G	G	G	G	G	Е	N		Gasoline - Lead Free	х	Х	G	G	Х	Х	Х	Е	Е
Ferrous Sulfate	Е	Е	Е	Е	Е	Е	Е	Е	Е		Gasoline (White)	X	Х	G	G	Χ	Х	Χ	G	N
Fertilizer (Liquid Manure)	Е	Е	Е	Е	Е	Е	Е	Е	Е		Gas, Coal	N	N	N	N	N	N	N	N	N
Fire-Resistant Hydra-Fluid (Texaco)	N	N	N	Е	Х	N	Х	Е	N		Gas, High Octane	X	Х	G	Е	Х	Χ	Χ	Е	Е
Fish Oil	Х	Х	Е	Е	Е	Е	Е	Е	Е		Gelatin	Е	Е	Е	Е	Е	Е	Е	Е	Е
Fluoroboric Acid	Е	С	G	Е	Е	Е	Е	Е	Е		Glacial Acetic Acid	N	N	Х	N	Χ	N	G	Е	Е
Fluorine	Х	Х	Х	Х	Х	Х	Х	Х	Х		Glauber's salt	Е	Е	N	N	N	N	Е	N	N
Fluosilicic Acid	Е	С	G	Е	Е	Е	Е	Е	Е		Gluconic Acid	X	Х	С	С	С	G	С	Е	E
Formaldehyde	С	С	G	G	Е	С	G	Е	Е		Glucose	Е	Е	G	G	Е	Е	G	Е	G
Formalin (37-50% HCHO w/15% MeOH)	Х	Х	G	G	G	G	Е	Е	N		Glue	Е	Е	Е	Е	Е	Е	Е	Е	Е
Formamide	Е	Е	Е	Е	Е	Е	Е	Е	Е		Glycerine (Glycerol)	Е	Е	Е	Е	Е	Е	Е	Е	Е
Formic Acid	G	G	С	Х	Е	F	Е	С	Е		Glycerol Monolaurate	N	N	N	N	Е	N	Е	Е	Е
FR Fluid D	N	N	N	Е	Х	N	Х	Е	N		Glycol FR Fluids	N	N	N	Е	Ε	N	Ε	N	N
Freon So 2	N	N	Е	N	N	N	Е	N	N		Glycols	Е	Е	Е	Е	Е	Е	Е	Е	Е
Freon 11	Х	Х	G	Ε	Х	Е	Х	Е	Е		Glyphosate	N	N	N	N	N	N	Е	N	Е
Freon 12	Х	Х	G	G	Х	Х	Х	G	G		Graffinite	Х	N	N	Е	Χ	Χ	Χ	Χ	N
Freon13	Е	Е	Е	Ε	Е	Е	Е	Е	Е		Graphite	Е	N	N	N	N	N	N	N	Е
Freon 21	Х	Х	G	Х	Х	Х	Х	Е	Е		Grease	Х	Х	Χ	Х	F	Χ	Е	G	Е
Freon 22	Х	Х	Х	Е	Е	Х	Е	Е	Е		Green Sulfate Liquor	Е	Е	G	Е	Е	Ε	Е	Е	Ε
Freon 31	G	G	Е	Х	Ε	G	Ε	Е	Е		Halium	Е	Е	Е	Е	Е	Е	Е	Ν	N
Freon 32	Е	Е	E	Е	Е	Е	Е	Е	Е		Halowax Oil	Х	Х	Х	Х	Х	Χ	Χ	Ε	Е
Freon 112	Х	Х	G	G	Х	G	Х	Е	E		Heptachlor in Petroleum Solvents	X	Х	G	G	Χ	Χ	Χ	Е	Е
Freon 113	С	G	Е	Е	Χ	Е	Χ	Е	Е		Heptachlor in Petroleum Solvents	Х	Х	G	G	Χ	Х	Χ	Ε	Е
Freon 114	Е	Е	Е	Ε	Е	Е	Е	Е	Е		Water Spray									l
Freon 115	Е	Е	Е	Е	Е	Е	Е	Е	Е		Heptanal (Heptaldehyde)	X	Х	Х	Х	Χ	Χ	G	Е	Е
Freon 142b	Е	Е	Е	Е	Е	Е	Е	Е	Е		Heptane	Х	Х	Е	Е	Χ	G	Χ	Е	Е
Freon 152b	Е	Е	Е	Е	Е	С	Е	Е	Е		Heptane Carboxylic Acid	X	N	N	Х	Χ	G	N	Е	Е
Freon 218	Е	Е	Е	Е	Е	Е	Е	Е	E		Heptanol	Е	Е	Е	Е	Е	Е	Е	Е	Е
Freon C316	Е	Е	Е	Е	Е	Е	Е	Е	Е		Hexaldehyde	N	N	N	N	N	N	Е	Е	Е
Freon C318	Е	Е	Е	Е	Е	Е	Е	Е	E		Hexane	Х	Х	Е	Е	Х	F	Χ	Е	Е
Freon 1381	E	E	Е	Е	E	E	Е	E	E		Hexanol	E	E	E	E	Е	E	Е	Е	Е
Freon 114B2	X	С	E	G	X	E -	X	E	E		Hexene	X	X	G	G	Х	G	X	E	E
Freon 502	E	E	E	G	E	E	E	E	E		Hexylamine	G	C	G	G	G	С	G	E	E
Freon TF	С	G	E	E	E	E	E	E	E		Hexylene	X	X	G	E	X	X	С	G	G
Freon T-WD602	С	G	G	E	E	G	G	E	E		Hexylene Glycol	E	E	E	E	E	E	E	E	E
Freen TMC	G	C	G	G	G	G	G	E	E		Hexyl Methyl Ketone	X	X	X	X	G	X	G	E	E
Freon T-P35	E	E	E	E	E	E	E	E	E		Hi-Tri (Trichloroethylene)	X	X	X	С	X	X	X	G	G
Freen TC	E	E	E	E	E	E	E	E	E		Honey	E	N	E	E	N	N N	E	N E	N
Freon TC	X	G X	E G	E G	E X	G	G	E	E		Houghto-Safe 271, 416, 520, 616, 8, 620	N	N N	N N	X E	E E	N N	E E	E	N N
Freen BF	X						X				Houghto-Safe 271, 416, 520, 616 & 620									
Freon MF Fuel A (ASTM)	X	G X	C G	E	X	G F	X	E	E		Houghto-Safe 5046 Houghto-Safe 625, 640, & 525 under 100°F	N	N N	N N	E E	E E	N N	X E	E E	N N
Fuel B (ASTM)	X	X	G F	Е	X	X	X	G	G			N	N	N	E	N	N	N	E	N
I doi D (AOTIVI)	^	^		_	^	^	^	9	9	ı	Hy-Chock Oil	IN	1.0	1.8	_	1.9	1.9	1.9	_	1.8

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									н											Н
							E	Х	M									E	Х	М
		S	•	N	!	С	P	L	W				S	•	N	!	С	P	L	W
	N R	B R	C R	B R	I R	S M	D M	P E	P E			N R	B R	C R	B R	I R	S M	D M	P E	P E
Hydrafluid 760 (Texaco & Houghton)	N	N	N	E	Х	N	X	E	N	1	Isobutylene	X	X	Х	Х	E	X	X	E	E
Hydrafluid AZR&O, A, B, AA, C	N	N	N	Е	Х	N	Х	Е	N		Isobutyl Ether	х	Х	Х	х	Х	Х	Х	Е	Е
Hydrasol A (Textile Drying)	N	N	N	Е	Х	N	Х	Е	N		Isocyanates	С	Х	Х	Х	G	С	G	G	G
Hydraulic Fluid (Petroleum)	Х	Х	G	Е	Х	G	Х	Е	Е		Isooctane	Х	Х	Е	Е	Х	G	Χ	Е	Е
Hydraulic Fluid	Х	Х	Х	Х	Е	Х	Е	Ε	Ε		Isooctyl Alcohol	N	N	N	N	Ν	N	Е	Е	Е
Phosphate Ester Based											Isooctyl Thioglycolate	N	Ν	Ν	N	Ν	Ν	G	Е	N
Hydraulic Fluid	G	G	Е	Е	Е	Е	Е	Е	Е		Isopentane	Х	Х	Е	Е	Χ	Χ	Χ	G	G
Poly Alkylene Glycol Base											Isophorone	N	N	Ν	Х	Е	Ν	Е	G	G
Hydraulic & Motor Oil	Х	Х	С	Е	Х	G	Х	Е	Е		Isopropyl Amine	G	Х	Е	С	G	С	G	Е	Е
Hydrazine	Х	X	X	Х	G	Х	G	Е	N		Isopropyl Acetate	Х	Х	Х	Х	Е	С	G	Е	Е
Hydrazine Hydrate	Х	Х	Х	Х	G	Х	G	Е	N		Isopropyl Alcohol (Iso-propanol)	Е	Е	Е	Е	Е	Е	Е	G	G
Hydrazine Solution	Х	Х	X	Х	G	X	G	Е	N		Isopropyl Amine	G	Х	Е	С	G	С	G	Е	Е
Hydrobromic Acid	Е	Х	Х	F	Е	Е	G	Е	Е		Isopropyl Benzene	Х	Х	Х	Х	Х	Χ	Χ	Е	Е
Hydrochloric Acid 37%	Е	Х	X	Х	F	Х	Х	Е	Е		Isopropyl Chloride	Х	Х	Х	Х	Х	Х	Х	G	G
Hydrochloric Acid 50%	Ε	С	Х	Х	G	Е	С	Е	Е		Isopropyl Ether	Х	Х	Х	С	Х	С	X	Е	Е
Hydrochloric Acid 100%	G	С	X	Х	С	G	С	Е	Е		Isopropyl Toluene	Х	Х	Х	Х	Х	Х	Х	Е	Е
Hydrocianic Acid	G	F	Е	F	Е	Е	С	Е	Е		Jet Fuels	Х	Х	G	E	Х	F	X	Е	Е
Hydro-Drive Oil (Houghton)	N	N	N	Е	Х	N	Х	N	N		Kerosene	Х	Х	С	Е	Х	F	Χ	Е	Е
Hydrofluoric Acid	Х	Х	Х	Х	Е	Е	Х	С	Е		Ketchup	N	N	Е	Е	N	N	N	N	N
Hydrogen Chloride Anhydrous	N	N	N	N	N	N	N	N	N		Ketoglutaric Acid	N	N	N	N	N	N	G	Е	Е
Hydrogen Bromide Liquid	Х	Х	N	Х	Х	N	Е	N	N		Ketones	G	G	Х	Х	G	X	Е	E	E
Hydrogen Dioxide 10%	X	X	N	N	F	N	N	N	G		Lacquer	X	X	X	X	X	X	N	N	N
Hydrogen Fluoride	X	X	N	X	G	N	E	N	N		Lacquer Solvents	X	X	X	X	X	X	X	E	Ε
Hydrogen Gas	X	X	N	X	G	N	E	N	N		Lactic Acid - Cold	G	G	E	X	E	G	X	С	N
Hydrogen peroxide 3%	E	С	G	G	E	E	G	E	E		Lactic Acid - Hot	X	X	X	X	N	С	X	N	N
Hydrogen Peroxide 10%	X	X	C	X	C	C	С	E	E		Lactol	N	N	G	G	N	N	N	E	N
Hydrogen Peroxide 30%	X	X	X	X	X	X	С	E	E		Lard	X	X	G	E	X	X	C	E	E
Hydrogen Peroxide 90%	X	X	X E	X	X E	X G	C E	G E	G E		Lasso (Alachlor) Latex Paint	N	N G	N N	N E	N G	N	N E	E	N E
Hydrogen Sulfide Hydrolube	X N	N	G	X	G	N	E	N	E		Lauryl Alcohol	G E	E	E	E	E	N E	E	E	E
Hydroquinine	G	G	X	X	G	C	G	E	E		Lavender Oil	X	X	X	G	X	X	X	G	N
Hydroxyacetic Acid Solution	N	N	N	N	N	N	G	E	E		Lead Acetate	X	X	G	G	E	X	G	E	E
Hydroxyethyl Acrylate (HEA)	N	N	N	N	N	N	Х	E	E		Lead Nitrate	E	E	E	E	E	E	E	E	E
Hydroxyethyl Acrylate Acid (HEA Acid		N	N	N	N	N	X	E	E		Lead Sulfamate	G	G	E	G	E	G	E	E	E
Hydroxypropyl Acrylate Acid	N	N	N	N	N	N	X	E	E		Lead Sulfate	E	E	E	E	E	E	E	E	E
Hylene	X	X	Х	X	G	X	G	N	N		Lead, Tetraethyl	X	X	X	G	X	X	X	G	N
Hypochlrous Acid	G	G	G	Х	G	Е	G	Е	Е		Lead, Tetramethyl	X	Х	Х	G	Х	Х	Χ	N	N
Ink Oil (Linseed Oil Base)	Х	X	G	G	G	G	G	Е	Е		Lecithin	N	N	G	х	N	N	N	Е	N
Insulating Oil	Х	х	G	Е	Х	х	Х	Е	Е		Ligroin	Х	Х	Е	Е	Х	Х	Х	Е	Е
lodine	Х	X	X	Х	Х	F	Х	Е	Е		Lime	Х	Х	С	F	Е	Е	G	Е	Е
Iron Acetate	Х	Х	Х	Х	Е	Х	G	Е	Е		Lime, Chlorinated	G	G	Х	G	G	Х	G	Е	Е
Iron Hydroxide	С	С	Е	G	Е	G	G	Е	Е		Lime Sulphur Solution	х	Х	Е	Х	Х	G	G	Е	Е
Iron Salts	Е	Е	Е	Е	Е	Е	Е	Е	Е		Limonene	Х	Х	N	Х	N	N	Χ	G	Е
Iron Sulfate	Е	Е	Е	Е	Е	Е	Е	Е	Е		Lindol (Tricresyl Phosphate)	Х	Х	Х	Х	Е	G	Е	Е	Е
Iron Sulfide	Е	Е	Е	Ε	Е	Е	Е	Е	Е		Linoleic Acid	Х	Х	Х	Х	X	Х	Χ	N	N
Isoamyl Acetate	Х	Х	Х	Х	Е	Х	G	Е	Е		Linseed Oil	х	Х	G	Е	Е	С	G	Е	E
Isoamyl Chloride	Х	Х	Х	Х	С	Х	Х	G	G		Liquid Petroleum Gas	Х	Х	G	Е	Х	G	Χ	Е	Е
Isoamyl Ether	Х	Х	Х	Х	Х	Х	Х	Е	Ε		Liquid Soap	E	Ε	Ε	Е	Е	Е	Е	Ε	E
Isoamyl Phthalate	Х	Х	Х	Х	Е	Х	G	Е	Ε		Liquified Natural Gas	X	Х	Χ	Х	Χ	Χ	Χ	Х	X
Isobutane	Χ	Х	Е	Е	Х	Х	Е	Е	Е		Lubrication Oils	×	Х	С	Е	Х	F	Χ	Ε	Е
Isobutanol (Isobutyl Alcohol)	Ε	Е	Е	Ε	Ε	Е	Ε	Е	Ε		Lye Solution	G	G	G	Е	Е	Е	Е	Е	G
Isobutyl Acetate	Χ	Х	Х	Х	Е	Х	G	Е	Ε		Machine Oil Under 135°F	Х	Х	Ε	Е	Χ	G	Χ	Е	Ν
Isobutyl Aldehyde	С	Х	Х	Х	G	Х	G	Е	Е		Maganese Salts	X	Х	N	Е	N	Е	N	Е	N
Isobutyl Amine	G	С	Х	Х	G	С	G	Е	Е		Magnesium Acetate	Х	Х	Х	Х	Ε	Χ	G	Ε	E
Isobutyl Bromide	Х	Х	Х	Х	Х	Х	Х	G	G		Magnesium Carbonate	E	Е	Е	Е	Е	Е	Е	Е	E
Isobutyl Carbinol	Е	Е	G	Е	Е	Е	Е	Е	Е		Magnesium Chloride	E	Е	Е	Е	Е	Е	G	Е	E
Isobutyl Chloride	Х	Х	Х	Х	Х	Х	Х	G	G		Magnesium Chloride Brine	Е	N	N	Е	N	N	Е	Е	Е

Water Spany										Н										Н
Magnessem Hybride								_										Ε	X	
Magenes   Mage		NI.		c		!	_		_			N		•		!		P	L	
Mappeneem Mystems						r R				-						r R				
Magneman Number	Magnesium Hydrate										Methylene Chloride	1								$\overline{}$
Magness Magnes		Е	Е	Е	Е	Е	Е	G	Е	Е	Methylene Dichloride	Х	Х	Х	Х	Х	Χ	Χ	Е	N
Manufacher Solution	Magnesium Nitrate	Е	Е	Е	Е	Ε	Е	Е	Е	Е	Methyl Ethyl Ketone (MEK)	G	Х	Х	Х	G	Х	G	Е	Е
Matheman Solveners   X   X   X   B   B   B   Mathym Hown (fottore   X   X   X   X   C   C   X   X   C   C	Magnesium Oxide, Slurry	G	N	Е	G	N	N	Е	Е	N	Methyl Formate	С	С	G	Х	G	С	G	G	G
Mathematic Solutions	Magnesium Sulfate	Е	Е	Е	Е	Е	Е	Е	Е	Е	Methyl Hexanol	Е	Е	Е	Е	Е	Е	Е	Е	E
Maries Pagor		Х	Х	С	С	Χ	Х	Х	Е	Е	Methyl Hexyl Ketone	Х	Х	Х	Х	G	Х	G	Е	Е
Marcia Annoles Annol	Malathion 50 in Aromatic Solvents,	х	Х	Е	Е	Х	Х	Х	Е	Е	Methyl Isoamyl Ketone	Х	N	N	Х	G	Χ	N	N	N
Make Lands (Matthing)	Water Spray										Methyl Isobutenyl Ketone	X	Χ	Χ	Х	G	Χ	G	Е	Е
Male Ladiard Male	Maleic Acid	Х	Х	Х	F	Χ	F	F	G	G	Methyl Isobutyl Carbinol	G	С	G	G	Е	G	Ε	Е	Е
Male Flance (Malhelme)  N  N  N  N  N  N  N  N  N  N  N  N  N	Maleic Anhydride	Х	Х	С	Х	С	Х	С	Е	Е	Methyl Isobutyl Ketone (MIBK)	X	Х	Х	Χ	G	Χ	G	Е	Е
Magnines Sulfation     C	Malic Acid	Е	G	С	G	Χ	G	Х	Е	Е	Methyl Isopropyl Ketone	Х	Х	Х	Х	G	Х	G	Е	Е
Maganeses Sulfide	Malt Extract (Maltine)	N	N	N	N	N	N	Е	Е	Е	Methyl Methacrylate	X	Χ	Χ	Х	Χ	G	G	G	N
Memoral (Persoal Hydraulic Fluid)	Maganese Sulfate	E	Е	Е	Е	Е	Е	Е	Е	Е	Methyl Methacrylate Monomer, Inhibited	Х	Х	Х	Х	Χ	Х	Х	N	N
Maxmunt (Penzou Fyderaul c Fluid)	Maganese Sulfide	С	Ε	G	Ε	Е	Е	G	Е	Е	Methyl Normal Amyl Ketone	X	N	N	Χ	G	Χ	G	Е	Е
Monterun Chichide	Manganese Sulfite	С	Е	G	Е	Е	Е	G	Е	Е	Methyl Phenol	Х	Х	Х	Χ	G	Х	Ν	G	N
Mercuric Chloride	Maxmul (Penzoil Hydraulic Fluid)	N	N	G	Ε	N	N	N	N	N	Methyl Propyl Carbinol	Е	Е	Е	Е	Е	Е	Е	Е	Е
Metrup Saluptons	Mek	G	Χ	Х	Χ	G	Х	G	Е	G	Methyl Propyl Ether	Х	Х	Х	Х	Х	Χ	Χ	Е	Е
Medity   Surface   No.   No.	Mercuric Chloride	G	G	С	С	G	G	С	Е	Е	Methyl Propyl Ketone	Χ	Х	Х	Χ	G	Χ	G	Е	Е
Methody   Meth	Mercuric Cyanide Solutions	G	G	Е	G	G	Е	G	Е	N	Methyl Salicylate	Х	Х	Х	Х	G	Χ	G	G	G
Mercury Vapors	Mercurous Nitrate Solutions	N	N	N	N	N	N	G	Е	Е	Methyl Sulfate	X	Х	Х	Χ	G	Χ	Χ	Е	N
Mestiya   Couloude (Methyl Isobutenyl Ketone)   X	Mercury	Е	Е	Е	Е	Е	Е	Е	Е	Е	Methyl Tertiary Butyl Ether (MTBE)	Х	Х	Х	Х	Χ	Χ	Χ	Ε	Х
Mestrylene	Mercury Vapors	Е	Е	Е	Е	Е	Е	Е	Е	Е	Methylallyl Acetate	X	N	N	Χ	Е	G	Е	Е	Е
Metrianary (Metrianary Canada   X	Mesityl Oxide (Methyl Isobutenyl Ketone)	Х	Χ	Х	Χ	G	Х	G	Е	Е	Methylallyl Chloride	Х	N	N	Х	Х	Χ	N	G	Е
Methacrylic Acid	Mesitylene	Х	Х	Х	Х	Χ	N	Х	N	N	Methyldiethanolamine	X	N	N	Е	Χ	Χ	Χ	Е	Е
Methanol	Metallic Soaps	Х	Х	N	Е	Χ	G	Х			Metribuzin	N	N	N	N	N	N	Е	N	
Methane	Methacrylic Acid	Х	Х	G		G	С	G	Е	Е	Mineral Oil	X	Х	С	Е	Х	G	Х	Е	
Methanoic Acid	Methallyl Alcohol	G	N	N		G		N			Mineral Spirits	Х						Χ	Е	Е
Methylacetate	Methane	Х	Х	G	Е	Х	G		Е	Е	Molasses	G	G	G	G			Е	Е	N
Methyl Acetate		N		N								Х								
Methyl Acetoacetate												X								
Methyl Acetone																				
Methyl Acrylate																				
Methyacrylic Acid         X         X         N         G         E         N         G         E         E         Monoisopropanol Amine         G         N         N         G         E         E         E           Methylaniline         N         N         X <td< td=""><td>· ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	· ·																			
Methylaniline																				
Methyl Alcohol (Methanol)         X <td>, ,</td> <td></td>	, ,																			
Methylallyl Alcohol         G         N         N         E         G         G         N         N         E         G         G         N         N         G         E         N           Methylamine (30-40% in water)         N											· ·									
Methylamine (30-40% in water)         N         N         N         N         N         N         N         N         G         E         N         Monovinyl Acetate         X         X         X         X         X         N </td <td></td>																				
Methyl Benzene (Toluene)         X <td></td> <td>· ·</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>											· ·									
Methyl Bromide         X         X         X         Z         G         G         X         G         E         E         Motor Oil - 40W         X																				
Methyl Butanathiol         X         X         N         N         X         E         N         Muriatic Acid         E         X         X         F         X         F         E         E         E         E         E         E         E         E         E         E         E         E         E         E         E         E         E         N <th< td=""><td>· · · · · ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>· ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	· · · · · ·										· ·									
Methyl Butanol         N         N         N         E         E         N         E         E         E         E         E         E         E         E         E         E         E         E         E         N	·																			
Methyl Butyl Ketone         X         X         X         X         X         G         E         E         N-Octane         X         X         G         G         X </td <td></td>																				
Methyl Carbitol         X         X         N         N         X         X         E         E         N         Naphta         X         X         G         E         X	·																			
Methyl Cellosolve         X         X         G         C         G         C         G         E         E         Naphtlalene         X<																				
Methyl Chloride         X	·										· ·									
Methyl Chloroform         X																				
Methyl Chloroformate         X         N											· ·									
Methyl Cyclohexane         X         N         N         N         X         X         N         N         X         N	·													G						
Methyl Ethyl Acetate         X         N         N         X         E         G         X         E         G         Neon Gas         E<	Methyl Cyclohexane																			
Methyl Ethyl Alcohol         E         N         N         E         Description         Neutral Oil																				
Methyl Ethyl Carbinol         E         N         N         E         E         E         E         E         E         E         E         E         E         E         E         E         E         Neutral Oil         X <t< td=""><td>Methyl Ethyl Alcohol</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Methyl Ethyl Alcohol																			
Methyl Ethyl Ketone         X         N         N         X         G         X         N         E         E         Nickel Acetate         X         <																				
Methyl Hexanone         X         N         N         X         G         X         N	Methyl Ethyl Ketone																			
Methylcyanide         N         <																				
											Nickel Plating Solution									

