



GAUGES

PIPE FITTINGS/ VALVES

HOSES

SHEET RUBBER

TERMS OF SALE

TERMS:

1/2% 10 Days, net 30 Days

FREIGHT:

All shipments are made FOB Seal Fast Inc. or Point of Manufacturer. (Applies to shipments from Houston Warehouse Only) Freight prepaid on 1000 net couplings and accessories, \$1500 Net Couplings, PVC Tubing, Braided Tubing and Fire Hose. Freight prepaid on \$3000 Net Couplings, Rubber Hose, PVC Hose and Sheet Rubber with the exclusion of all PVC Suction including 6" and 8" PVC Suction ONLY orders. If combined with other items freight is prepaid at \$3000 Net, otherwise these items will Not be applied toward prepaid freight. Effective immediately, regardless of invoice value, all uncoupled cut lengths of hoses are shipped FOB Seal Fast Inc. Seal Fast Inc. reserves the right to determine the most Economical shipping method on all prepaid shipments. In addition, Seal Fast Inc. reserves the right to refuse any prepaid shipments exceeding 6% freight cost of the order unless items are added or subtracted to keep said freight cost at or below 6%. Applies to Continental United States, excluding Alaska and Hawaii. Any evidence of shortage must be reported to Seal Fast Inc. within 10 days. Any Damage to hose/hoses, etc. customer is responsible for filing a claim with the delivery carrier within 10 days. Seal Fast Inc. will not issue credit.

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MINIMUM INVOICE:

All invoices are subject to a minimum billing charge of 50.00 net. Returned checks are subject to a \$25.00 service charge.

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Orders will be accepted subject to delays caused by accident, strike, fire or other causes beyond the control of the seller including failure of seller's suppliers to