Octyl Carbinol   E   E   E   E   E   E   E   E   E										U										U
No.																				
No. 1																				
New Month Sales						ı										- 1		-	_	
Novel Stalls						-										I				
NAMES MILES   R   R   R   R   R   R   R   R   R	Nickel Salts								1		Peanut Oil	_		1					_	$\overline{}$
NING CAGNO (1649)																				
NINCe AGAS, Cong. (19N) NINCE																				
NIGN PLAGE FLOWING   X   X   X   X   X   X   X   X   X																				
Nixe And 1916  Nixe And 1918  Nixe A											· ·									
NINCe Acci - 15 NN N N N N N N N N N N N N N N N N N	-																			
NINGE AGEJ - 139 N. P. N.																				
Nike Acid - 20%   Nike Acid - 20%   Nike Acid - 20%   Nike Acid - 20%   Nike Acid - 30%   Nike Acid -																				
Natice Acts 200% to 70% to 70%																				
Netice Acts 2 19% is 70% in No. 2																				
Netherburne   X																				
Nicepanga							х			Е										
Nicegorn Class   Section																				
Nillogen Clarifon Colde							Е			Е	·									
Ninogen-teneouse																				
Niconaniane										Х		F			Χ	Е				Е
Netrous Oxide Gas    C	-	G	G	С	Х	G	С	G	Е	Е	Phenol Acid	х	Х	Х	Х	G	Х	G	G	N
Nitrous Oxide Gas    E	Nitropropane	С			Х	Е	С	G			Phenolates	N		Х	Х				N	N
Octande Cardidecannois Acid  X X X G E X X X X G E G X X X X G E C G A X X X X G E C C E E C Phanythydrazine  X X X G E X X X X X E Z X G E Z G C C C C G E E C COctanno (Cardi-Cycly Alcoholy)  G G G E G G G G G E E F Phosphare (Cardi-Cyry) Chloride)  X X X X X X X Z E X G E E C Cocyl Alcoholy  G G G E E G G G G E E Phosphare Esters  X X X X X X Z E Z X Z X X Z E E Z G C G G E E C Phosphare Esters  X X X X X X Z E Z X E E E E E E E E E E				Е	Е						Phenolsulfonic Acid	х	Х	С	Х	С			G	G
Octame   X	Nonenes	Х										Х			Х	Х	Х	Χ	Е	Е
Octanol (Octyl Alcohorly)  G G G E G G G G G G G G G G G G G G G	Octadecanoic Acid		Х	G										Х	Х	G				
Octanol (Octyl Alcohol)  G G G B G G G G G G G G G G G G G G G	Octane	Х	Х	G		Х	Х	Х			, ,	Х		Х	Х	Е	Х	G		
Octyl Acetate	Octanol (Octyl Alcohol)	G	G	Е	G	G	G	G	Е	Е	Phosgene (Carbonyl Chloride)	х	Х	Х	Х	G	Х	Х	Х	
Octyl Aldehyde																				
Octyl Amine  C C C G G C C G G C G C G C G C G C G		Х	N	N	Х	Х	Х	N	N	N		Е	Е	Е	Е		Е	Е	Е	Е
Octylene Glycol  E E E E E E E E E E E E E E E E E E E	Octyl Amine	С	С	G	С	G	С	G	Е	Е	Phosphoric Acid 10% - 85%	F			F	Е	Е	Е	Е	Е
Oil, ASTM#1  X X X E E X C X E E Pittic Acid, Molten  C C C C C C C C C C C C C X X X X X X	Octyl Carbinol	Е	Е	Е	Е	Е	Е	Е	Е	Е	Phosphorous Trichloride	Х	Х	Х	Х	Е	Х	Е	Е	Е
Oil, ASTM #2  X X E E E X X C X E E F Pinene  X X X X E E E C G G E E X X X E E E Pinene  X X X X E E E C Pinene  X X X X E E E C C G G E E X X X E E E C Pinene  X X X X E E E C C G G E X X X E E E C Pinene  X X X X X E E E C C G G E X X X E E E C Pinene  X X X X X E E E C C G G E X X X E E E C C G G E X X X E E E C C G G E X X X E E E C C G G E X X X X E E E C C G G E X X X X E E E C C G G E X X X X E E E C C G G E X X X X E E E C C G G E X X X X E E E C C G G E X X X X E E E C C G G E X X X X G G G C C E E E E C C G G E E E C C C G E E E E	Octylene Glycol	Е	Е	Е	Е	Е	Е	Е	Е	Е	Pickling Solution	С	С	С	С	С	С	С	Е	Е
Oil - ASTM #3    X	Oil, ASTM#1	Х	Х	Е	Е	Х	G	Χ	Е	Е	Pitric Acid, Molten	С	С	С	С	С	G	С	Х	х
Oil - Petroleum    X	Oil, ASTM #2	х	Х	Е	Е	Х	С	Х	Е	Е	Pitric Acid, Water Solution	Е	С	G	G	Ε	Е	G	Е	Е
Oil of Turpentine    X	Oil, ASTM #3	Х	Х	С	G	Е	Х	Χ	Е	Е	Pinene	Х	Х	Х	Е	Х	Х	Χ	Е	Е
Olles, Animal (high fatty acid content)  X X G G E G X X G B E E Picking Solutions, Chrome  X X G G G E C E E E Colleum (Fuming Sulf Acid)  X X X X X X X X X X X X X X X X X X X	Oil - Petroleum	Х	Х	Е	Ε	Х	F	Х	Е	Е	Pine Oil	Х	Х	Х	F	F	Χ	Χ	Е	Е
Dileic Acid	Oil of Turpentine	Х	Х	G	Е	Χ	Х	Χ	G	G	Piperidine	Х	Х	Х	Х	Х	Х	Χ	G	G
Dilum (Fuming Sulf Acid)	Oils, Animal (high fatty acid content)	Х	Х	G	Е	G	Х	Х	G	N	Pitch	Х	Х	G	G	Х	С	Χ	Е	Е
Olive Oli	Oleic Acid	Х	Х	F	С	G	Х	G	Е	Е	Plating Solutions, Chrome	Х	Х	G	G	Е	С	Е	Е	Е
Organic Fatty Acids         X         N         N         E         X	Oleum (Fuming Sulf Acid)	Х	Х	Х	Х	Х	Х	Х	Х	Х	Plating Solutions, Other	Е	Е	G	G	Е	С	Е	Е	Е
Ortho-Dichlorobenzene         X	Olive Oil	Х	Х	G	Ε	Е	G	G	Е	Е	Polyvinyl Acetate Emulsion (PVA)	С	С	G	С	Е	G	Ε	Ε	Е
Orthodichlorobenzol         X         N         N         N         X	Organic Fatty Acids	Х	N	N	Е	Χ	Х	Х	Е	Е	Polyethylene Glycol	Е	Е	Е	Е	Е	Е	Е	Ε	Е
Orthoxylene         X         X         N         N         X         X         Z         E         G         Potassium Acetate         X         X         X         Z         G         E<	Ortho-Dichlorobenzene	Х	Х	Х	Х	Χ	Х	Χ	Е	Е	Polypropylene Glycol	Е	Е	Е	Е	Е	Е	Ε	Ε	Е
OS 45 Hydraulic Fluid (Silicate Ester Base)         X         X         E         G         X         G         X         N         N         N         Potassium Bicarbonate         E <td>Orthodichlorobenzol</td> <td>Х</td> <td>N</td> <td>N</td> <td>Х</td> <td>Χ</td> <td>Х</td> <td>Χ</td> <td>Е</td> <td>Е</td> <td>Polyurethane Foam Under 125°F</td> <td>N</td> <td>N</td> <td>N</td> <td>Ν</td> <td>G</td> <td>N</td> <td>G</td> <td>Е</td> <td>N</td>	Orthodichlorobenzol	Х	N	N	Х	Χ	Х	Χ	Е	Е	Polyurethane Foam Under 125°F	N	N	N	Ν	G	N	G	Е	N
Oxalic Acid         F         F         G         F         E         G         E <th< td=""><td>Orthoxylene</td><td>Х</td><td>Х</td><td>N</td><td>N</td><td>Χ</td><td>Х</td><td>Х</td><td>Е</td><td>G</td><td>Potassium Acetate</td><td>Х</td><td>Х</td><td>Х</td><td>Χ</td><td>Е</td><td>Х</td><td>G</td><td>Е</td><td>Е</td></th<>	Orthoxylene	Х	Х	N	N	Χ	Х	Х	Е	G	Potassium Acetate	Х	Х	Х	Χ	Е	Х	G	Е	Е
Oxygen, Cold         G         G         G         G         E <t< td=""><td>OS 45 Hydraulic Fluid (Silicate Ester Base)</td><td>Х</td><td>Х</td><td>Е</td><td>G</td><td>Х</td><td>G</td><td>Χ</td><td>N</td><td>N</td><td>Potassium Bicarbonate</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td></t<>	OS 45 Hydraulic Fluid (Silicate Ester Base)	Х	Х	Е	G	Х	G	Χ	N	N	Potassium Bicarbonate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Oxygen, Hot         X <th< td=""><td>Oxalic Acid</td><td>F</td><td>F</td><td>G</td><td>F</td><td>Е</td><td>G</td><td>Е</td><td>Е</td><td>Е</td><td>Potassium Bisulfate</td><td>Е</td><td>Е</td><td>Е</td><td>Ε</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td></th<>	Oxalic Acid	F	F	G	F	Е	G	Е	Е	Е	Potassium Bisulfate	Е	Е	Е	Ε	Е	Е	Е	Е	Е
Ozone         X         F         G         X         G         E <td>Oxygen, Cold</td> <td>G</td> <td>G</td> <td>G</td> <td>G</td> <td>Е</td> <td>G</td> <td>G</td> <td>Е</td> <td>Е</td> <td>Potassium Bisulfite</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Е</td>	Oxygen, Cold	G	G	G	G	Е	G	G	Е	Е	Potassium Bisulfite	Е	Е	Е	Е	Е	Е	Е	Е	Е
Paint Thinner         X         X         X         X         X         X         X         X         X         X         E         <	Oxygen, Hot	Х	Х	Х	Χ	Χ	Χ	Χ	Е	Е	Potassium Bromide	Е	Е	Е	Е	Е	Е	Ε	Е	N
Paint (Emulsion or Latex)         N         N         N         N         G         R         N         G         E         E         E         Potassium Chromate         X         X         F         X         E         F         G	Ozone	Х	F	G	Х	G	Ε	Е	Е	Е	Potassium Carbonate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Paint (Oil or Solvent Based)         X         X         N         G         X         X         X         E         N         Potassium Cyanide         E <td>Paint Thinner</td> <td>Х</td> <td>Х</td> <td>Х</td> <td>Х</td> <td>Χ</td> <td>Х</td> <td>Χ</td> <td>Е</td> <td>Е</td> <td>Potassium Chloride</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Е</td> <td>Ε</td> <td>Ε</td> <td>Е</td>	Paint Thinner	Х	Х	Х	Х	Χ	Х	Χ	Е	Е	Potassium Chloride	Е	Е	Е	Е	Е	Е	Ε	Ε	Е
Palmitic Acid         X         X         C         E         E         C         C         G         E         Potassium Dichromate         X         X         G         X         E         F         G         E         <	Paint (Emulsion or Latex)	N	N	N	G	N	N	G	Е	Е	Potassium Chromate	Х	Х	F	Х	Е	F	G	G	G
Palm Oil         X         X         G         E         E         G         G         E<	Paint (Oil or Solvent Based)	Χ	Х	N	G	Х	Χ	Х	Е	N	Potassium Cyanide	Е	Е	Е	Ε	Е	Ε	Е	Е	Е
Papermakers Alum         E	Palmitic Acid	Х	Х	С	Е	Е	С	С	G	Е	Potassium Dichromate	Х	Х	G	Χ	Е	F	G	Е	Е
Para-Dichlorobenzene         X	Palm Oil	Χ	Х	G	Е	Е	G	G	Е	Е	Potassium Hydrate	Е	G	G	G	Ε	G	Е	Е	Е
Paraffin Wax         X         X         G         E         X <t< td=""><td>Papermakers Alum</td><td>Е</td><td>Е</td><td>Е</td><td>Ε</td><td>Е</td><td>Е</td><td>Ε</td><td>Е</td><td>Е</td><td>Potassium Hydroxide</td><td>Е</td><td>Е</td><td>С</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td><td>Е</td></t<>	Papermakers Alum	Е	Е	Е	Ε	Е	Е	Ε	Е	Е	Potassium Hydroxide	Е	Е	С	Е	Е	Е	Е	Е	Е
Paraformaldehyde         X         X         G         G         G         G         G         E         E         Potassium Permanganate 5%         X         X         X         X         X         X         E         E         E         E           Paraldehyde         X <t< td=""><td>Para-Dichlorobenzene</td><td>Χ</td><td>Х</td><td>Х</td><td>Х</td><td>Х</td><td>Χ</td><td>Х</td><td>G</td><td>G</td><td>Potassium lodide</td><td>N</td><td>N</td><td>Е</td><td>Е</td><td>N</td><td>Е</td><td>Е</td><td>N</td><td>N</td></t<>	Para-Dichlorobenzene	Χ	Х	Х	Х	Х	Χ	Х	G	G	Potassium lodide	N	N	Е	Е	N	Е	Е	N	N
Paraldehyde         X         N         N         X         G         X         G         E         E         Potassium Phosphate         N         N         E         N         N         E         E         N         N	Paraffin Wax	Х	Х	G	Е	Х	Х	Х	Х	Х	Potassium Nitrate	Е	Е	Е	Е	Е	Е	Е	Е	Е
	Paraformaldehyde	Χ	Х	G	G	G	G	G	Е	Е	Potassium Permanganate 5%	х	Х	Х	Х	Е	Х	Е	Е	Е
Paraxylene X N N N X X N E E Potassium Silicate E E E E E E E E E E	Paraldehyde	Х	N	N	Х	G	Х	G	Е	Е	Potassium Phosphate	N	N	Е	N	N	Е	Е	N	N
	Paraxylene	Х	N	N	N	Х	Х	N	Е		· ·	E	E	E	E	Е	E	Е	Е	E

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## CHEMICAL, OIL & SOLVENT RESISTANCE TABLE - RUBBER HOSE

U H

							Е	х	М								Е	х	М
		s		N	ı	С	P	L	w			s		N	ı	С	P	L	w
	N	В	С	В	1	s	D	Р	Р		N	В	С	В	1	s	D	Р	Р
	R	R	R	R	R	М	М	Е	E		R	R	R	R	R	М	М	Е	E
Potassium Sulfate	Е	Е	Е	Е	Е	Е	Е	Е	Е	Soda Ash	Е	Е	Е	Е	Е	Е	Е	Е	Е
Potassium Sulfide	Ε	Е	Е	Е	Е	Е	Е	Е	Е	Soda, Caustic (Sodium Hydroxide)	Е	G	Е	G	Е	Е	Е	Е	Е
Potassium Sulfite	Е	Е	Е	Е	Е	Е	Е	Е	Е	Soda Lime	Е	Ε	G	G	Е	G	Е	Е	Е
Potassium Thiosulfate	N	N	Е	N	N	Е	Е	N	N	Soda Niter (Sodium Nitrate)	Е	Е	Е	Е	Е	Е	Е	Е	Е
Producer Gas	Х	Х	G	Е	Х	G	Х	Е	Е	Sodium Acetate	х	Х	Х	Х	Х	Х	G	Е	Е
Propane	Х	Х	С	Е	Х	G	Х	Е	N	Sodium Aluminate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Propanediol	Е	Е	G	Е	Е	Е	Е	Е	Е	Sodium Bicarbonate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Propanol	Е	N	N	Е	Е	Е	Е	Е	Е	Sodium Bichromate Solution	G	G	G	G	Е	G	Е	Е	N
Propionic Acid	G	G	х	Х	G	G	G	Е	Е	Sodium Bisulfate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Propyl Acetate	Х	Х	х	Х	G	Х	G	Е	Е	Sodium Bisulfite	Е	Е	Е	Е	Е	Е	Е	Е	Е
Propyl Alcohol (Propanol)	Е	Е	Е	Е	Е	Е	Е	Е	Е	Sodium Borate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Propyl Aldehyde	Х	N	N	Х	G	Х	N	N	N	Sodium Carbonate	Е	Е	Е	Е	Е	Е	Е	Е	Е
Propyl Chloride	Х	Х	С	Х	С	Х	С	G	G	Sodium Chloride	Е	Е	Е	Е	Е	Е	Е	Е	Е
Propylene	Х	Х	Х	Х	Х	Х	Х	N	N	Sodium Chloride Solution	G	G	Х	Х	G	G	Х	N	N
Propylene Diamine	G	G	G	G	Е	С	G	Е	Е	Sodium Chromate	х	Х	С	Х	Е	С	G	G	G
Propylene Dichloride	Х	Х	Х	Х	Х	Х	Х	G	G	Sodium Cyanide	Е	Е	Е	Е	Е	Е	Е	Е	Е
Propylene Glycol	Е	Е	Ε	Е	Е	Е	Е	E	E	Sodium Dichromate	X	X	С	X	E	F	G	E	E
Propylene Tetramer	X	N	N	E	X	X	X	E	E	Sodium Fluoride	Ε	Е	E	Е	Е	Е	E	Е	E
Purina Insecticide	N	N	Х	X	G	N	G	E	N	Sodium Hydrate	G	G	G	G	G	G	E	G	N
Puropale RX Oils	N	N	N	E	Х	N	Х	E	N	Sodium Hydoxide (Caustic Soda)	E	С	E	G	E	E	E	E	E
Pydraul Hydraulic Fluids	Х	Х	Х	X	G	Х	G	G	G	Sodium Hypochlorite	F	Х	X	Х	G	F	G	G	G
Pyranol	X	X	X	C	Х	X	Х	E	E	Sodium Metallic	N	N	N	G	N	N	E	N	N
Pyrene (Carbon Tetrachloride)	X	X	X	Х	X	X	X	G	X	Sodium Metaphosphate	E	E	G	E	E	G	E	E	E
Pyridine	X	X	X	X	G	X	G	E	E	Sodium Nitrate	E	E	E	E	E	E	E	E	E
Pyroligneous Acid	C	C	G	C	G	G	G	E	E	Sodium Nitrite	E	E	E	E	E	E	E	E	E
Pyrrole	С	G	Х	Х	G	Х	С	E	E	Sodium Perborate	С	X	G	X	E	X	G	E	E
Quenching Oil	N	N	G	G	N	N	N	N	N	Sodium Peroxide	G	G	G	G	E	G	E	G	G
Quintolubric 822	N	N	G	E	X	N	G	E	N	Sodium Phophate	E	G	G	E	E	E	E	E	E
Rando Oils	N	N	N	E	X	N	Х	E	N	Sodium Silfhydrate	G	X	G	G	G	G	E	G	N
Rape Seed Oil	X	X	G	G	E	G	G	G	G	Sodium Silicate	E	E	E	E	E	E	E	E	E
Red Oil (Crude Oleic Acid)	X	X	G	G	G	G	G	E	E	Sodium Sulfate	E	E	E	E	E	E	E	E	E
Refined Wax (Petroleum)	X	X	G	E	N	N	N	E	N	Sodium Sulfide	E	E	E	E	E	E	E	E	E
Refrigerant 11 - Freon	X	X	С	E	Х	F	F	G	G	Sodium Sulfite	E	E	E	E	E	E	E	E	E
Refrigerant 12 - Freon	X	X	G	E	X	X	X	G	G	Sodium Sulphhydrate	N	N	G	G	E	G	E	G	N
Refrigerant 22 - Freon	X	X	E	X	E	X	X	E	E	Sodium Thiocyanate Solution	N	G	E	E	G	G	E	E	N
Richfield A Weed Killer 100%	X	X	X	X	X	X	X	G	G	Sodium Thiosylliate	E	E	E	E	E	E	E	E	E
Richfield B Weed Killer 33%	X	X	G	G	G	C	X	G	G	Soinus Oils	N	N	N	E	X	N	X	E	N
Rosin Oil	X	X	E	E	Х	G	X	E	E	Soybean Oil	Х	Х	G	G	G	G	E	E	E
Rotenone and Water	E	E	E	E	E	E	E	E	E	Spent Acid	X	X	Х	Х	Х	G	X	G	G
Rubilene Oils	N	N	N	E	X	N	X	E	N	Stannic Chloride	E	E	E	E	E	E	E	E	E
Sal Ammoniac	E	Е	Е	E	E	E	E	E	E	Stannic Sulfide	E	E	E	E	E	E	E	E	E
Salicylic Acid	E	G	X	X	E	E	E	E	E	Stannous Chloride	E	E	E	E	G	E	E	E	E
Sea Water	E	E	E	E	E	E	E	E	E	Stannous Sulfide	E	E	E	E	E	E	E	E	E
Sevin	N	N	N	N	N	N	G	G	N	Starch	E	E	G	G	N	E	E	E	N
Sewage	F	F	G	E	F	E	G	E	E	Starch Gum	N	N	E	E	х	N	E	E	N
Sillicate of Soda	E	E	E	E	E	E	E	E	E	Steam - Below 350°F	Х	Х	X	X	G	Х	E	X	Х
Silicone of Soda (Sodium Silicate)	E	E	E	E	E	E	E	E	E	Stearic Acid	X	X	G	G	G	G	G	E	E
Silicate Esters	X	X	E	G	X	E	X	E	E	Stoddards Solvent	X	X	С	E	Х	Х	Х	E	E
Silicone Greases	E	E	E	E	E	E	E	E	E	STPP (Sodium Tripolyphosphate)	G	G	N	N	G	N	G	G	N
Slicone Oil	E	F	E	E	E	E	F	E	E	Styrene	Х	X	Х	Х	Х	Х	Х	Х	Х
Silver Cyanide	N	N	E	N	N	N	N	E	N	Sugar Solutions (Sucrose - Non F.D.A.)	E	E	E	E	E	E	E	E	E
Siver Nitrate	E		E	E		E		E	E	Sulfamic Acid	С	С	G	G	E	G	E	E	E
Skelly Solvent	X	E X	G	E	E X	C	E X	E	E	Sulfite Liquors	G	G	G	G	E	E	G	E	E
Skydrol Hydraulic Fluids	X	X	X	X	E	X	E	E	E	Sulfonic Acid	X	X	C	X	X	С	X	G	G
	G	G	E	E	G	A E	E	E	N	Sulfur (Molten)	X	X	X	X	F	F	^ F	G	G
Soap, Liquid								E					C					E	G
Soap Oil	N	N	X G	X	N	X	N		G	Sulfur Chloride	X	X F		C	X	G	X F		
Soap Solutions	G	Е	G	Е	Е	Е	Е	Е	Е	Sulfur Dioxide	F	г	G	Χ	G	G	г	G	G

No										U										U
Section   Sect																				
Substitution			٠		N		•								NI.		•			
No.		N		С		-						N		С		-				
Surface According 1						-														
Subtrace And Confere County   X	Sulfur Hexafluoride						Е		Е		Trichloroacetic Acid							G	Е	N
Substruce And Comers	Sulfur Trioxide	Х	Х	Х	Х	G	Х	С	G	G	Trichlorobenzene	Х	Х	Х	Х	Х	Х	Х	G	G
Submit Acid Summer Summ	Sulfuric Acid 60% (200°F)	Х	Х	F	Х	F	G	G	Е	Е	Trichloroethane	Х	Χ	Х	Χ	Х	Χ	Χ	Е	Е
Surface Associated Surface Sur	Sulfuric Acid - Conc.	Х	Х	Х	Х	Х	Е	Х	Е	Х	Trichloroethylene	Х	Х	Х	С	Х	Х	Х	G	Х
Suttline And 2798-1079. Suttli	Sulfuric Acid - Fuming	X	Х	Χ	Χ	Χ	Х	Х	Х	Х	Trichloropropane	X	Х	Χ	Х	Χ	Х	Χ	Е	Е
Surfriess Acids Surfriess Acid	Sulfuric Acid 25%	G	G	G	Ε	Е	Е	G	Е	Е	Tricresyl Phosphate (TCP)	Х	Х	Χ	Х	Ε	Х	G	Е	Е
Saffernas Acard Soci C C C C C C C C C C C C C C C C C C C	Sulfuric Acid 25% - 50%	G	Х	Χ	F	Е	Е	Е	Е	Е	Tridecanol	Е	Ε	Е	Ε	Е	Е	Е	Е	Е
Surke OLVIS	Sulfuric Acid 50% - 96%	Х	Х	F	Х	F	G	G	Е	Е	Triethanolamine (TEA)	G	G	Ε	G	Ε	Ε	G	Е	Е
Santine WF Chile  N N N R E X N N X E N N Thindraine  N N N R E X N N X E N N Thindraine  N N N R E X N N N R E X N N N R E X N N X E N N Thindraine  Symmetric Childrago  N N N N E X X N N N R E X N N X E N N Thindraine  N N N R E X N N N X E N N Thindraphereuro Acid  Symmetric Childrago  N N N N E X X N N N R X Z R E N Thindraphereuro Acid  N N N R E X N N N R X E N N Thindraphereuro Acid  Tall Childrago  N N N R E X N N N N R E X N N N R X E N N Thindraphereuro Acid  Tall Childrago  N N N R E X N N N N N R E X N N N N R E R THINDRAINE  Tall Childrago  N N N R E X N N N N R E R THINDRAINE  Tall Childrago  N N N N R E X N N N N R E R THINDRAINE  Tall Childrago  N N N N N R E X N N N N N N N N N N N N N N N N N N	Sulfurous Acid	G	С	G	С	G	Е	G	Е	Е	Triethylamine	G	G	Е	G	G	Е	G	Е	Е
Surface M 70 ls	Sun R&O Oils	N	N	N	Е	Х	N	Х	Е	N	Triethylene Glycol	Е	Ε	Е	Е	Е	Е	Е	Е	Е
Symbolic Oli (Oligo) N N N R B L X N N X E N N Tembrolyberace Symbolic Oligo) N N N N R B L X N N X E N N Tembrolyberace N N N N R B L X N N X B B N N R N R B R N N R R B N N R R B N N R R R R	Suntac HP Oils	N	N	N	Е	Х	N	Х	Е	N	Trifluralin	X	N	N	Х	Χ	Χ	Χ	Е	Е
Synthesic Oil (Cago)	Suntac WR Oils	N	N	N	Е	Х	N	Х	Е	N	Trihydoxybenzoic Acid	G	G	Х	Х	G	N	Ε	Е	Е
Sample   R	Sunvis Oils 700, 800, 900	N	N	N	Е	Х	N	Х	Е	N	Trimethylbenzene	X	Χ	Х	Х	Х	N	Χ	N	N
Tatlor	Synthetic Oil (Citgo)	N	N	N	E	Х	N	Х	Е	N	Trinitrophenol	G	G	G	G	G	G	G	G	G
Tallow Ta	Syrup	Е	Е	G	N	N	N	N	Е	Е	Trinitrotoluene (TNT)	Х	Х	G	Х	Х	G	Χ	Х	
Tamic Acid    C	Tall Oil	Х	Х	G	Е	Х	G	Х	Е		Triphenyl Phosphate	Х	Х	С	Х	Е	С	G	Е	Е
Tare Bituminous    X	Tallow	Х	Х	Е	Е	Х	Х	Х	Е	Е	Tripoly Phosphate	G		N	N	G	N	G	G	N
Tartiario Acid	Tannic Acid	Е	G	G	С	Е	G	Е	Е	Е	Trisodium Phosphate	Е	Ε	Е	Е	Е	Е	Е	Е	Е
Tartianic Acid   E   E   G   E   E   G   E   E   E   E	Tar	Х	Х	G	G	Х	Х	Х	Е	Е	Tung Oil	Х	Х	G	Е	С	G	Χ	Е	
Tellus Olis		Х									Turbine Oil	Х					G	Х		
Terpined	Tartaric Acid	Е	Е	G	Е	Е	Е	G	Е	Е	Turpentine	X	Х		E	Х	Х	Х	G	
Terriprine	Tellus Oils	N	N	N	Е	Х		Х	Е	N		Х					Х			
Tetrachrorobenzene	Tergitol	N	N	N	N						Ucon Hydrolube Oils	X	Х	G		Е	Х	Е	Е	
Tetrachiorobenzene	Terpineol											G	N	N		N		N	N	N
Tetrachtoroethane		Е									· ·					N				
Tetrachloromethylene		X										N								
Tetrachloromethane												X	Х	Х	Х	Е	Е	Е	С	С
Tetrachloronapthalene	·																	_		l _ l
Tetradecanol																				
Tetraethylene Glycol	·																			
Tetraethyl Lead																				
Tetrahydrofuran (THF)  X X X X X X X X X X X X X X X X X X X																				
Tetrahydroxydicyclopentadiene  X X X X X X X X X N N N Versilube  C C C C E E E E E E E E E E E E E E E																				
Tetralin																				
Theobromo Oil																				
Thionyl Chloride																				
Thiopen																				
Tin Chloride    E																				
Tin Tetrachloride    E																				
Titanium Tetrachloride																				
Toluene																				
Toluene Diisocyanate (TDI)																				
Toluidine																				
Toluol																				
Toxaphene         X         X         G         G         X         X         E         E         V.M. & P. Naptha         X         X         E         E         X         X         X         E <td></td>																				
Transformer Oils (Petroleum Base)																				
Transformer Oils (Chloronated Pheynyl Base Askerels)         X	· ·										·									
Base Askerels)         Value	, , , , , , , , , , , , , , , , , , , ,																			
Transmission Fluids A         X											· ·									
Transmission Fluid B         X	· ·	Х	х	С	G	х	х	х	Е	Е										
Tributoxyethyl Phosphate         X         X         N         X         G         E         X         White Oil         X         X         G         E         X         X         E         <											· ·									
Tributoxyl Ethylsulfate         X         N         N         X         E         X         E																				
Tributyl Amine   G   G   G   E   C   E   E   E   Wood Alcohol   E   E   E   E   E   E   E   E   E																				
Tributyl Phosphate         X         X         X         X         G         X         G         E         E         Xylene (Xytol)         X <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																				

									U
									Н
							E	X	M
		S		N	-1	С	Р	L	W
	N	В	С	В	1	s	D	Р	Р
	R	R	R	R	R	М	М	Е	E
Zeolites	G	Е	Е	С	С	Е	Е	Е	Е
Zeric	N	N	N	Е	Х	N	Х	Ε	N
Zinc Acetate	С	Х	С	С	Е	С	G	Е	Е
Zinc Carbonate	Е	Е	Е	Е	Е	Ε	Е	Е	Е
Zince Chloride	Е	Е	Е	Е	Е	Е	G	Е	Е
Zinc Chromate	Е	С	Е	Е	Е	С	Е	G	G
Zinc Sulfate	Е	Е	Е	Е	Е	Е	Е	Е	Е

	RESISTAN	ICE	RATING
Е	EXCELLENT	С	ACCEPTABLE
G	GOOD	X	UNSATISFACTORY
F	FAIR	N	NO DATA

Maximum temperature 100°F (38°C) unless otherwise specified.

The reader is cautioned that the above table is only a guide and should be used as such. The degree of resistance of an elastomer with a particular fluid depends on such variables as temperature, concentration, pressure, velocity of flow, duration of exposure, aeration, stability of fluid, etc. Also, variations in elastomer types and special compounding of stocks to meet specific service conditions have considerable influence on the results obtained.

Warning: The following data has been compiled from generally available sources and should not be relied upon without consulting and following the hose manufacturer's specific chemical recommendations. Neglecting to do so migh result in failure of the hose to fulfill its intended purpose. This may result in possible damage to property and serious bodily injury.

1-EXCELLENT

2-GOD

3-LIMITED

4-UNSATISFACTORY

1-EXCELLE	EN I	2-GOOD	3	-LIMITED	4	-UNSATI	SFACIO	<b>KY</b>
Material Conveyed					nstruction nperature			
	P۱	/C (F°)	TPI	R (F°)	TPE	E (F°)	Polyuret	thane (F°)
	68	104	68	104	68	104	68	104
Acetaldehyde	4	4	4	4	4	4	4	4
Acetaldehyde 40%	4	4	4	4	4	4	4	4
Acetate Solvents, crude	4	4	3	4	3	4	3	4
Acetate Solvents, pure	4	4	3	4	3	4	3	4
Acetic Acid 0-1%	1	2	1	2	3	4	4	4
Acetic Acid 20-30%	1	2	1	2	3	4	4	4
Acetic Acid 80%	2	2	1	2	4	4	4	4
Acetic Acid Vapors	1	2	1	2	3	3	4	4
Acetic Acid Glacial	2	3	2	3	4	4	4	4
Acetic Anhydride	4	4					4	4
Acetone	2	3	1	1	3	4	3	4
Acetylene	1	1	•	•	Ŭ	•	1	1
	1	2					'	
Acrylonitrite	2	3					4	4
Adipic Acid	4	4					4	4
Allyl Alcohol 96%	3							4
Allyl Chloride		3		4		4	4	
Alum	1	1	1	1	1	1	1	1
Aluminum Acetate	2	3						
Aluminum Alkyl	4	4						
Aluminum Chloride	1	1	1	1	1	1	3	3
Aluminum Flouride	1	1	1	1	1	1	1	1
Aluminum Hydroxide	1		1	1	2	2	2	3
Aluminum Nitrate	1	2					1	1
Aluminum Oxychloride	1	1						
Aluminum Phosphate Solution	4	4						
Aluminum Salts	1	1						
Aluminum Sulphate	1	1	1	1	1	1	1	1
Aminoethanol	2							
Ammonia - aqueous	1		1		3		3	4
Ammonia- dry gas	3	4	2		3		3	4
Ammonia- liquid	4	4	3		3		3	4
Ammoniated Latex	1	3						
Ammonium Acetate	1	1						
Ammonium Bicarbonate	1	1						
Ammonium Carbonate	1	1					1	1
Ammonium Chloride Solution	1	1					2	3
Ammonium Flouride 25%	4	4					3	4
Ammonium Hydroxide (30% NH)	4	4					3	4
	1	1					2	2
Ammonium Metaphosphate	1	1					2	2
Ammonium Persulfate	1							2
Ammonium Nitrate	1 4	1					2	2
Ammonium Phosphate Solutions	1	1						4
Ammonium Sulfate	1	1	_	4	4	4	1	1
Ammonium Sulfide	1	1	1	1	1	1	1	1
Ammonium Thiocyanate	1	1	1	1	2	2	2	2
Amyl Acetate	4	4		_		_		_
Amyl Alcohol	1	2	1	2	4	4	4	4
Amyl Chloride	4	4	4	4	4	4		
Aniline	2	3	1	2	]		4	4
Aniline Chlorohydrate	4	4					4	4
Aniline Hydrochloride	4	4					4	4
Animal Gelatin	1				]			
Animal Oils	1	1	1	1	]			
Ant Oil	4	4			ĺ			

1-EXCELLENT

2-GOOD

**3-LIMITED** 

I-EXCELLEN I	2-600	,,,	3-LIMITI		4-01132	II ISFAC I	OKI	
				Hose Cor	nstruction			
Material Conveyed					perature			
ŕ	PVC	(F°)	TPR	2 (F°)		(F°)	Polyure	thane (F°)
	68	104	68	104	68	104	68	104
Anthraquinone	1	1	00	104	00	104	00	104
	1	1					4	4
Anthraquinonesufonic Acid	1	1					4	4
Antifreeze	1	ı						
Antimony Chloride								
Antimony Salts	1	4					4	4
Antimony Trichloride	1	1					1	1
Apple Sauce/Juice	1	1						
Aqua Ammonia	4	4		_				
Aqua Regia	3	4	2	3			4	4
Argon, Compressed	4	4						
Aromatic Hydrocarbons	3	3	1	1				
Arsenic Acid 80%	1	2	1	1	4	4	4	4
Arsenic Trichloride	1	1					1	1
Arsenic Trioxide	1							
Arylsulfonic Acid	3	4					4	4
Askarel (Transformer Oil)	4	4					1	
Asphalt	4	4					1	
ASTM Fuel Oil # 1	1	1	1	1	2	2	1	1
ASTM Oil No. 2	4	4					1	
ASTM Fuel Oil # 3	2	3	1	1	2	2	1	1
ASTM Fuel A	2	2	1	1	2	2	1	1
ASTM Fuel B	4	4	1	1	2	3	2	3
ASTM Fuel C	4	4	'		_	9	2	3
	1	1						3
Baby Food	2	ı						
Baltic Types 100, 150, 200, 300, 500	1	4	4	4	4	4	4	4
Barium Carbonate		1	1	1	1	1	1	1
Barium Chloride	1	1	1	1	1	1	1	1
Barium Hydroxide	1	1			_		2	3
Barium Sulfate	1	1	1	1	1	1	1	1
Barium Sulfide	1	1	1	1	1	1	1	1
Barley	1	4						
Basic Copper Arsenate	1							
Beer	1	1						
Beet Sugar - liquor	1	1						
Bellows 80-20 Hydraulic Oil	2							
Benzaldehyde	4	4						
Benzene	4	4						
Benzidine	4	4						
Benzoic Acid	2	3	1	2	4	4	4	4
Benzoic Aldehyde	4	4						
Benzol	4	4	2	3	3	4	3	4
Benzotrichloride	4	4	_	Ü	· ·	•		•
Benzyl Alcohol	1							
Benzyl Chloride	4	4						
Berries	1	1						
	1	1					1	1
Bismuth Carbonate	1	1	1	1			'	ı
Black Liquor			'	'				
Blast Furnace Gas	4	4		0				
Bleach 12.5% Active CL	2	3	1	2	3	4	3	4
Borax	1	2	1	1			1	1
Bordeaux Mixture	1	1	1	1			1 .	_
Boric Acid	1	1	1	1			4	4
Boric Oxide	1						1	
Boron Triflouride	1	1					1	1
Brake Fluid (Petroleum Base)	2						1	
Brake Fluid (Synthetic Base)	2							
Brine	1	1	1	1	3	4	2	3
Bromic Acid	1	2	1	2	3	4	4	4
Bromine - Liquid	4	4	3	4	4	4	4	4
Bromine - Water	4	4	3	4	4	4	4	4
Bromobenzene	4	4		-		-		-
Bromochloromethane	4	4						
Bromotoluene	4	4					1	
Bunker Oil	4	4						
Durinor Oil	7	7						

1-EXCELLENT

2-GOOD

**3-LIMITED** 

					(			
Material Conveyed					nstruction nperature			
Material Conveyed	PVC	(F°)	TPR	R (F°)		(F°)	Polyuret	hane (F°)
	68	104	68	104	68	104	68	104
Butadiene	3	4	00	104	00	104	00	104
Butane	1	1	1	1	1	1	1	1
Butanol - Primary	4	4					3	4
Butanol - Secondary	4	4					3	4
Butter	2	3						
Butyl Acetate	1							
Butyl Alcohol	1	2	1	2	1	2	3	4
Butyl Cellosolve	4	4	3	4				
Butyl Mercaptan	4 3	4 4	2	3				
Butyl Phenol Butyl Stearate	1	4	2	3				
Butylene	1	2	1	1	1	1	1	1
Butyric Acid 20%	3	4	2	3	3	4	3	4
Butynedial	4	4	-	· ·		·	4	4
Cake Alum Solution	1							
Calcium Arsenate	1							
Calcium Bisulfate	1	1	1	1	1	1		
CalciumBisulfide	2							
Calcium Bisulfite	1	1					1	1
Calcium Carbonate	1	1	1	1	1	1	1	1
CalciumChlorate	1	1	1	1	2	3	2	3
Clacium Chloride	1	1	1	1	3	4	3	4
Calcium Hydrosulfide	2 1	4	4	4	0	2		2
Calcium Hydroxide	1	1 1	1 1	1 1	2 <b>4</b>	3 <b>4</b>	2 4	3 <b>4</b>
Clacium Hypochlorite Calcium Metasilicate	1	Ī	'	ı	4	4	4	4
Calcium Nitrate	1	1	1	1	1	1	1	1
Calcium Silicate	1	•		•		•		
Calcium Sulfate	1	1	1	1	1	1	1	1
Calcium Sulfide	2							
Cane Sugar Liquors								
Carbolic Acid	4	4						
Carbon Bisulfide	1	1						
Carbon Dioxide	1	1						
Carbon Disulfide	4	4						
Carbon Monoxide	1	1	1	1	1	1	1	1
Carbon Tetrachloride	4	4	2	3	3	4	3	4
Carbolic Acid	4	4 1	1	1	4	4	4	4
Carbonic Acid Carrots	1	1	1	1	4	4 4	4	4
Casein	1	2	'		7	-	1	1
Castor Oil	1	1	1	1	1	1	1	1
Catsup	1	2						
Caustic Potash	1	1	1	1	3	4	3	4
Caustic Soda	1	1	1	1	3	4	3	4
Cellosolve	3	4	2	3	2	3	2	3
Cellulose Acetate	1							
Cellulose Butyl	1							
Cheese	1	2						
Cherries	1	1						
China-Wood Oil	2							
Chloropatio Apid	2	1					4	1
Chloral Hydrate	1	4 1					4 2	<b>4</b> 3
Chloral Hydrate Chloric Acid 20%	1	1					4	4
Chlorinated Hydrocarbons	1	1					4	4
Chlorinated Solvents	4	4					'	
Chlorine Gas - dry	1	1	1	1	4	4	4	4
Chlorine Gas - moist	3	4	2	3	3	4	4	4
Chlorine Trifluoride	4	4						
Chloroacetyl Chloride	1							
Chlorobenzene	4	4						
Chlorobromomethane	4	4						
Chloroethane	4	4	L					

1-EXCELLENT

2-GOOD

**3-LIMITED** 

				Hogo Cor	otw.otion			
Material Conveyed				Hose Cor with Tem				
material Conveyed	PVC	(F°)	TPR	(F°)	TPE (F°)		Polyurethane (F°)	
	68	104	68	104	68	104	68	104
Chloroform	4	4						
Chloropentane	4	4						
Chloropicrin Mixture	4	4						
Chlorotoluene	4	4						
Chlorox	1	4					4	4
Chlorsulfonic Acid	3 2	4 3					4	4
Chocolate Chocolate Syrup	1	3						
Chromic Chloride	1							
Chrome Alum	1	1	1	1	1	1	1	1
Chromic Acid 25%	2	3	1	2	4	4	4	4
Chromic Acid 50%	2	3	1	2	4	4	4	4
Chromium Trioxide	4	4						
Cider	2							
Citgo FR Fuels	2							
Coal Gas	1		_	_				_
Coal Tar	4	4	3	3	4		4	4
Coconut Oil	3	4	1	1	1	1	1	1
Cola Beverage	1	1	4	4	4	4	4	4
Copper Chloride	1 1	2 1	1	1	1	1	1	1
Copper Cyanide	1	1					1	1
Copper Flouride 2% Copper Nitrate	1	2	1	1	1	1	1	1
Copper Nitrate  Copper Sulphate	1	2	'	'	'	'	1	1
Core Oils	1	1					1	1
Corn Oils	1	2					·	•
Cottonseed Oil	2	3					1	1
Creosole	4	4	3	4	3	4	-	
Creosote	4	4	3	4				
Cresylic Acid 50%	4	4					4	4
Crude Oil Sour	1	1	1	1	1	1	1	1
Crude Oil Sweet	1	1	1	1	1	1	1	1
Crude Wax	1							
Cupric Chloride	1							
Cupric Cyanide	1							
Cupric Nitrate	1							
Cupric Sulfate	1							
Cyanide, Copper	1							
Cyanide, Silver Cyanide Sodium	1							
Cyclohexane	4	4						
Cyclohexanol	4	4					3	4
Cyclohexanone	4	4					4	4
Cymene	4	4					-	
Decanol	4	4						
Deicing Fluid	1	1						
Demineralized Water	1	1	1	1	3	4	2	4
Denatured Alcohol	1							
Detergents, synthetic	1	2	1	1				
Developers, photographic	1	1	1	1				
Dextrin	1							
Dextron	2		] ,	,	,			
Dextrose	1	2	1	1	1	1	1	1
Diacetone	4	4						
Diacetone Alcohol	4	4						
Diammonium Phosphate Diazinon	2							
Diazo Salts	1	1						
Dibutyl Phthalate	1	'						
Dibutylamine	4	4						
Dichlorobenzene	4	4						
Dichlorobenzyl Chloride	4	4						
Dichloroethane	4	4						
Dichloroethylene	4	4						

1-EXCELLENT

2-GOOD

**3-LIMITED** 

I-EXCELLENT	2-G00		3-LIMITE	.D	4-0N3A	IISFACI	ORI	
				Hose Cor	nstruction			
Material Conveyed				with Tem	nperature			
	PVC	(F°)	TPR	(F°)	TPE	(F°)	Polyure	thane (F°)
	68	104	68	104	68	104	68	104
Dichloroethylene	4	4						
Dichloromethane	4	4						
Diesel Oils	3	4	1	2				
Diethanolamine	2							
Diethyl Ether	2							
Diethyl Ketone	4	4						
Diethyl Oxalate	4	4						
Diethylene Dioxide	2							
Diethylene Ether	4	4						
Diethylene Glycol	1	_						
Diglycolic Acid	1	2						
Dihydroxyethyl Ether	1							
Dimethylamine	4	4					4	4
Dimethylbenzene	4	4						
Dimethylcarbonal	2 4	4						
Dimethylketone		4 4						
Dioctyl Phthalate	4	4						
Dioctyl Phosphite	4	4						
Dioxane Disodium Phosphate	1	1	1	1	1	1	1	1
Distilled Water	1	1	1	1	3	4	2	4
DMB ( Dimethylbenzene )	4	4	'	'	3	4	_	4
Duro Oils	2	7						
EDB (Ethylene Dibromide)	4	4						
Eggs	1	1						
Emulsions, photographic	1	1						
Enamels	2							
Essential Oils	2							
Ethanolamine	2							
Ethers	4	4					2	3
Ethyl Acetate	4	4						_
Ethyl Acrylate	4	4						
Ethyl Alcohol	2	3						
Ethyl Alcohol 50-98%	3	4						
Ethyl Bromide	4	4						
Ethyl Chloride	4	4	4	4	4	4	4	4
Ethyl Ether	4	4					2	3
Ethyl Ether Acetate	1							
Ethyl Mercaptan	4	4						
Ethyl Methyl Ketone	4	4						
Ethylbutanol	1							
Ethylbutyl Alcohol	1							
Ethylene Bromide	1	4	1	3	4	4	4	4
Ethylene Chlorohydrin	4	4						
Ethylene Dibromide	4	4						
Ethylene Dichloride	4	4					4	4
Ethylene Glycol	1	1	1	1	2	3	2	3
Ethylene Oxide	4	4					4	4
Ethylhexanol	1							
Ethylhexyl Acrylate	4	4						
Ethylhexyl Alcohol	1							
Fatty Acid	2							
Fatty Alcohol, Blend	1							
Ferric Chloride	1	1	1	1	2	3	2	3
Ferric Nitrate	1	1	1	1	1	1	1	1
Ferric Sulphate	1	1	1	1	1	1	1	1
Ferrous Chloride	1	1	1				1	1
Ferrous Nitrate	2							
Ferrous Sulfate Solution	1		1					
Fertilizer	2	4	1					
Figs	1	1						
Fish Solutions, photographic	1	1	1					
Fixing Solutions, photographic	1 1	2 4	1					
Flour	I	4						

1-EXCELLENT

2-GOOD

**3-LIMITED** 

Hydraulic Fluid HF-18, HF-20	1-EXCELLENT	2-GO(	OD	3-LIMIT	ED	4-UNSA	TISFACT	ORY	
Pour	Material Conveyed								
Pedrotropic Accident   1	material conveyor	PVC	C (F°)	TPF			E (F°)	Polyuret	thane (F°)
Provided Acid									
Pisopie Acid	Flourobic Acid								
From Acad   1   3   3   4   4   4   7   7   7   7   7   7   7	Fluorine	4	4					4	4
Formaliny de Solution (16 90%) Formalin	Fluosilic Acid	4	4						
Formis And 379	Foric Acid	1	3					4	4
Semina Acid 39%   1	Formaldehyde Solution (to 50%)								
Farmer And 310%		-							
From Acid 25%									
From 1.4   1									
Precent 2									
Fixed to See				1	1	1	1		
Final Pulse and Julices Final Police Final Colid Final									
Fisel Oil				'					
Faman And	The state of the s			1	1	1	2		
Farrian							_	·	•
Furthery Alzohole   1									
Furtury Alcohol   1								4	4
Fusel Di		1							
Gaschold		1							
Gas - coko voen  2	Gallic Acid Solution	4	4						
Gas - natural (dy)  Gas - natural (ver)  Gas - natural (ver)  Gas - natural (ver)  Gasoline - verifined  Gasol	Gasohol								
Gas-natural (we)    1	Gas - cook oven								
Gasoline - refined	Gas - natural (dry)								
Gasoline - refined	Gas- natural (wet)			1	1	1	1	1	1
Gasoline, Unleaded Gasoline, White Gasoline, W	Gasoline								
Gasoline, White Gelatin 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Gasoline - refined			1	1	2	3		
Gelatin									
Ginger Ale Ginger Ale Gilacial Acetic Acid Gilacial Acetic Acid Gilacial Acetic Acid Gilocose									
Ginger Ale Giacali Acetic Acid Giacali Acetic Acid Giucose 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				1	1	1	1	1	1
Glacial Acetic Acid Glucose Glucose Glucose Glycerine Glycerine Glycerine Glycerol Glycorol G									
Glucose Glucos									
Giucerine Giycerine Giycerol G				1	1	1	1	1 1	1
Glycerine Glycerol Glycerol Glycorol Glycorol Glycorol Glycolo			'	·	ı	1	'	'	'
Glycerol Glycol 1 1 1 1 1 2 2 2 1 1 1 Glycol Glycol 1 1 1 1 1 2 2 2 1 1 1 Glycol Glyco			1	1	1	1	1		
Glycol	1 -	1			•		•		
Glycolic Acid 30%		1		1	1	2	2	1	1
Grape Juice 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 -	1			-	_	_		
Grapefruit Juice 1 1 1 1 1	T	1	1						
Grease 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	I .	1							
Heptachlor Heptane Heptane Heptane Heyarane Hexane Honey HPO (Sodium Thiosulfate) Hydraulic Fluid Hydraulic Fluid Hydraulic Fluid Hydroshloric Acid 48% Hydrochloric Acid 48% Hydroflouric Acid 68% Hydroflouric Acid 88% Hy		1							
Heptane		1	1						
Heptanol			4						
Hexane	Heptane	3	4	1	2	1		1	
Honey	Heptanol								
HPO (Sodium Thiosulfate) Hydraulic Fluid Hydraulic Fluid HF-18, HF-20 Hydrazine Hydro-Drive Oil (houghton) Hydrobloric Acid 10% Hydrochloric Acid 48% Hydrocyanic Acid Hydroflouric Acid 4% Hydroflouric Acid 4% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 60% Hydroflouric Acid 60% Hydroflouric Acid 60% Hydroflouric Acid 60% Hydrogen Hydrogen Hydrogen Hydrogen Hydrogen Hydrogen Hydrogen Hydroflouric Acid Elw Hydrogen Hydrogen Hydroflouric Acid Elw Hydrogen	Hexane								
Hydraulic Fluid HF-18, HF-20	The state of the s		1						
Hydraulic Fluid HF-18, HF-20 Hydrazine Hydro-Drive Oil (houghton) Hydrobromic Acid Hydrochloric Acid 10% Hydrochloric Acid 48% Hydrocyanic Acid Hydroflouric Acid 4% Hydroflouric Acid 10% Hydroflouric Acid 4% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 4% Hydroflouric Acid 48% Hydroflouric Acid 60% Hydroflouric	HPO (Sodium Thiosulfate)								
Hydrazine Hydro-Drive Oil (houghton) Hydrobromic Acid Hydrochloric Acid 10% Hydrochloric Acid 48% Hydrocyanic Acid Hydroflouric Acid 4% Hydroflouric Acid 10% Hydroflouric Acid 4% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 40% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 60% Hydroflouric Acid 40% Hydroflouric Acid 4									
Hydro-Drive Oil (houghton)         2           Hydrobromic Acid         4         4           Hydrochloric Acid 10%         1         1         1         4         4         4           Hydrochloric Acid 48%         3         4 <td></td> <td></td> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			4						
Hydrobromic Acid Hydrochloric Acid 10% Hydrochloric Acid 10% Hydrochloric Acid 48% Hydrocyanic Acid Hydroflouric Acid 4% Hydroflouric Acid 40% Hydroflouric Acid 10% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 60% Hydroflouric Acid 60% Hydroflouric Acid 60% Hydroflouric Acid Hydrogen Hyd	1 · ·		4						
Hydrochloric Acid 10% Hydrochloric Acid 48% Hydrocyanic Acid 48% Hydrocyanic Acid 4% Hydroflouric Acid 4% Hydroflouric Acid 10% Hydroflouric Acid 10% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 60% Hydroflouric Acid 60% Hydroflouric Acid 60% Hydroflouric Acid Hydrogen Hydr			1						
Hydrochloric Acid 48% Hydrocyanic Acid Hydroflouric Acid 4% Hydroflouric Acid 4% Hydroflouric Acid 10% Hydroflouric Acid 48% Hydroflouric Acid 48% Hydroflouric Acid 60% Hydroflouric Acid 60% Hydroflouric Acid Hydrogen H	1 · ·			1	1	Л	1	1	1
Hydrocyanic Acid       4       4         Hydroflouric Acid 4%       2       3         Hydroflouric Acid 10%       3       3         Hydroflouric Acid 48%       3       4         Hydroflouric Acid 60%       3       4         Hydrofluosilicic Acid       4       4         Hydrogen       1       2       1       1       1       1       1         Hydrogen Bromide (Dry) (liquid)       1       1       1       1       1       1       1				'	1	4	4		
Hydroflouric Acid 4% Hydroflouric Acid 10% Hydroflouric Acid 10% Hydroflouric Acid 48% Hydroflouric Acid 60% Hydroflouric Acid 60% Hydroflouric Acid Hydroflouric Acid Hydrogen Hydrogen Hydrogen Bromide (Dry) (liquid)  ### 4 4 ### 4 4 #### 4 4 #### 4 4 #### 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 · ·							"	7
Hydroflouric Acid 10%       3       3       4								4	4
Hydroflouric Acid 48%       3       4         Hydroflouric Acid 60%       3       4         Hydroflousilicic Acid       4       4         Hydrogen       1       2       1       1       1       1       1         Hydrogen Bromide (Dry) (liquid)       1       1       1       1       1       1       1									
Hydroflouric Acid 60%     3     4       Hydroflousilicic Acid     4     4       Hydrogen     1     2     1     1     1     1     1       Hydrogen Bromide (Dry) (liquid)     1     1     1     1     1     1     1								-	
Hydrofluosilicic Acid         4         1									
Hydrogen         1         2         1<								-	
Hydrogen Bromide (Dry) (liquid)	1 · ·			1	1	1	1		
	Hydrogen Bromide (Dry) (liquid)		•						
	Hydrogen Cyanide	1	1					4	4

1-EXCELLENT

2-GOOD

**3-LIMITED** 

I-EXCELLEN I	2-G00	שי	3-LIMITE	יב	4-UN3A	I ISFAC I	ORT			
				Hose Cor	Construction					
Material Conveyed					mperature					
	PVC	(F°)	TPR	(F°)	TPE	(F°)	Polyuret	thane (F°)		
	68	104	68	104	68	104	68	104		
Hydrogen Peroxide	4	4				.0.				
Hydrogen Peroxide 12%	1	2	1	1	2	3				
Hydrogen Peroxide 50%	1	3	1	2	3	4	2	3		
Hydrogen Peroxide 90%	4	4	3	4	4	4	4	4		
Hydrogen Phosphide	1	3		-	7	-	7	7		
Hydrogen Sulfide - Aqueous Solution	1	1								
Hydrogen Sulfide - Dry	1	1								
Hydrolube (water glycol)	1	1								
Hydrolubric Oil	2									
Hydroquinone Solution	2									
Hydroxylamine Sulfate	1	1								
Hypochlorous Acid	1	1					3	4		
lodine	4	4					Ü	•		
Iron Acetete Liquor	1	•								
Iron Salts	1									
Iron Sulfate Solution	1									
Isobutanol	2									
Isobutyl Alcohol	2									
Isooctane	4	4								
	2	4								
Isopropanol	4	4								
Isopropyl Acetate	1	<b>4</b> 2	1	1	3	4				
Isopropyl Alcohol	4	4	'		3	4				
Isopropyl Ether	4		2	2	3	2	2	3		
JP 3, 4, 5		4		3	3	3		3		
Jelly	1	1								
Jet Fuel - All Types	4	4								
Karo Syrup	1	1	4	4	4	4	4	0		
Kerosene	4	4	1	1	1	1	1	2		
Ketones	4	4								
Kraft Liquor (paper)	1	1		0	0	0	0			
Lacquer Thinner	3	4	2	2	3	3	2	4		
Lactic Acid 28%	1	1					4	4		
Lard	2	3					4	0		
Lard Oil	1	2					1	2		
Latex Paint	1	4		4	0	4	0			
Lauric Acid	1	1	1	1	3	4	3	4		
Lauryl Chlorite	1	1					1	2		
Lauryly Sulfate	1	1			_		_			
Lead Acetate	1	1	1	1	1	1	1	1		
Lead Nitrate Solution	1									
Lead, Tetraethyl	1									
Lemon Juice	1	2								
Ligroin	4	4								
Lime. Chloronated	2									
Lime, sulfur	1	1								
Linoleic Acid	1					_		_		
Linseed Oil	1	1	1	1	1	1	1	1		
Liquid Soap	2									
Liquors	1	2								
Lubricating Oils	4	4	1	1	1	1	1	1		
Machine Oil under 135°F	2									
Magnesium Carbonate	1	1	1	1	1	1	1	1		
Magnesium Hydroxide	1	1	1	1	3	4	2	3		
Magnesium Nitrate	1	1					1	1		
Magnesium Sulfate Solution	1									
Malathion	1									
Maleic Acid Solution	4	4								
Manganese Salts	1									
Manganese Sulfate Solution	1									
Mayonnaise	1	1								
MBK (Methyl Butyl Ketone)	4	4								
MEA (Ethanolamine)	2									
MEK (Ethyl Methyl Ketone)	4	4								
Mercuric Chloride	2	2	1	1	2	3	2	3		

1-EXCELLENT

2-GOOD

**3-LIMITED** 

1-EXCELLENT	2-GO	OD	3-LIMIT	ED	4-UNSA	TISFACT	ORY			
	Hose Construct				nstruction	struction				
Material Conveyed	with Tem			emperature						
	PV	C (F°)	TPF	R (F°)	TPE	(F°)	Polyuret	thane (F°)		
	68	104	68	104	68	104	68	104		
Mercuric Chloride Solution	2									
Mercuric Cyanide	2	2								
Mercuric Nitrate	2	2					2	2		
Mercury	2	2								
Mesitylene	4	4								
Mesityl Oxide	4	4								
Mesitylene	4	4								
Methanol	4	4	4	4	4	4	4	4		
Methyl Acetate	4	4								
Methyl Acetone	1	4	_	2	_	4		4		
Methyl Alcohol	3	4	2	3	3	4	4	4		
Methyl Bromide	4	4 4								
Methyl Butanathiol	4 1	4								
Methyl Butanol	4	4					4	4		
Methyl Chloroform	4	4					-	4		
Methyl Chloroform Methyl Cyanise	1	+	1							
Methyl Ethyl Ketone	4	4	2	3	3	4				
Methy Isobutenyl Ketone	4	4	_	5	3	7				
Methyl Isobutyl Ketone	4	4								
Methyl Isopropyl Ketone	4	4	1							
Methyl Methacrylate	1	7								
Methyl Methacrylate Monomer	4	4								
Methyl Propyl Ketone	4	4								
Methyl Slaicylate	1									
Methyl Sulfate	1									
Methylamine	4	4								
Methylaniline	4	4								
Methylene Bromide	4	4								
Methylene Chloride	4	4								
Methylene Dichloride	4	4								
Milk	1	1					1	1		
Mineral Oils	1	2	1	1	1	1	1	1		
Molasses	1	1	1	1	1	1	1	1		
Monochlorobenzene	4	4								
Monomethylamine	4	4								
Monosodium Phosphate	1									
Motor Oil	3									
Muriatic Acid	4	4								
N-Octane	4	4								
Naphthenic Acid	1									
Naptha	4	4	1	1						
Napthalene	3	4	1	1						
Nickel Chloride Solution	1	1	1				1	1		
Nickel Nitrate Solution	2						1	1		
Nickel Plating Solution	4	4	1							
Nickel Salts	2									
Nickel Sulfate Solution	1							_		
Nicotine	1	1					1	1		
Nicotine Acids	1	2	1	1	3	4	3	4		
Nicotine Salts	1									
Niter Cake	1	^	1	4	_	4		4		
Nitric Acid 10%	1	2	_	1	4	4	4	4		
Nitric Acid 40%	2	3	1	1	4	4	4	4		
Nitric Acid 60%	3	4	2	3	4	4	4	4		
Nitric Acid 68%	3	4	2 3	3	4	4	4	4		
Nitric Acid 70%	4	4	٥	3	4	4	4	4		
Nitrogen	4 1	4	1				4	4		
Nitrogen Ovide	4	4								
Nitrogen Oxide	4	4	1							
Nitromethane Nitrous Acid (up to 10%)	1	4								
Nitrous Acid (up to 10%) Nitrous Oxide	1	1	1				1	1		
Oats	1	4	1				'	•		
Outo	<u> </u>	7	1		<u> </u>		1			

1-EXCELLENT

2-GOOD

**3-LIMITED** 

I-EXCELLEN I	2-G00	טי	3-LIMITE	<u> </u>	4-0113A	HISFACT	JRI			
	Hose Construction									
Material Conveyed	with Temperature				nperature					
	PVC	(F°)	TPR	(F°)	TPE	(F°)	Polyure	thane (F°)		
	68	104	68	104	68	104	68	104		
Octadecanoic Acid	1									
Octanol	2									
Octyl Alcohol	2									
Oil of Turpentine	1									
Oils, Animal	2									
Oils, Mineral	4	4		4		4		4		
Oils, Petroleum	1	2	1	1	1	1	1	1		
Oleic Acid	2	3	1	1	4	4	4	4		
Oleum Olive Oil	4 2	4 2	4	4	4	4	4	4		
Ortho-Dichlorobenzene	4	4								
Ortho-xylene	4	4								
Oxalic Acid	4	4								
Oxygen	1	1					1	1		
Ozone	3	4					·			
Paint	1									
Para formaldehyde	1	2								
Paraffin	1	2								
Palmitic Acid 10%	1	2					4	4		
Palmitic Acid 70%	3	4					4	4		
Peaches	1	1								
Peanut Butter	1	2								
Peanut Oil	2									
Peas	1	1								
Pentachlorophenol in Oil	4	4								
Pentane	3	4								
Pentanone	4	4								
Pentasol	2	_								
Perchloric acid	4	4								
Perchloroethylene	4	4								
Petrol	4	4	4	1						
Petroleum Ether	3 4	3 4	1	1						
Petroleum Naptha Petroleum Oils (Refined)	1	4								
Petroleum Oils (Sour)	2									
Phenol	4	4								
Phenol Acid	4	4								
Phenyl Chloride	4	4								
Phenolhydrazine	4	4								
Phenolhydrazine Hydrochloride	3	4								
Phosgene (gas)	1	2								
Phosgene (liquid)	4	4								
Phosphorous (yellow)	2	3								
Phosphorous Pentoxide	4	4								
Phosphorous Trichloride	1	1					1	1		
Phosphorous Trichloride	1	1					1	1		
Photographic Chemicals	1	1					1	2		
Photographic Fixing Solutions	1	_	_	_		_	_	_		
Picric Acid	4	4	4	4	4	4	4	4		
Pinene	4	4		4						
Pitch	2	3	1	1			4	4		
Plating Solutions	1	2					1	1		
Polyethylene Glycol	2									
Potash Potassium Acetate	1									
Potassium Acetate Potassium Acid Sulfate	1	1					1	1		
Potassium Acid Sulfate Potassium Antimonate	1	1					1	1		
Potassium Bicarbonate  Potassium Bicarbonate	1	1	1	1	1	1	1	1		
Potassium Bichromate	1	1	· '	'	'		1	1		
Potassium Bisulfate	1						, i	•		
Potassium Bisulfite	1	1					1	1		
Potassium Borate 1%	1	1					1	1		
Potassium Bisulfate	1									
Potassium Bromate 10%	1	1	1	1	1	1	1	1		

1-EXCELLENT

2-G00D

**3-LIMITED** 

1-EXCELLENT	2-GO(	טכ	3-LIMITI	ED	4-UNSA	ITISFAC	ORY	
				Hose Co	nstruction			
Material Conveyed								
	PV	C (F°)	TPR	R (F°)	TPE	(F°)	Polyure	thane (F°)
	68	104	68	104	68	104	68	104
Potassium Bromide	1	1	1	1	1	1	1	1
Potassium Carbonate	1							
Potassium Chlorate	1							
Potassium Chloride	1	1	1	1	1	2	1	2
Potassium Chromate	1						2	2
Potassium Cuprocyanide	1							
Potassium Cyanide	1	1	1	1	1	1	1	1
Potassium Dichromate	1	1					2	2
Potassium Ferrocyanide	1	1					1	1
Poassium Fluoride	1	1	1	1	1	2		
Potassium Hydrate	2							
Potassium Hydroxide	1	1						
Potassium Hypochlorite	2	3					4	4
Potassium Iodide	1							
Potassium Nitrate	1	1	1	1	1	1	1	1
Potassium Perborate	1	1	1	1	1	1	1	1
Potassium Perchlorite	1	1					2	3
Potassium Permanganate	4	4						
Potassium Persulfate	1							
Potassium Sulfate	1							
Potassium Sulfide	1	1	1	1	1	1	1	1
Potassium Sulfite	2							
Potassium Thiosulfate	1							
Potatoes	1	1						
Propane	1	1	1	1	1	1	1	1
Propargyl Alcohol	1	1						
Propyl Alcohol	1	2	1	1	2	3	2	3
Propylene Dichloride	4	4					4	4
Propylene Glycol	1						4	4
Prune Juice	1	1						
Puropale RX Oils	2							
Pyrene	4	4						
Pyrethrum	2							
Pyridine	4	4						
Pyrogard C, D	2							
Red Oil	2							
Regal Oils R&O	2							
Richfield A Weed Killer	1	2						
Rubilene Oils	2							
Salicylic Acid	1							
Salt Water	1	1	1	1	2	3	2	4
Sauerkraut	2							
Selenic Acid	1	2					4	4
Sewage	2							
Shortening	2	3						
Silicic Acid	1	1					4	4
Silicone Greases	2							
Silicone Oils	2							
Silver Cyanide	1	1					1	1
Silver Nitrate	1	1	1	1	1	1		
Silver Plating Solution	1	2	1	1	1	1	1	1
Skydrol 500A & 7000	4	4						
Soap	1	1	1	1	2	3	2	4
Soda Ash	1					-	1	
Soda Water	1	1						
Sodium Acetate	1	1					1	1
Sodium Aliminate Solution	2						1	
Sodium Arsenite	1	1					1	1
Sodium Benzoate	1	2	1	1	1	1	1	1
Sodium Bicarbonate	1	1	1	1	1	1	1	1
Sodium Bichromate Solution	2	•	1	•	'	•	1	
Sodium Bisufite	1						1	
Sodium Borate	1							
Sodium Bromide	1	1	1	1	1	2	1	2
Codiani Diolilido						_		_

1-EXCELLENT

2-GOOD

**3-LIMITED** 

1-EXCELLENT	2-GOC	טנ	3-LIMITE	<b>=</b> D	4-UNSA	TISFACT	ORY	
				Hose Cor	nstruction			
Material Conveyed	with Temperature							
	PVC	C (F°)	TPF	R (F°)	TPE	(F°)	Polyuret	thane (F°)
	68	104	68	104	68	104	68	104
Sodium Carbonate (soda ash)	1	1	1	1	1	2	1	1
Sodium Chlorate	2	3	1	2	3	3	2	2
Sodium Chloride	1	1	1	1	1	2	1	2
Sodium Chlorite Solution	2							
Sodium Chromate Sodium Cyanide	2	1	1	1	1	1	1	1
Sodium Dichromate	1	2	1 1	2	1	2	1	2
Sodium Ferricyanide	1	1	'	_	'	_	1	1
Sodium Ferrocyanide	1	1					1	1
Sodium Fluoride (70%)	1	1					1	2
Sodium Hydrate	2							
Sodium Hydrochlorite	2							
Sodium Hydrosulfide	1							
Sodium Hydrosulfite	2							_
Sodium Hydroxide 10%	1	1	1	1	3	4	3	4
Sodium Hydroxide 50%	1 1	2 3	1 1	1 2	4	4	4	4
Sodium Hydroxide 50% Sodium Hypochlorite (20%)	1	3 1	'	۷			4	4
Sodium Hyposulfate	1	1						7
Sodium Metaphosphate	1							
Sodium Nitrate	1	1					1	1
Sodium Nitrite	1	1					1	1
Sodium Peroxide	1							
Sodium Phosphate	1							
Sodium Phosphate Acid	2	2	1	2	4	4		
Sodium Silicate	1							
Sodium Sulfate	1							
Sodium Sulfhydrate Sodium Sulfide	2	1					1	1
Sodium Sulfite	1	1					1	1
Sodium Sulphrydate	2	•					·	
Sodium Thiosulfat	1	1					1	2
Solnus Oils	1							
Sour Crude Oil	4	4						
Soya Beans	1	4						
Soya Oil	1	3						
Soybean Oil	1	1						
Spent Acid	4	4						
Spinach	1 1	1 1						
Squash Stannic Chloride	2	ı						
Stannis Chloride	1	1	1	1	1	2	1	2
Starch	1					_		_
Starch Gum	1							
Stearic Acid	1							
Stoddard Solvent	2							
Straight Synthetic Oils	2							
Styrene	4	4						
Sugar - all forms	1	1						
Sulfamic Acid	4	4						
Sulfate Liquors under 150° F Sulfur	2	2						
Sulfur Chloride	2	_						
Sulfur Dioxide (dry)	1							
Sulfur Dioxide (liquid)	4	4						
Sulfur Hexafluoride (Gas)	2							
Sulfur Trioxide	1							
Sulfuric Acid 10%	1	2	1	1	3	4	3	4
Sulfuric Acid 70%	1	2	1	1	4	4	4	4
Sulfuric Acid 95%	3	3	1	2	4	4	4	4
Sulphus Diovide Coo. do.	2	3 1	1	2	4	4	4	4
Sulphur Dioxide Gas - dry Sulfur Dioxide Gas - wet	4	4						
Sulfur Dioxide Gas - wet Sulfur Dioxide - Liquid	3	4						
Canar Dioxido Elquid	Ŭ	7	1		1		<u> </u>	

1-EXCELLENT

2-GOOD

**3-LIMITED** 

I-EXCELLENT	2-600		3-LIMITI			(I ISFAC	OKI			
				Hose Cor	nstruction					
Material Conveyed				with Ten	with Temperature					
	PVC	C (F°)	TPR	R (F°)	TPE	(F°)	Polyuret	hane (F°)		
	68	104	68	104	68	104	68	104		
Sun R&O Oils		104	00	104	00	104	00	10-4		
	2 2									
Suntac HP Oils										
Suntac WR Oils	2									
Sunvis Oils 700, 800, 900	2									
Synthetic Oil (Citgo)	2									
Tall Oil	4	4								
Tallow	2									
Tannic Acid	1	1	1	1	3	4	3	4		
Tanning Liquors	1	1								
Tar Oil	2									
Tartaric Acid	1	2	1	1	2	3	3	4		
TEA (Triethanolamine)	2	3								
Tellus Oils	2									
Tenol Oils	2									
Terpineol	2									
Tetrachloroethane	4	4	1							
Tetraethyl Lead	2	3	1							
Tetrahydrofuran	4	4	1							
Tetrahydroxydicyclopentadiene	4	4	1							
THF (Tetrahydrofuran)	4	4	1							
	4	4					1	4		
Thionyl Chloride			4	4	4	4	4	4		
Tin Chloride	1	1	1	1	1	1				
Titanium Tetrachloride	1	4		0	0		3	4		
Toluene	4	4	2	2	3	4				
Toluol	4	4								
Tomatoes	1	1								
Tributyl Phosphate	4	4								
Trichloroethylene	4	4					3	4		
Trichloroethane	4	4								
Tricresyl Phosphate	4	4					4	4		
Triethanolamine	3	4								
Triethylamine	2	3								
Trihydroxybenzoic Acid	4	4								
Trimethylbenzene	4	4								
Trimethyl Propane	3	4								
Trinitrophenol	1	-								
	1	1	1	1	1	1	1	1		
Trisodium Phosphate			'		'		'	'		
Tung Oil	2	4	1	4	_	2		0		
Turpentine	3	4	1	1	2	3	1	2		
Ucon Hydrolube Types 150CP, 200CP	2									
Ucon Hydrolube Types 275CP,300CP, 550CP	2									
Ucon M1	2									
Union Hydraulic Tractor Fluid	2									
Urea	1	2	1	1	1	1	1	1		
Urine	1	1	1	1	1	1	1	1		
Varnish	4	4	1	1	1	2	1	2		
Vegetable Oils	2	3								
Versilube F-50, F-44	2									
Vinegar	1	2					2	3		
Vinyl Acetate	4	4	1				4	4		
Vinyl Chloride	4	4	1				1	•		
Vinyl Trichloride	4	4	1							
Vitrea Oils	2	7	1							
Vitrea Oils Vodka	1	2	1							
		1	1	4	2	4	2	4		
Water Acid - mine water	1	ı	1	1	3	4	2	4		
Water in Oil Emulsions	1	4		4		4		4		
Water - distilled	1	1	1	1	3	4	2	4		
Water - fresh	1	1	1	1	3	4	2	4		
Water - salt	1	1	1	1	3	4	2	4		
Whiskey	1	2	1							
White Gasoline				4		_	1 4	_		
	1	1	1	1	1	2	1	2		
White Liquor (paper)	1	1 1 2	1	1		2	1	2		

1-EXCELLENT

2-GOOD

**3-LIMITED** 

Material Conveyed								
	PV	C (F°)	TPR (F°)		TPE (F°)		Polyurethane (F°)	
	68	104	68	104	68	104	68	104
Wood Oil	1							
Xylene	4	4	1	1	2	3	2	3
Xylol	4	4	1	1	2	3	2	3
Yeast	1	2						
Yogurt	1	2						
Zeric	2							
Zinc Acetate	1							
Zinc Chloride Solutions	1							
Zinc Chromate	1	1	1	1	1	1	1	1
Zinc Cyanide	1	1	1	1	1	1	1	1
Zinc Hydrate	1							
Zinc Nitrate	1	1	1	1	1		1	1
Zinc Sulfate	1	1	1	1	1	1	1	1

**WARNING:** The following data has been compiled from generally available sources and should not be relied upon without consulting and following the hose manufacturer's specific chemical recommendations. Neglecting to do so might result in failure of the hose to fulfill it's intended purpose, and may result in possible damage to property and serious bodily injury.

### **RESISTANCE RATING**

	METAL
Е	EXCELLENT
G	GOOD
F	FAIR
Χ	NOT RECOMMENDED
С	CONTACT FACTORY

	NON-METAL
Α	ACCEPTABLE
X	NOT RECOMMENDED
С	CONTACT FACTORY

- **1.** Ratings given are based at +70°F (+21°C). Chemical compatibility varies greatly with temperature. For applications at temperatures other than +70°F (+21°C), contact the manufacturer for recommendations.
- **2.** Chemical resistance of a material does not necessarily indicate the suitability of a fitting in a given application due to variables such as improper clamp and coupling application, special hose construction, gasket material, etc.

### SPECIAL CAUTION SHOULD BE TAKEN WHEN HANDLING HAZARDOUS MATERIALS.

MATERIAL	Aluminum	Brass	Carbon Steel	Stainless Steel, 304	Stainless Steel, 316	Nylon	Poly- Propylene
Absorption Oil		Е					
Acetal		Е					
Acetaldehyde	Е	Е	Е	Е	Е		Е
Acetamide	Е	Х		G			
Acetate Solvents (Crude)	Е	Х	G	Е	Е	Α	Х
Acetate Solvents ( Pure)	Е	Е	X	Е	Е	Α	Χ
Acetic Acid (80%)	F	Х	Х	Е	Е	Х	Χ
Acetic Acid (50%)	G	Х	X	G	Е	Х	X
Acetic Acid (20%)	G	Х	х	G	Е	Х	Х
Acetic Acid (10%)	G	Х	X	Ē	Е	Х	X
Acetic Anhydride	G	Х	G	G	G	Х	Х
Acetic Ether	E	Е	E	Ē	Ē		G
Acetic Oxide	G	Х	х	G	G		Х
Acetone	E	G	G	E	E	Α	X
Acetophenone							G
Acetylene	Е	Х	G	Е	Е	Χ	X
Acetyl Oxide	G	Х	х	G	G		X
Acetylene Dichloride	_	''		_	_		X
Aeroshell 7A, 17 Grease	Е		E	Е	Е		
Air 212° F	E	Е	E	E	E		
Air. Ambient	E	E	E	E	E		Е
Aircraft Hydraulic Oil AA	E	E	E	E	E		=
Alachlor (Lasso)	_	_	_	E	E		
Alcohol - Amyl	G	G	G	G	G	Α	X
Alcohol - Benzyl	G	G	G	E	E	A	X
Alcohol - Butyl	E	G	G	Ē	E	X	X
Alcohol - Diacetone	E	Ē	G	G	G	X	X
Alcohol - Ethyl	E	G	G	G	G	X	X
Alcohol - Hexyl	С	С	С	С	С	Х	X
Alcohol - Isobutyl	C	C	C	C	C	X	X
Alcohol - Isopropyl	G	G	G	G	G	X	X
Alcohol - Methyl	G	G	G	G	G	X	X
Alcohol - Octyl	C	C	C	C	C	A	X
Alcohol - Propyl	G	G	G	E	E	X	X
Alkyaryl Sulfonate			E	E	_		
Allomalaic Acid Solution			E	Ē			
Allyl Chloride			E	E			
Aluminum Acetate		Х	_	E	Е		
Aluminum Bromide		Х	х	G	G		
Aluminum Chloride	X	X	X	X	X	Α	Α
Aluminum Fluoride	G	C	X	X	G	X	A
Aluminum Nitrate	F	X	X	G	G	Α	Α
Aluminum Potassium Sulfate	G	G	X	X	G	X	A
Aluminum Salts	G	ľ	^	G	G		E
Aluminum Sulfate	X	х	х	C	G	Α	A
Aminos (Mixed)	× ×	×	^	_		, · ·	/ `

MATERIAL	Aluminum	Brass	Carbon Steel	Stainless Steel, 304	Stainless Steel, 316	Nylon	Poly- Propylene
Aminoethanol		E	Е	E	Е		
Ammonia Anhydrous	E	Χ	E	G	E	Α	Χ
Ammonia Gas	Х	Χ	E	E	E	Α	Х
Ammonia Nitrate	С	С	С	С	С	Χ	С
Ammonium Acetate		Χ		E	E		E
Ammonium Bifluoride	С	Χ	Χ	С	С	Χ	Α
Ammonium Carbonate	G	Χ	G	G	G	Α	Α
Ammonium Casenate	С	С	С	С	С	Α	С
Ammonium Chloride	Х	Χ	Χ	Х	Χ	Α	Α
Ammonium Hydroxide	G	Χ	E	G	G	Α	Α
Ammonium Metaphosphate	Х		E	E	E		E
Ammonium Nitrate	G	Χ	Χ	С	С	Α	Α
Ammonium Nitrite				E	E		E
Ammonium Persulfate		Χ		E	E		Χ
Ammonium Phosphate	Х	Χ	Χ	E	G	Α	Α
Ammonium Sulfate	Χ	Χ	Χ	Χ	G	Α	Α
Ammonium Sulfide	Х	Χ	E	E	E		E
Ammonium Thiocyanate			E	E	E		E
Amyl Acetate	Х	Е	Χ	E	E		Χ
Amyl Alcohol	E	Е	E	E	E		
Amyl Chloride				E	E		Χ
Amy Chloronapthalene				E	E		
Amyl Napthalene				E	E		
Amyl Phenol				E	E		
Anethole	G	Χ	G	E	E		E
Aniline	С	Χ	Χ	E	E	Χ	Χ
Aniline Hydrochloride		Χ		Χ	Χ		G
Aniline Oil	G	Χ	G	E	E		E
Animal Fat (Lard)	E	Χ	E	E	E		
Animal Gelatin				E	E		
Animal Oils	E		E	E	E		
Ant Oil	E	E	G	E	E		G
Antifreeze	E	E	E	E	E		E
Aqua Ammonia		X	G	E	E		E
Aqua Regia				Х	Х		Х
Aromatic Hydrocarbons	G	G	E	E	E		
Arsenic Acid	G		G		E		G
Askarel (Transformer Oil)		E	E	E	E		G
Asphalt	С	С	G	С	G	Х	Х
Asphalt (Cut Back)		E	E	E	E		
ASTM Oil No. 1	Е	Е	E	E	Е		G
ASTM Oil No. 2	E	E	E	E	E		X
ASTM Oil No. 3	E	Е	E	E	E		Х
ASTM Reference Fuel A	Е	E	E	E	E		X
ASTM Reference Fuel B	Е	E	E	E	E		Х
ASTM Reference Fuel C	E	Е	E	E	E		Χ

MATERIAL	Aluminum	Brass	Carbon	Stainless	Stainless	Nylon	Poly-
			Steel	Steel, 304	Steel, 316		Propylene
Baltic Types 100, 150, 200, 300, 500							G
Banvel					E		
Bardol B			E	Е	Е		
Barite		G	Е	Е	Е		
Barium Carbonate	Х	G	G	G	G	Α	Α
Barium Chloride	С	G	С	X	С	Α	Α
Barium Hydroxide	Х	G	G	G	G	Α	Α
Barium Sulfate	G	G	X	G	G	Α	Α
Barium Sulfide	Х	Х	G	G	G	Α	Α
Beer	Е	G	G	Е	Е	Α	Α
Beet Sugar Liquors	Х		х	Х	Х		Х
Bellows 80-20 Hydraulic Oil							Х
Benzaldehyde	G	G	х	G	G	Х	х
Benzene, Benzol	Е	G	G	G	G	Α	X
Benzenesulfonic Acid	X		Х		G		E
Benzine	E	G	G	G	G	Α	X
Benzoic Acid	G	G	X	G	G	X	X
	G	G		G	-	^	
Benzoic Aldehyde	_	_	E	_	E		E
Benzol	E	Е	Е	Е	Е		Х
Benzyl Alcohol, Photo Inhibited			Е	Е	Е		Е
Benzyl Benzoate			Е	E	Е		
Bismuth Carbonate			Е	Е	E		Е
Bitumastic		Е	Е	Е	Е	1	
Black Liquor			Е	Е	Е		Е
Black Sulfate			Е	Е	Е		Е
Blast Furnace Gas		Е	Е	Е	Е		
Bleach	x	С	×	С	х	х	Α
(12.5% active Chlorine)	,				^		,,
	V			_	_	· ·	
Borax	X	G	G	E	E	X	Α
Bordeaux Mixture				Е	Е		
Boric Acid	Е	Х	X	С	С	Х	Α
Brake Fluid (Peteroleum Based)		E	E	Е	Е		Х
Brake Fluid (Synthetic Based)		Е	E	Е	Е		
Brine Acid	Е	Х	Х	С	С	Х	Α
Bromic Acid	X	Х	С	С	С	Х	Α
Bromine		Е	Е	Е	Е		Х
Bromine Liquid	G	С	С	X	X	Х	Х
Bromochloromethane		Е	Е	Е	Е		х
Bunker Oil	Е	Е	Е	Е	Е		
Butadiene, Butylene	G	G	G	G	G	x	x
Butanal	Ŭ	E			Ŭ		^
	_		_			V	Х
Butane	G -	G	E	G	G	Х	×
Butter Oil (Use FDA Hose)	E	E	E	Е	Е		
Butyl Acetate	E	G	G	G	G	Α	Х
Butyl Alcohol	Е	Е	Е	Е	Е		Е
Butyl Carbitol	E	Е	E	E	E	Ī	
Butyl Ether	Е	Е	Е	Е	Е	1	
Butyl Mercaptan				Е	Е		
Butyl Stearate	Е	Е	Е	Е	Е	Ī	
Butylamine	Е	Е	Е	Е	Е		х
Butyric Acid	G	G	X	G	G	Α	Α
Cake Alum	X	х	X	X	G		E
Calcine Liquor	G	^	E	E	E		_
		_	E	E	E	Ī	
Calcium Acetate	E	E				V	
Calcium Bisulfate	X	С	X	X	G	X	A
Calcium Bisulfide	С	С	С	С	G	Α	Α
Calcium Bisulfite	X	Х	X	С	G	Х	Α
Calcium Bromide	Х	G	Х	Х	Х	Х	Х
Calcium Carbonate	X	G	G	Е	G	Α	Α
Calcium Chlorate				G	Е		Е
Calcium Chloride	С	G	G	С	С	Α	Α
Calcium Hydrogen Sulfite				Е	Е		Е
Calcium Hydrosulfide		X	Ī	G	E	Ī	E
Calcium Hydroxide	x	G	G	G	G	Α	A
Calcium Hypochlorite	X	X	X	X	G	Х	A
Calcium Metasilicate	E	Е	E	E	Е	l	E

MATERIAL	Aluminum	Brass	Carbon	Stainless Steel, 304	Stainless	Nylon	Poly-
alcium Oxide			Steel	Steel, 304	Steel, 316 G		Propylene
alcium Silicate	Е	Е	Е	Е	E		
alcium Sulfate		Е	Е	E	E		Е
alcium Sulfide	G		Е	Е	Е		
aliche Liquors	G		Е	Е	Е		
ane Sugar Liquors	Е	G	Е	Е	Е		Е
arbolic Acid	G	Х	Х	E	E		
arbolic Acid (Phenol)	G	Х	X	Е	Е		
arbolic Acid (Phenol, 82-95% in Creosols)	G	Х	X	E	E		
arbon Bisulfide	E	X	G	G	G	A	X
arbon Dioxide - Dry arbon Dioxide - Wet	E E	E X	G F	G G	G G	A X	A A
arbon Dioxide - Wet	E	X	G	G	G	A	X
arbon Monoxide	E	E	G	E	E	A	A
arbon Tetrachloride	X	С	G	E	С	A	X
arbonic Acid	E	G	G	G	G	X	Α
astor Oil	G	G	G	G	G	Х	Α
austic Potash	X	С	Х	С	G	Α	Α
austic Soda	Х	G	G	С	С	Х	Α
(see Sodium Hydroxide)							
ellosolves	G	G	G	G	G	Χ	Α
ellosolve Acetate			Е	E	E		E
ellosolve Butyl			Е	Е	Е		Е
hina Wood Oil	Е	Е	Е	E	E		
hlorine - Liquid	С	С	G	С	F	Х	X
hlorine - Water				X	X		E
hloroacetic Acid Solution	_	G	X	X	X		E
hlorobenzene	E	E	E	E	E		X
hloroform	С	E C	E X	E C	E	х	X
hloropentane	O		^	E	E	^	X
hloropropylene Oxide			Е	_	_		E
hlorosulfonic Acid	С	Х	G	X	X	Х	X
hlorothene		Е		Е	Е		
hlorotoluene	Е	Е	Е	Е	Е		
lorox (5.5% bleach)	Х	С	Х	С	G	Х	С
hromic Acid (50%)	G	Х	Х	F	С	Х	X
hromium Trioxide	Х	Х	Х	Х	G		E
itric Acid	F	Х	Х	F	С	Χ	X
oal Tar	E	E	Е	E	E		
obalt Nickel Plating Solution					G		
ocoa Butter			Е	Е	E		
od Liver Oil	Е	E	E	Е	Е		
oke Oven Gas	G	F	G	G	G	Х	Х
opper Arsenate	Х	Х	E X	E X	E X	Α	Δ.
opper Chloride opper Cyanide	X	X	C	G G	G	X	A C
opper Cyanide opper Nitrate	^	X	x	E	E	^	E
opper Sulfate	X	X	X	С	G	Α	A
orn Oil	E	Е	E	E	E		Х
orn Syrup	Е		Е	Е	Е		
ottonseed Oil	E	Е	Е	Е	E		E
reosote	Е	Х	G	Е	Е		G
resol	E		G	E	Е		G
rotonic Acid			Е	X			
rude Oil	E	Е	Е	E	E		E
rude Wax		Е	Е	Е	Е		Е
ryolite		Е	E	E	E		Х
rysylic Acid	G	G	G	G	G	Х	X
upric Arsenate			E	E	E		_
upric Nitrate		X	X	E	E		E
utting Oil (Mineral Oil Base) utting Oil, Sulfur Base		E	E E	E	E E		X E
utting Oil, Water Soluble		E	E	E	E		E
yanide, Copper		X	_	E	E		E
yanide, Mercuric	x			_	_		E
yanide, Silver	Χ	Х	G	Е	Е		E

MATERIAL	Aluminum	Brass	Carbon Steel	Stainless Steel, 304	Stainless Steel, 316	Nylon	Poly- Propylene	MATERIAL	Aluminum	Brass	Carbon Steel	Stainless Steel, 304	Stainless Steel, 316	Nylon	Poly Propyle
Cyanide, Sodium	х	Х	G	E	E		Тторутене	Ethyl Acetate	С	С	G	G	G	Α	Х
Cyclohexane	G	G	G	G	G	Α	X	Ethyl Acetoacetate	Е	Е	Е	Е	Е		Х
Cyclohexanol							Е	Ethyl Alcohol	Е	G	Е	Е	Е		Е
Cyclohexanone	G			Е	Е		X	Ethyl Bromide	_	E	_	E	E		_
Cymene	E	Е	Е	E	E		Α	Ethyl Butyrate	Е	_		E	E		
Decalin	_	E	_	_	_		E	Ethyl Chloride	С	С	G	С	E	А	Х
	Е	E	G	Е	Е		E	•	E	E	G	E	E	А	E
Deicing Fluid			E				E .	Ethyl Ether							-
Denatured Alcohol	E	E		E	E	١.		Ethyl Mercaptan		_	G	_	_		
Detergents	G	G	G	E	G	Α	Α	Ethyl Pentachlorobenzene		E	G	E	E		
Developing Solutions				E	E			Ethyl Phthalate		E		Е	Е		
Dextrin				Е	Е			Ethyl Silicate	Е	Е	Е	Е	Е		
Dextrose	G	С	С	С	С	Α	Α	Ethylamine		Е		Е	E		
Dextrose	G	С	С	С	С	Α	Α	Ethylbenzene		Е	Е	Е	Е		
Diacetone		Е	E	Е	Е		E	Ethylcellulose		Е	Е	E	Е		
Diacetone Alcohol	Е	Е	E	E	Е		E	Fatty Acids	Е	F	X	С	Е	Α	Α
Diammonium Phosphate	x		x	G	Е		Е	Ferric Chloride	Х	Х	Х	Х	Х	Х	Α
Diazinon							G	Ferric Hydroxide	С	С	С	Е	Е	Α	С
Dibenzyl Ether	Е	Е	Е	Е	Е	l		Ferric Nitrate (10 - 50%)	х	х	Х	G	G	Х	А
Dibutyl Phthalate	Е	Е	Е	Е	Е		G	Ferric Sulfate	X	Х	Х	С	С	Х	Α
Dibutylsebacate	-	E	-		_			Ferrous Chloride	X	X	C	X	X	X	A
Dichlorobenzene (ortho)		E		Е	Е	l		Ferrous Nitrate			-	E	E		E
		E		E	E	l		Ferrous Nulfate Ferrous Sulfate	_	0	х	G	C	х	A
Dichlorobenzene (para)		_		E	_	l	V		G	G				^	A E
Dichloroethylene		_	_	_	_		Х	Fertilizer	E	E	E	E	E		-
Dichloromethane		E	E	E	E			Fire-Resistant Hydra-Fluid	Е	Е	Е	E	E		
Diesel Fuels	E	Е	G	Е	Е	Α	Х	Fixing Solution (Photo)				Е	Е		Е
Diethanolamine	Е	X	E	Е	Е	l		Fluboric Acid	Х	С	Е	С	С	Х	Α
Diethanolamine - 20%	E	х	E	Е	Е	l		Fluosilicic Acid	Е						Е
Diethyl Ether	E	Е	G	Е	Е		E	Formaldehyde (50%)	С	G	Х	E	Е	Х	А
Diethyl Phthalate		Е		E	Е			Formic Acid (Anhydrous)	Е	Х	Х	С	С	Х	А
Diethyl Sebacate		Е		Е	Е	l		Freon 11	G	G	Х	G	G	Х	Х
Diethylamine	G	С	Х	G	G	х	Α	Freon 12	G	G	Х	G	G	Х	Х
Diethylene Dioxide	Е	Е	Е	Е	Е		Е	Freon 22	G	G	Х	G	G	Х	х
Diethylene ether	E	Е	E	E	E		E	Fruit Juices	G	G	X	G	G	Α	A
Diethylene Glycol	E	E	E	E	E	l	E	Fuel Oil	G	G	G	G	G	A	X
Dihydroxyethyl Ether	E	E	E	E	E		E	Funaric Acid				E	E	^	_ ^
	-	E	E	E	E		E		_	_	_	E	E		
Diisobutyl Ketone						Ī	_	Furan	E	E	E				
Diisobutylene		E		E	E			Furfural	G	G	G	G	G	Α	Х
Diisopropyl Ketone		E		E	E	l		Furfuran	E	E	E	E	E		
Diisopropylidene Acetone		Е	E	E	Е			Fusel Oil	Е	E	Е	Е	Е		
Dimethyl Aniline		Е				l		Fyrguard 150, 200	E	Е	Е	E	E		
Dimethyl Ether	E	Е	E	Е	Е	l		Fyrquel 15R&O, 220R&O, 550R&O	Е		Е				
Dimethyl Formamide			Е	Е	Е		E	Fyrquel 90, 150, 220, 300, 550, 1000	E		Е				
Dimethyl Phthalate		Е				l		Gallic Acid			Х	Е	Е		Е
Dimethylcarbinol	Е	G	Е	Е	Е		Е	Gasohol	Е	Е	G	Е	Е		Х
Dimethylformamide			Е	Е	Е		Е	Gasoline - Refined	G	G	G	G	G	Α	Х
Dimethylketone	Е	Е	E	E	E	l	G	Gasoline - Sour	х	G	G	G	G	Α	Х
Dioctyl Phthalate	E	E	E	E	E		x	Gasoline (Oxygenated- Blended with MTBE)	E	E	G	E	E		X
Dioxane	E	E	E	E	E	l	E	Gelatin	G	G	X	G	G	Α	A
Dioxolane	E	E	E	E	E	l	_	Glucose	G	G	G	G	G	A	A
														A	A
Dipentene	E	E	E	E	E	l		Glucose	E	E	E	E	E	_	
Dirco Oils	E	E	E	E	E			Glue	G	G	G	С	G	С	A
Disodium Phosphate	С	С	E	С	Е	Α	Α	Glycerine	E	Е	G	Е	Е	Α	Α
DMF ( Dimethylfomamide)		1	E	E	Е	l	E	Glycerol	Е	Е	G	Е	Е		
Dowtherm A	Е	Е	E	Е	Е			Glycols	G	G	G	G	G	Α	Α
Dowtherm SR-1	E	Е	G	E	E		E	Grease	Е	Е	Е	Е	Е		
Ouro Oils	Е	Е	Е	Е	Е	l		Grease, Silicone Base	Е	Е	Е	Е	Е		
Ehylene Chloride	С	С	G	С	С	Α	х	Green Liquor	С	С	G	С	С	С	Α
Ehylene Dichloride	С	G	G	G	G	Α	X	Green Sulfate Liquor			Е	E	Е		
Ehylene Glycol	E	G	G	G	G	Α	Х	Heptane	G	G	G	G	G	Α	Х
Ehylene Oxide	E	X	G	G	G	X	X	Hexaldehyde	E	E	E	E	E		
	_	E		G		^	^					E	E	٨	Х
Enamels		=	_			l	_	Hexane	G	G	G			Α	X
Epichlrohydrin		l _	E				Е	Hexanol	Е	G	E	E	E		
Essential Oils	Е	E	E	Е	Е			Hexene		E	E	E	E		
Ethanol	Е	G	Е	Е	Е	l	Е	Hexyl Alcohol	E	G	Е	Е	Е		
Ethanolamine		Е	E	E	E			Hexylene		Е	Е	Е	Е		
Ethers	G	G	G	Е	Е	Α	X	Houghto-Safe 1055, 1110, 1115, 1120, 1130	Е	Е	Е	Е	Е		
				Е		1				Е					

MATERIAL	Aluminum	Brass	Carbon	Stainless	Stainless	Nylon	Poly- Propylene	MATERIAL
Houghto-Safe 5048	Е	Е	Steel	Steel, 304	Steel, 316		Propylene	Lime Sulfur Solution
Houghto-Safe 625, 640 & 525 under 100°F	E	E	E	E	E			Lime Sulphur
HPO (Sodium Thiosulfate)	G	X	X	E	E			Lime, Chlorinated
Hy-Chock Oil	G	^	E	E	E			Limonene
Hydrafluid 760	Е	Е	E	E	E			Lindane
	E		E	E				
Hydrafluid AZR&O, A, B, AA, C					E			Linseed Oil
Hydrasol A	Е		E	E	E			Liquid Soap
Hydraulic Fluid (Phosphate Ester Base)			Е	Е	Е			Lonoleic Acid
Hydraulic Fluid (Polyalphaolifin)	Е	Е	Е	Е	Е			Lubricants (oil)
Hydraulic Fluid (Std. Petroleum Oils)	E	Е	E	E	E			Machine Oil Under 135°F
Hydraulic Fluid (Water Glycol Based)	Е	Е	Е	Е	Е			Magnesium Chloride
Hydraulic Fluid HF-18, HF-20	E	Е	Е	Е	E			Magnesium Hydroxide
Hydraulic Fluid HF-31	Е	E	Е	Е	Е			Magnesium Nitrate
Hydrobromic Acid - 20%	Х	Х	Х	Х	Х	Х	Α	Magnesium Oxide
Hydrobromic Acid - 50%	X	X	Х	X	X	Х	Α	Magnesium Sulfate
Hydrochloric Acid - 20%	Х	Х	Х	Х	Х	Х	Α	Magnesium Carbonate
Hydrochloric Acid - 38%	X	X	Χ	X	X	Х	Α	Malathion
Hydrocyanic Acid	G	Х	G	G	G	Х	Α	Maleic Acid
Hydrofluosilicic Acid-10 -50%	X	G	X	X	G	Х	С	Maxmul
Hydrogen Chloride (Dry Gas)	Х	G	G	С	С	Х	Α	MBK (Methyl Butyl Ketone)
Hydrogen Fluoride			Е	Е	Е			Mecurious Nitrate Solution
Hydrogen Gas	Е	Е	С	Е	Е	Х	Α	MEK (Ethyl Methyl Ketone)
Hydrogen Peroxide - 50%	С	Х	X	С	С	Х	Α	Mercuric Chloride
Hydrogen Peroxide (35% or less)	Е	Х	Х	G	Е			Mercuric Cyanide
Hydrogen Peroxide (50% or less)	Е	X	X	G	Е			Mercury
Hydrogen Peroxide (70% or less)	E	Х	Х	G	E			Mesityl Oxide
Hydrogen Peroxide (90% or less)	E	X	X	G	E			Metallic Soaps
Hydrogen Sulfide	C	C	C	X	G	х	Α	Methane
Hydroquinine	Ŭ			E	E	_ ^		Methanol
Hydroquinine Solution				E	E			Methoxychlor Solution
	x	X	X	X	X	Х	X	
Hypo Chlorous Acid	^	G	G	G		^	^	Methyamine
Ink (Printers)					E			Methyl Acetate
Ink Oil		E	E	E	E			Methyl Acrylate
Insulating Oil		Е	Е	E	Е			Methyl Alcohol
lodine	Е	X	X	X	X	Х	Α	Methyl Bromide
Iron Acetate Liquor			Е	Е	E		Е	Methyl Butyl Ketone
Iron Sulfate Solution	X	X	X	Е	Е		Е	Methyl Cyanide
sobutanol	Е	G	Е	E	Е			Methyl Ethyl Ketone
sobutyl Alcohol	Е	G	Е	Е	Е			Methyl Formate
socyanate			Е	E	Е			Methyl Isobutyl Ketone
Isooctane	G	E	E	Е	Е			Methyl Metha crylate
Isoproponal	Е	G	Е	Е	Е		E	Methyl Nutanathiol
sopropyl Acetate	Е	Е	Е	Е	Е			Methyl Phenol
sopropyl Alcohol	Е	G	Е	Е	Е		Е	Methyl Salicylate
sopropyl Ether	С	G	С	Е	G	Α	X	Methylene Chloride
sopropyltoluene	Е	Е	Е	Е	Е			Methylene Dichloride
Jet Fuel (JP4, JP5)	G	Е	G	G	G	Х	X	Milk
Karo Syrup				Е	Е			Mineral oil
Kerosene	G	G	G	G	G	Х	X	Mobile Therm 603
Ketchup				Е	Е			Molasses
Ketones	G	G	G	G	G	Α	X	Monochloroacetic Acid Solution
Lacquer - Alcohol or Acetate as Solvent	E	Е	Х	Х	E			Monochlorobenzene
_acquer - Toluene or Xylene as Solvent	E	E	X	X	E			Monoethanolamine
Lactic Acid (25%)	F	G	X	C	С	Α	Α	Monomethylamine
Lactic Acid (80%)	G	G	X	C	C	A	A	Monosodium Phosphate
	O	E	E	E	E		^	Motor Oil
actol								
ard Oil	G	С	F	G	G	Α	Α	Mould Oil
Lasso	1 _	_		E	E	l		Mouth Wash
Latex Paint	E	E	E	E	E			Muriatic Acid
Lead Acetate	Х	Х	Х	G	G	Х	Α	Mustard
_ead Chloride	X	С	С	G	G	X	С	Naptha
Lead Nitrate Solution	1		Е	E	E	l		Napthalene
Lead Sulfate	X	С	X	G	G	Х	С	Napthalene
Lecithin				Е	Е			Neutral Oil
Ligroin	1		G	Е	Е	l		Nickel Acetate
ime	1				G	Ī		Nickel Chloride
Lime Chlorinated (normal 35-37% Chlorine)	1		1	1	G	l		Nickel Nitrate

MATERIAL	Aluminum	Brass	Carbon	Stainless	Stainless	Nylon	Poly-
Lime Sulfur Solution	Х	Х	Steel G	Steel, 304 E	Steel, 316		Propylene
Lime Sulphur	X	X	Х	G	G	Х	Α
Lime, Chlorinated			Х	G	Е		
Limonene	E	Е	Е	E	E		
Lindane				E	E		
Linseed Oil	G	G	G	G	G	Α	Α
Liquid Soap	Е	Е	Е	Е	Е		
Lonoleic Acid	G	X	X	G	G	X	A
Lubricants (oil)	G E	E	G E	G E	G E	Α	Х
Machine Oil Under 135°F Magnesium Chloride	X	X	C	C	C	Х	Α
Magnesium Hydroxide	G	G	G	E	E	X	A
Magnesium Nitrate	G	G	G	G	G	Х	A
Magnesium Oxide	С	С	С	С	С	Х	С
Magnesium Sulfate	G	С	С	G	G	Х	Α
Magnesium Carbonate	G	С	С	G	G	Χ	Α
Malathion		Е	Е	Е	Е		
Maleic Acid	С	G	Х	С	G	Χ	Α
Maxmul			Е		Е		
MBK (Methyl Butyl Ketone)	Е	Е	Е	Е	Е		
Mecurious Nitrate Solution	X		E	E	E		
MEK (Ethyl Methyl Ketone)	E	E X	E X	E	E	v	
Mercuric Chloride Mercuric Cyanide	X	X	X	X G	C G	X	A A
Mercury	x	x	G	E	E	A	A
Mesityl Oxide	E	E	E	E	E	,,	,,
Metallic Soaps	Е	Е	Е	Е	Е		
Methane	Е	Е	G	Е	Е	Α	Х
Methanol	G	G	G	G	G	Α	Α
Methoxychlor Solution			Е	Е	Е		
Methyamine			Е	Е	E		
Methyl Acetate	Е	Е	Е	Е	Е		
Methyl Acrylate	Е	Е	Е	Е	Е		
Methyl Alcohol	Ε	G	E	E	E		
Methyl Bromide	X	C	G	G	G	Х	Х
Methyl Butyl Ketone Methyl Cyanide	Е	Е	E E	E E	E E		
Methyl Ethyl Ketone	G	G	G	G	G	Α	X
Methyl Formate	E	E	E	E	E	- / (	X
Methyl Isobutyl Ketone	G	G	G	G	G	Α	X
Methyl Metha crylate	G	С	Х	G	G	Х	Α
Methyl Nutanathiol				Е	Е		
Methyl Phenol	Е		G	Е	Е		G
Methyl Salicylate	Е	Е	Е	Е	Е		
Methylene Chloride	С	G	G	С	С	Α	Х
Methylene Dichloride	Х	Е	Е	Е	Е		
Milk	E	Х	G	Е	E	Α	Α
Mineral oil	G	E	G	E	G	Α	Α
Mobile Therm 603	E G	E X	E G	E	E E		
Molasses Monochloroacetic Acid Solution	G	G	X	E X	X		
Monochlorobenzene		E	E	E	E		
Monoethanolamine		E	E	E	E		
Monomethylamine			Е	Е	Е		
Monosodium Phosphate	Х	Х	Е	Е	Е		
Motor Oil	Е	Е	Е	Е	Е		
Mould Oil			Е	Е	E		
Mouth Wash	Е	Е	Е	Е	Е		
Muriatic Acid	Х	С	С	Х	х	Х	Α
Mustard			X	Е	Е		
Naptha		E	G	E	E		
Napthalene	G	G	G	E	E	A	A
Napthalene Neutral Oil	G	G E	G E	G	G	Α	Х
Nickel Acetate	Е	E	E	E E	E E		
Nickel Chloride	X	X	X	C	С	Х	Α
Nickel Chloride	v	^		Ŭ	C		**

MATERIAL	Alcumincum	Proce	Carbon	Stainless	Stainlage	Mylon	Dobr	MATERIAL	Altuminum	Proce	Carbon	Stainless	Stainless	Abdon	Doby
MATERIAL	Aluminum	Brass	Carbon Steel	Stainless Steel, 304	Stainless Steel, 316	Nylon	Poly- Propylene	MATERIAL	Aluminum	Brass	Carbon Steel	Stainless Steel, 304	Stainless Steel, 316	Nylon	Poly- Propylene
Nickel Plating Solution				E	Е			Potash		Х	G	Е	Е		E
Nickel Sulfate	Х	Х	С	G	G	Х	Α	Potassium Acetate	X	X	G	С	С	Α	Α
Nicotine Salts			Е	X	G			Potassium Bicarbonate (30%)	Х	G	G	Е	E	Α	Α
Niter Cake	Х	Х	Х	E	E.			Potassium Carbonate (50%)	Х	G	G	Е	Е	Α	Α
Nitogen, Liquid	Е	Е	Е	Е	Е			Potassium Chlorate (30%)	G	Х	G	G	E	Х	Α
Nitric Acid (100%)	Е	Х	Х	G	С	Х	Х	Potassium Chloride (30%)	Х	Х	G	С	С	Α	Α
Nitric Acid (30%)	Х	Х	Х	Е	С	Х	Х	Potassium Chromate (30%)	G	G	С	G	G	Х	Α
Nitric Acid (50%)	Х	Х	Х	G	С	Х	Х	Potassium Cyanide (30%)	X	Х	G	G	G	X	Α
Nitrobenzene	Е	G	G	G	G	Α	Α	Potassium Dichromate (30%)	E	G	G	E	E	Х	A
Nitroethane	_	E	_	E	E			Potassium Hydroxide (90%)	X	X	С	X	С	X	A
Nitrogen Gas	Е	E	E	E	E			Potassium Nitrate (80%)	E	G	G	G	G	X	A
Nitrogen Oxide		X	Е	E	E			Potassium Permanganate (20%)	G	G	G	G	G	X	A
Nitromethane		E		E	E			Potassium Sulfate (10%)	E	G	G	E	E	A	A
Nitropropane		Е		E	E			Propane	Е	Е	G	G	G	Х	X
Nitrosyl Chloride	.,	.,	.,	E	E			Propionic Acid			E	E			
Nitrous Acid (Up to 10%)	Х	X	X	E	E			Propylene Glycol	G	G	G	G	G	A	A
Nitrous Oxide		X	Ε	Е	E			Propylene Oxide (90%)	С	С	С	E	E	Х	Х
Octadecanoic Acid	Х	Х	Х	G	Е			Purina insecticide	E	G	Е	E	Е		
Octanol	E	G	Е	Е	Е			Puropale RX Oils	Е	Е	Е	Е	Е		
Octyl Alcohol	E	G	E	E	Е			Pydraul 10E, 29E-LT, 30E, 60, 65E, 115SE	E	E	E	E	E		
Oil - Castor	G	G	G	G	G	Α	Α	Pyrene	Х	G	Х	G	G	Α	Х
Oil - Coconut	G	С	F	G	G	Α	Α	Pyridine	G	G	G	G	G		X
Oil - Corn	G	G	G	С	G	Α	Α	Pyrogallic Acid	G	G	G	G	G	Х	Х
Oil - Cotton Seed	G	G	G	G	G	Α	Α	Pyroguard 160, 230, 630			Е	Е	Е		
Oil - Fuel	G	G	G	G	G	Α	X	Pyroguard 51, 53, 55			Е	Е	E		
Oil - Linseed	G	G	G	G	G	Α	Α	Pyroguard C, D	Е	Е	Е	Е	Е		
Oil - Mineral	G	Е	G	Е	G	Α	Α	Quenching Oil	Е			Е	E		
Oil - Silicon	G	Е	G	G	G	Α	Α	Quintolubric 822	Е	Е	Е	Е	Е		
Oil - Vegetable	G	G	G	Е	Е	Α	X	Ramrod (Ag Spray)	Е	Е	Е	Е	E		
Oils, Animal	Е	Е	Е	Е	Е			Rando Oils	Е	Е	Е	Е	Е		
Oleic Acid	G	F	G	С	E	Α	X	Rapeseed Oil	Е	Е	Е	Е	E		
Oleum	G	Х	G	G	G	Х	Х	Red Oil (MIL-5606)	Е	G	G	G	Е		Е
Olive Oil	Е	G	G	Е	Е		Е	Refined Wax (Petroleum)		Е	Е	Е	Е		
Ortho-Dichlorobenzene		Е		E	Е			Regal Oils R&O	Е	Е	Е	Е	Е		
Oxalic Acid	G	С	X	X	X	X	Α	Salicyclic Acid	G			Е	E		
Oxygen	G	G	G	G	G	Х	Х	Salt Water		G	G	Е	Е		
Ozone	Е	Е	Е	E	Е		E	Sewage	G	Е	Х	E	E		
Paint (inorganic)	E	Е		E	E			Silicone Greases		Е	Е	Е	E		
Palm Oil	Е	Е	E	E	Е			Silicone Oils		Е	Е	Е	E		
Palmitic Acid	G	F	F	G	G	Х	Α	Silver Nitrate	X	Х	X	G	E	X	Α
Paraffin	G	G	G	G	G	Α	Α	Skydrol 500A & 7000	Е		Е	Е	E		
Paraformaldehyde	Е			E	E			Soap Solutions	G	G	G	G	G	Α	Α
Peanut Oil	Е	Е	E	E	E		Е	Soda Ash	Х	G	Е	Е	E		E
Pentasol	Е	Е	Е	E	E			Sodium Acetate	Е	G	X	G	G	Α	Α
Perchloric Acid			F	G	Е		Е	Sodium Bicarbonate - 20%	G	G	F	Е	E	Α	Α
Perchloroethylene	G	G	G	С	С	Х	Х	Sodium Bisulfate	X	С	G	С	С	Α	Α
Petrolatum	G	С	F	G	G	Α	С	Sodium Bisulfite	Х	G	Х	С	С	Α	Α
Petroleum Ether		Е	G	E	E			Sodium Borate	G	G	F	G	G	Α	Α
Phenol (Carbonic Acid)	Е	Е	F	С	Е	Х	X	Sodium Carbonate	Х	G	G	С	G	Α	Α
Phenyl Chloride	Е	Е	Е	E	E		х	Sodium Chlorate - 50%	G	G	Х	G	G	X	Α
Phorone		Е	Е	Е	Е			Sodium Chloride	Х	х	G	G	Е		
Phosphoric Acid (25-50%)	х	Х	Х	С	С	Х	Α	Sodium Chromate	X	Х	G	Е	Е		
Phosphoric Acid (50-85%)	X	Х	Х	С	С	Х	Α	Sodium Cyanide	Х	Х	G	С	С	Α	Α
Photographic Solutions	С	С	х	E	Е	Х	Х	Sodium Dichromate	G	Х	G	G	G	Х	Α
Phthalic Anhydride	С	G	G	Е	Е	Х	X	Sodium Fluoride (70%)					G		
Picric Acid	Е	Х	Х	G	G	Х	С	Sodium Hydrochloride - 30%	Х	G	G	С	С	Х	Α
Plating Solutions - Brass	С	С	С	С	G	Х	Α	Sodium Hydroxide - 30%	х	G	G	Е	E	х	Α
Plating Solutions - Cadmium	С	G	С	С	G	Х	Α	Sodium Hydroxide - 50%	Х	Х	F	Е	С	X	Α
Plating Solutions - Chrome (40%)	X	С	Х	G	G	Х	Α	Sodium Hydroxide - 70%	х	х	F	G	G	х	Α
Plating Solutions - Copper Cyanide	С	С	С	С	С	х	Α	Sodium Hydroxide (40%)	Х	Х	G	Е	Е		
Plating Solutions - Gold	С	С	С	С	Е	Х	Α	Sodium Hypochlorite	х	х	Х	С	С	х	Α
Plating Solutions - Iron	С	С	С	С	С	Х	Α	Sodium Metaphosphate	X	х	Х	G	G	Х	X
Plating Solutions - Lead	С	С	С	E	E	Х	Α	Sodium Nitrate - 40%	Е	G	G	E	E	Α	Α
Plating Solutions - Nickel	С	С	С	Е	Е	Х	Α	Sodium Perborate - 10%	G	Х	G	G	G	Х	Α
Plating Solutions - Silver	С	С	С	E	E	Х	Α	Sodium Perborate - 10%	G	Х	G	G	G	Х	A
Plating Solutions - Tin	С	С	С	С	F	Х	A	Sodium Peroxide - 10%	G	X	G	G	G	X	Α
Plating Solutions - Zinc	С	С	С	С	С	Х	Α	Sodium Phosphate	х	х		E	Е		

MATERIAL	Aluminum	Brass	Carbon	Stainless	Stainless	Nylon	Poly-
O a disser Oiliseata	_	0	Steel	Steel, 304	Steel, 316		Propylene
Sodium Silicate Sodium Sulfate	E C	G	G G	G C	G E	A A	A A
Sodium Sulfide - 50%	X	G	G	C	G		
	G	X	X	G	G	X A	A A
Sodium Thiosulphate Solnus Oils	E	E	E	E	E	А	А
Soybean Oil		_	E	E	E		
Spent Acid			-	E	E		
Stannic Chloride	Х	Х	х	X	X	Х	Α
Stannous Chloride	X	X	X	×	C	X	X
Starch Gum	^	^	^	E	E	^	E
Stauffer Jet 1	Е	Е	Е	E	E		_
Stauffer Jet 2	E	E	E	E	E		
Steam Steam	C	C	C	C	C	х	С
Stearic Acid	G	F	F	G	E	A	A
Stoddard's Solvent	G	G	G	G	G	X	A
STPP (Sodium Tripolyphosphate)	Х	Х	0	E	E	^	^
Styrene	X	G	G	X	G		
Sucrose Solutions	^	G	E	E	E		
	Е	G	G	E	E	Α	Α
Sugar Liquors (Beet) Sugar Liquors (Cane)	E	G	G	G	G	A	A
Sulfate Liquors	G X	X	F X	C G	G G	X	A X
Sulfite Liquors					-		
Sulfur Chloride	X	С	X	С	С	X	X
Sulfur Dioxide (Dry)	G	G	E	С	G	Х	A
Sulfur Trioxide	G	G	G	С	G	X	X
Sulfuric Acid - 100%	Х	Х	G	С	С	Х	Х
Sulfuric Acid to 10%	X	G	X	X	X	X	Α
Sulfurous Acid	G	G	Х	Х	С	Х	Α
Sun R&O Oils	Е		Е	Е	Е		
Suntac HP Oils	Е		E	E	E		
Suntac WR Oils	Е		Е		Е		
Sunvis Oils 700, 800, 900			E	E	E		
Synthetic Oil (Citgo)			Е	Е	Е		
Syrup			E	E	E		
Tall Oil				X	G		
Tall Oil under 150°F				Х	G		
Tallow	Е	G	G	G	G		
Tannic Acid	Х	С	Х	G	G	Х	Α
Tanning Liiquors	Е	С	С	Е	Е	X	Α
Tar Under 100°F	Е	G	E	Е	E		
Tartaric Acid	С	С	С	Е	Е	Α	Α
Tellus Oils	Е	Е	Е	Е	E		
Tenol Oils			Е	Е	Е		
Tergitol		G	G	E	Е		
Tetrahydrofuran	X	С	Е	1	G	Α	X
Tetrahydrofuran (THF)			G				Х
Theobromo Oil			Е	Е	Е		
Titanium Tetrachloride	Х	Х	G	С	G	Х	Х
Toluene	Е	Е	Е	Е	E	Α	X
Toluene Diisocyanate			Е	E	E		
Tomato Juice	G	С	F	G	G	Х	Α
Transformer Oil (Askarel Types)		Е	Е	Е	Е		G
Transformer Oil (Petroleum Types)	Е	Е	Е	Е	Е		
Transmission Fluid		Е	Е	Е	Е		
Tributoxyethyl Phosphate	X		Е				
Tributyl Phosphate	х		Е				
Trichloroethylene	Е	С	G	С	С	Α	X
Trichloroethylene	Х	Е	Х		Е		
Tricresyl Phosphate	X		Е		G		
Triethanolamine	G	х	G	G	G	Α	Х
Triethylamine	С	С	С	G	G	Α	X
*			Х	E	E		E
I rihydroxybenzoic Acid		1				1	_
Trihydroxybenzoic Acid Trinitriphenol	Χ	X	X	E	E		
Trinitriphenol	X X				E E	Α	А
		X G E	G E	E E		Α	Α

MATERIAL	Aluminum	Brass	Carbon Steel	Stainless Steel, 304	Stainless Steel, 316	Nylon	Poly- Propylene
Ucon Hydrolube Types 150CP, 200CP	Е	Е	Е	Е	Е		
Ucon M1	Е	Е	Е	Е	Е		
Union Hydraulic Tractor Fluid	Е	Е	Е	Е	Е		
Urea - 50%	G	С	G	G	G	Α	Α
Urine	С	С	G	Е	Е	Х	Α
Varnish		G	G	Е	Е		
Vegetable Oils	Е		Е	Е	Е		
Versilube F-50, F-44	Е	Е	Е	Е	Е		
Vinegar	G	Х	G	G	G	Х	Α
Vinyl Acetate	Е	G		Е	G		
Vinyl Chloride	Е	Х	G	Е	Е		
Vitrea Oils			Е	Е	Е		
VM&P Naptha	G	Е	Е	Е	Е		
Water (Distilled)	Х	G	Х	G	G	Α	Α
Water (Sea)	G	G	Х	G	G	Α	Α
Water Acid (Mine)	Х	Х	Х	С	С	Х	Α
Whiskey	X	G	G	Е	Е	Х	Α
White Liquor	G	С	Х	G	G	Х	Α
Wine	X	G	Х	Е	Е	Х	Α
Xylene	G	G	G	G	G	Α	Х
Zeric				Е	Е		
Zinc Chloride	Х	х	Х	Х	G	Α	Α
Zinc Nitrate	С	С	С	G	G	Х	Α
Zinc Sulfate - 50%	Х	G	х	Е	Е	Х	Α

## **TECHNICAL INFORMATION**

## DECIMAL & MILLIMETER EQUIVALENTS OF FRACTIONS AND VACUUM CONVERSION TABLE

### **DECIMAL AND MILLIMETER EQUIVALENTS OF FRACTIONS**

	1 i	nch = 2	25.4 mil	limeters				1	1 inch =	25.4 mi	llimeters	
	Fractio	nal Incl	1	De	cimal			Fraction	onal Inc	h	Deci	mal
1/64	1/32	1/16	1/8	inch	mm		1/64	1/32	1/16	1/8	inch	mm
1				0.016	0.40		33			•	0.516	13.10
2	1			0.031	0.79		34	17			0.531	13.50
3				0.047	1.19		35				0.547	13.90
4	2	1		0.063	1.59		36	18	9		0.563	14.30
5				0.078	1.98		37				0.578	14.70
6	3			0.094	2.38		38	19			0.594	15.10
7				0.109	2.78		39				0.609	15.50
8	4	2	1	0.125	3.18	S	40	20	10	5	0.625	15.90
9				0.141	3.57	п	41				0.641	16.30
10	5			0.156	4.00	25.4 MILLIMETERS	42	21			0.656	16.70
11				0.172	4.40	Σ	43				0.672	17.10
12	6	3		0.188	4.80		44	22	11		0.688	17.50
13				0.203	5.20	Ħ	45				0.703	17.90
14	7			0.219	5.60	4	46	23			0.719	18.30
15				0.234	6.00	2	47				0.734	18.70
16	8	4	2	0.250	6.40		48	24	12	6	0.750	19.10
17				0.266	6.70	ш	49				0.766	19.50
18	9			0.281	7.10	INCH	50	25			0.781	19.80
19				0.297	7.50	Ž	51				0.797	20.30
20	10	5		0.313	7.90	Е	52	26	13		0.813	20.60
21				0.328	8.30		53				0.828	21.00
22	11			0.344	8.70		54	27			0.844	21.40
23				0.359	9.10		55				0.859	21.80
24	12	6	3	0.375	9.50		56	28	14	7	0.875	22.20
25				0.391	9.90		57				0.891	22.60
26	13			0.406	10.30		58	29			0.906	23.00
27				0.422	10.70		59				0.922	23.40
28	14	7		0.438	11.10		60	30	15		0.938	23.80
29				0.453	11.50		61				0.953	24.20
30	15			0.469	11.90		62	31			0.969	24.60
31				0.484	12.30		63				0.984	25.00
32	16	8	4	0.500	12.70		64	32	16	8	1.000	25.40

	VAC	UUM CONVER	SION TABLE FOR V	VATER (SU	CTION)	
ATM	PSI	Meter(s)	Feet	mm	In Hg	%
0.1	1.40	1	3 ft. 3-3/8 in.	73.60	2.90	10
0.2	2.80	2	6 ft. 6-3/4 in.	147.10	5.80	20
0.3	4.20	3	9 ft. 10-1/8 in.	220.70	8.70	30
0.4	5.70	4	13 ft. 1-1/2 in.	294.20	11.60	40
0.5	7.10	5	16 ft. 4-13/16 in.	367.80	14.50	50
0.6	8.50	6	19 ft. 8-3/16 in.	441.30	17.40	60
0.7	10.00	7	22 ft. 11-9/16 in.	514.90	20.30	70
0.8	11.40	8	26 ft. 2-15/16 in.	588.40	23.20	80
0.9	12.80	9	29 ft. 6-3/8 in.	662.00	26.00	90
1.0	14.20	10	32 ft. 9-11/16 in.	735.50	29.00	100

## TECHNICAL INFORMATION TEMPERATURE CONVERSION

Look up reading in middle column (shaded). If in degrees Centigrade, read Farenheit equivalent in right-hand column; if in Farenheit degrees, read Centigrade equivalent in left-hand column.

 $^{\circ}F = (^{\circ}C \times 1.8) + 32$ 

 $^{\circ}$ C = ( $^{\circ}$ F - 32) x .5556

C	C F	F	C	C F	F	c	C F	F
-51	-60	-76	.6	33	91.4	22.2	72	161.6
-46	-50	-58	1.1	34	93.2	22.8	73	163.4
-40	-40	-40	1.7	35	95.0	23.3	74	165.2
-34	-30	-22	2.2	36	96.8	23.9	75	167.0
-29	-20	-4	2.8	37	98.6	24.4	76	168.8
-23	-10	14	3.3	38	100.4	25.0	77	170.6
-17.8	0	32	3.9	39	102.2	25.6	78	172.4
-17.2	1	33.8	4.4	40	104.0	26.1	79	174.2
-16.7	2	35.6	5.0	41	105.8	26.7	80	176.0
-16.1	3	37.4	5.6	42	107.6	27.2	81	177.8
-15.6	4	39.2	6.1	43	109.4	27.8	82	179.6
-15.0	5	41.0	6.7	44	111.2	28.3	83	181.4
-14.4	6	42.8	7.2	45	113.0	28.9	84	183.2
-13.9	7	44.6	7.8	46	114.8	29.4	85	185.0
-13.3	8	46.4	8.3	47	116.6	30.0	86	186.8
-12.8	9	48.2	8.9	48	118.4	30.6	87	188.6
-12.2	10	50.0	9.4	49	120.2	31.1	88	190.4
-11.7	11	51.8	10.0	50	122.0	31.7	89	192.2
-11.1	12	53.6	10.6	51	123.8	32.2	90	194.0
-10.6	13	55.4	11.1	52	125.6	32.8	91	195.8
-10.0	14	57.2	11.7	53	127.4	33.3	92	197.6
-9.4	15	59.0	12.2	54	129.2	33.9	93	199.4
-8.9	16	60.8	12.8	55	131.0	34.4	94	201.2
-8.3	17	62.6	13.3	56	132.8	35.0	95	203.0
-7.8	18	64.4	13.9	57	134.6	35.6	96	204.8
-7.2	19	66.2	14.4	58	136.4	36.1	97	206.6
-6.7	20	68.0	15.0	59	138.2	36.7	98	208.4
-6.1	21	69.8	15.6	60	140.0	37.2	99	210.2
-5.6	22	71.6	16.1	61	141.8	37.8	100	212.0
-5.0	23	73.4	16.7	62	143.6			
-4.4	24	75.2	17.2	63	145.4 147.2	42	110	220
-3.9 -3.3	25 26	77.0	17.8 18.3	64 65	147.2 149.0	43 49	110	230
-3.3 -2.8		78.8 80.6	18.3	65 66	149.0 150.8	54	120 130	248 266
-2.8 -2.2	27 28	80.6 82.4	18.9 19.4	66 67	150.8	60	140	266 284
-2.2	26 29	84.2	20.0	68	154.4	66	150	302
-1.7 -1.1	30	86.0	20.6	69	154.4	71	160	302
-0.6	31	87.7	21.1	70	158.0	77	170	338
0.0	32	89.6	21.7	71	159.8	82	180	356
	32	07.0	۷۱./	7 1	1.77.0	OΖ	100	טככ

## TECHNICAL INFORMATION IND. HOSE CONVERSION FACTORS

atmospheres atmospheres atmospheres atmospheres	cms of mercury ft. of water (at 4°C)	76.0	
atmospheres	ft of water (at 1°C)		
	it. Of water (at 4 C)	33.90	
atmospheres	in. of mercury (at $0^{\circ}$ C)	29.92	
	kgs/sq cm	1.0333	
atmospheres	kgs/sq meter	10.332	
atmospheres	pounds/sq in	14.70	
BAR	newtons/sq m	10 <sup>5</sup>	
bar	atmospheres	0.9869	
bar	at (tech.)	1.0197	
bar	psi	14.504	
BARRELS - OIL	gals/oil	42	
BT UNITS	kg-calories	0.2520	
BTUs	ftlbs	777.9	
BTUs	hp-hrs	3.927 x 10 <sup>-4</sup>	
BTUs	kg-meters	107.5	
BTUs	kw-hrs	2.928 x 10 <sup>-4</sup>	
CENTIMETERS	inches	0.3937	
cm	meters	0.01	
cm	mm	10	
CMS MERCURY	atm	0.3937	
cms mercury	ft water	0.4461	
cms mercury	kgs/sq meter	136.0	
cms mercury	lbs/sq ft	27.85	
cms mercury	lbs/sq in	0.1934	
CMS/SECOND	ft/min	1.969	
cms/sec	ft/sec	0.03281	
cms/sec	km/hr	0.036	
cms/sec	meter/min	0.6	
cms/sec	miles/min	3.728 x 10 <sup>-4</sup>	
CMS/SEC/SEC	ft/sec/sec	0.03281	
CUBIC CMS	cu/ft	3.531 x 10 <sup>-5</sup>	
cu cms	cu in	3.102 x 10 <sup>-2</sup>	
cu cms	cu meters	106	
cu cms	cu yards	1.308 x 10 <sup>-6</sup>	
cu cms	gals	2.642 x 10 <sup>-4</sup>	
cu cms	liters	10 <sup>-3</sup>	
cu cms	pints (liq)	2.113 x 10 <sup>-3</sup>	
cu cms	quarts (liq)	1.057 x 10 <sup>-3</sup>	
CUBIC FEET	cubic cms	2.832 x 10 <sup>-4</sup>	
cu ft	cu inches	1728	
cu ft	cu meters	0.02832	
cu ft	cu yards	0.03704	
cu ft	gals	7.48052	
cu ft	liters	28.32	
cu ft pints (liq)		59.48	
l a f+	cu ft quarts (liq)		

TO CONVERT	INTO	MULTIPLY BY
CUBIC FT/MIN	cu cms/sec	472.0
cu ft/min	gals/sec	0.1247
cu ft/min	liters/sec	0.4720
cu ft/min	lbs water/min	62.43
cu ft/sec	gals/min	448.831
CUBIC INCHES	СС	16.39
cu ins	cu ft	5.787 x 10 <sup>-4</sup>
cu ins	cu meters	1.639 x 10⁵
cu ins	cu yards	2.143 x 10 <sup>-5</sup>
cu ins	gals	4.329 x 10 <sup>-3</sup>
cu ins	liters	1.639 x 10 <sup>-2</sup>
cu ins	pints (liq)	0.03463
cu ins	quarts (liq)	0.01732
CUBIC METERS	сс	104
cu M	cu ft	35.31
cu M	cu meters	61.023
cu M	cu yards	1.308
cu M	gals	264.2
cu M	liters	10 <sup>3</sup>
cu M	pints (liq)	2113
cu M	quarts (liq)	1057
CUBIC YARDS	cu cms	7.646 x 10 <sup>5</sup>
cu yds	cu ft	27
cu yds	cu ins	46,656
cu yds	cu meters	0.7645
cu yds	gals	202.0
DECIMETERS	meters	0.1
DEGREES (ANGLE)	minutes	60
degs (angle)	radians	0.01745
degs (angle)	secs	3600
DEGREES/SEC	radians/sec	0.01745
degs/sec	revs/min	0.1667
degs/sec	revs/sec	0.002778
FEET	cms	30.48
ft	ins	12
ft	meters	0.3048
ft	yds	1/3
FT. OF WATER	atms	0.02850
ft of w	ins mercury	0.8826
ft of w	kgs/sq cm	0.03048
ft of w	lbs/sq ft	62.32
ft of w	lbs/sq in	0.4328
FEET/MIN	cm/sec	0.5080
ft/min	ft/sec	0.01667
ft/min	kms/hr	0.01829
ft/min	meters/min	0.3048
ft/min	miles/hr	0.01136

## TECHNICAL INFORMATION IND. HOSE CONVERSION FACTORS

TO CONVERT	INTO	MULTIPLY BY	
FT/SEC/SEC	cms/sec/sec	30.48	
ft/sec/sec	meters/sec/sec	0.3048	
FT - POUNDS	BTUs	1.286 x 10 <sup>-3</sup>	
ft lbs	hp/hrs	5.050 x 10 <sup>-7</sup>	
ft lbs	kg-calories	3.241 x 10 <sup>-4</sup>	
ft lbs	kg-meters	0.1383	
ft lbs	kw-hrs	3.766 x 10 <sup>-7</sup>	
FT - LBS/MIN	BTUs/min	7.717 x 10 <sup>-2</sup>	
ft - Ibs/min	ftlbs/sec	0.01667	
ft - Ibs/min	hp	3.030 x 10 <sup>-5</sup>	
ft - Ibs/min	kg-calories/min	3.241 x 10 <sup>-3</sup>	
ft - lbs/min	kws	2.260 x 10 <sup>-5</sup>	
FT - LBS/SEC	BTUs/min	7.717 x 10 <sup>-2</sup>	
ft - Ibs/sec	hp	1.818 x 10 <sup>-3</sup>	
ft - Ibs/sec	kg-calories/min	1.945 x 10 <sup>-2</sup>	
ft - lbs/sec	kws	1.356 x 10 <sup>-3</sup>	
GALLONS	ccs	3785	
gals	cu ft	0.1337	
gals	cu ins	231	
gals	cu meters	3.785 x 10 <sup>-3</sup>	
gals	liters	3.785	
gals	pints (liq)	8	
gals	quarts (liq)	4	
GALLONS, IMP	US gals	1.20095	
gallons, US	Imp gals	0.83267	
GALLONS/MIN	cu ft/sec	2.225 x 10 <sup>-3</sup>	
gals/min	liters/sec	0.06308	
gals/min	cu ft/hr	8.0208	
HORSEPOWER	BTUs/min	42.44	
hp	ft-lbs/min	33,000	
hp	ft-lbs/sec	550	
hp	hp (metric)	1.104	
hp	kg-calories/min	10.70	
hp	kws	0.7457	
hp	watts	745.7	
HP - HOURS	BTUs	2547	
hp-hrs	ft-lbs	1.98 x 10 <sup>8</sup>	
hp-hrs	kg-calories	641.7	
hp-hrs	kg-meters 2.737 x		
hp-hrs	kw-hrs	0.7457	
INCHES	cms	2.540	
INS MERCURY	atms 0.0024		
ins mercury	ft-water 1.133		
ins mercury	kgs/sq cm 0.03453		
ins mercury			
ins mercury	lbs/sq in	0.4912	

TO CONVERT	INTO	<b>MULTIPLY BY</b>
INS OF WATER	atms	0.002458
ins of w	ft-water	0.07355
ins of w	kgs/sq cm	0.002540
ins of w	lbs/sq ft	5.202
ins of w	lbs/sq in	0.03613
KILOGRAMS	dynes	980,665
kgs	lbs	2.205
kgs	ton (short)	1.102 x 10 <sup>-3</sup>
kgs	grams	1000
	granis	1000
KGS/SQ CM	atms	0.9678
kgs/sq cm	ft-water	32.81
kgs/sq cm	ins mercury	28.96
kgs/sq cm	lbs/sq ft	2048
kgs/sq cm	lbs/sq in	14.22
KILOMETERS	cms	10 <sup>5</sup>
kms	ft	3281
kms	meters	10 <sup>3</sup>
kms	miles	0.6214
KMS/HR	cms/sec	27.78
kms/hr	ft/min	54.68
kms/hr	ft/sec	0.9113
kms/hr	meters/min 16.87	
kms/hr	miles/hr	0.6214
	•	
KMS/HR/SEC	cms/sec/sec	27.78
kms/hr/sec	ft/sec/sec 0.9113	
kms/hr/sec	meters/sec/sec	0.2778
KILOWATTS	BTUs/min	56.92
kws	ft-lbs/min	4.425 x 10 <sup>4</sup>
kws	ft-lbs/sec	737.6
kws	hp	1.341
kws	kg-calories/min	14.34
kws	watts	10 <sup>3</sup>
KILOWATTS - HOURS	BTUs	3415
kw-hrs	ft-lbs	2.655 x 10 <sup>6</sup>
kw-hrs	hp-hours	1.341
kw-hrs	kg-calories	860.5
kw-hrs	kw-meters 3.671 x	
LITERS	ccs	103
liters	cu ft 0.03531	
liters	cu ins 0.03531	
liters	cu meters 10 <sup>-2</sup>	
liters		
liters	gals 0.2642 quarts (liq) 1.057	
	* **	
LITERS/MIN	gals/sec	4.403 x 10 <sup>-3</sup>

## TECHNICAL INFORMATION IND. HOSE CONVERSION FACTORS

TO CONVERT	INTO	MULTIPLY BY
METERS	cms	100
meters	ft.	3.281
meters	ins	39.37
meters	kms	10 <sup>3</sup>
meters	mms	10 <sup>3</sup>
meters/min	cms/sec	1.667
meters/min	ft./min	3.281
meters/min	ft/sec	0.05468
meters/min	kms/hr	0.06
meters/min	miles/hr	0.03728
METERS/SEC	ft/min	196.8
meters/sec	ft/sec	3281
meters/sec	kms/hr	3.6
meters/sec	kms/min	0.06
meters/sec	miles/hr	2.237
meters/sec	miles/min	0.03728
MICRON	meters	10-8
microns	in	39 x 10⁻⁴
MILES/HR	cms/sec	44.70
miles/hr	ft./min	88
miles/hr	ft/sec	1.467
miles/hr	kms/hr	1.609
miles/hr	meters/min	26.82
MILLIMETERS	cms	0.1
mms	ins	0.0397
MINUTES (ANGLE)	radians	2.909 x 10 <sup>-4</sup>
NEWTON	kgs	0.1020
OUNCES	lbs	1.805
ozs	gram	28.349527
OUNCES (FLUID)	cu in	1.805
ozs (fluid)	liters	0.02957
POUNDS	ozs	16
lbs	tons (short)	0.005
lbs	newtons (N)	4.44
lbs	gram	453.5924
LBS OF WATER	cu ft	0.01605
lbs of water	cu in	27.73
lbs of water	gals	0.1204
LBS OF WATER/ MIN	cu ft/sec	2.679 x 10 <sup>-4</sup>
POUNDS/CU FT	lbs/cu in	5.787 x 10⁴
POUNDS/CU IN	lbs/cu ft	1728

TO CONVERT	INTO	<b>MULTIPLY BY</b>	
POUNDS/SQ IN	atms	0.06804	
lbs/sq in	ft water	2.311	
lbs/sq in	in mercury	2.036	
lbs/sq in	kgs/sq cm	0.07031	
RADIANS	degrees	57.29578	
TONS (LONG)	kgs	1016	
tons (long)	lbs	2240	
tons (long)	tons (short)	1.12000	
TONS (SHORT)	kgs	2000	
tons (short)	kps	907.18486	
tons (short)	tons (long)	0.89287	
tons (short)	tons (metric)	0.90718	
WATTS	BTUs/min	0.05682	
watts	ft-lbs/min	44.26	
watts	ft-lbs/sec	0.7376	
watts	hp	1.341 x 10 <sup>-3</sup>	
watts	kg-calories/min	0.01434	
watts	kws	10	
WATTS/HOURS	BTUs	3.415	
watts/hours	ft-lbs	2655	
watts/hours	hp-hrs	1.341 x 10 <sup>-3</sup>	
watts/hours	kg/calories	0.8605	
watts/hours	kg-meters	367.1	
watts/hours	kw-hrs	10 <sup>-3</sup>	

## TECHNICAL INFORMATION PRESSURE RATING CONVERSION

	TA	BLE 2: BAR TO	PSI CONVER	SION	
BAR	PSI	BAR	PSI	BAR	PSI
1	PSI	30	## ## ## ## ## ## ## ## ## ## ## ## ##	210	## PSI ## 3046.0 ## 3191.0 ## 3336.0 ## 3481.0 ## 3626.0 ## 3789.0 ## 351.0 ## 4714.0 ## 5076.0 ## 5802.0 ## 6527.0 ## 6889.0 ## 7252.0 ## 6889.0 ## 7252.0
16	217.60232.10246.60275.60390.10304.60319.10333.60348.10	110 120 130 140 150 160 170 180 190		550	

## **NOTES**


## **NOTES**


## **TERMS, CONDITIONS AND** LIMITED WARRANTY OF SALE

All prices, terms and conditions of sale are subject to MERCHANDISE SHIPPED IN ERROR change without prior notice. Buyer agrees to all terms and conditions of seller upon the placement of any and all purchase orders.

### **GENERAL**

- All orders are subject to a minimum charge of \$100.00.
- All claims must be made within seven (7) days of receipt due to shipping error. of merchandise.
- The company reserves the right at all times to reject any and all orders for any reason.

### **PAYMENT TERMS**

- Net 30 days (to approved and qualified accounts).
- We reserve the right to hold shipments against past due
- Seller may require full or partial payment in advance if, in its sole judgement, the financial condition of the buyer does not justify the terms specified.
- All past due accounts are subject to a late payment charge of 1.5% per month, or maximum allowed by law if different, along with the expenses incidental to collection including reasonable attorney's fees.
- Returned checks are subject to a minimum \$50.00 charge.

### **ACCEPTANCE, ALTERATION AND CANCELLATION OF ORDERS**

Orders for other than standard items or standard lengths may not be cancelled after purchase has been committed, production scheduled or any costs incurred.

### **RETURN OF DEFECTIVE MERCHANDISE**

Defective or failed material to be held at the buyer's premises until authorization has been granted by seller to return or dispose of merchandise. Merchandise to be returned for final inspection must be returned Freight Prepaid in the most economical way. Credit will be issued for material found to be defective upon our inspection based on prices at time of purchase.

Buyer must notify seller immediately on any merchandise shipped in error. Upon notification, merchandise is to be returned to seller either via truck on a Freight Collect basis, via carrier of our choice, or via UPS on a Freight Prepaid basis. Buyer will be reimbursed for cost of merchandise, plus any additional freight which may have been incurred

### **MERCHANDISE ORDERED IN ERROR**

Standard packaged merchandise only may be returned, provided that the merchandise is in the original buyer's possession not more than 30 days. If merchandise is accepted for return, merchandise must be returned Freight Prepaid, and buyer will be charged a minimum of 15% rehandling charge, plus a chargeback for outbound freight charges if the original order was shipped prepaid. Returns are not accepted for any merchandise that is specifically manufactured to meet the buyer's requirement of either specifications or large quantity.

### **DELIVERY. DAMAGES. SHORTAGES**

Delivery to the initial common carrier shall constitute the delivery to the buyer. Our responsibility, insofar as transportation risks are concerned, ceases upon the delivery of the merchandise in good condition to such a carrier, and all the merchandise shall be shipped at the buyer's risk.

### **GOODS DAMAGED IN SHIPMENT**

Upon receipt of shipment, any evidence of damage to original shipping package must be reported by the receiving party and a claim made with the delivering carrier upon receipt of shipment.

### **CONCEALED DAMAGE**

Any evidence of damage to material shipped, upon the opening of the original shipping package, must be reported by the receiving party to and a claim made with the delivering carrier without delay.

### LIMITED WARRANTY

The merchandise or products sold or distributed by Jason Industrial Inc. are warranted to our customers to be free from defects in material and workmanship at the time of shipment by us. All warranty claims shall be made within 90 days after we have shipped the merchandise. Our liability hereunder is limited to the purchase price of any merchandise proved defective, or, at our option, to the replacement of such merchandise upon its

THIS WARRANTY IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESSED, IMPLIED, STATUTORY, OR OTHERWISE CREATED UNDER APPLICABLE LAW INCLUDING, BUT NOT LIMITED TO, THE WARRANTY OF MERCHANT ABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL WE BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF PROFITS.



### **NON CATALOGED HOSE REQUEST**

While Jason catalogs many useful hose products for a multitude of applications, there is always the possibility that we may not catalog a hose item you need. By filling out this form, we will give our factories and Jason the opportunity to quote your request.

Company Nam	ne		Contact		
Address			Phone		
City Salesman			E-Mail Fax		
Manufacturer			Part Number		
Please fill in th	e blanks:				
ID	OD	WP PSI	Burst PSI	Length	
	he following que hose or a discha				
If a suction hose	e, what vacuum is	s required?			
What is the max	kimum temperatu	ire of the material	being conveyed? F		
		any pertinent info	ormation such as abrasion, I environment.	bend radius,	
What end conne	ections will be us	ed and how will t	hey be attached?		
Are there specia	al requirements s	uch as color, stati	c wire(s), approvals or brar	nding/layline?	



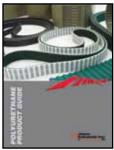


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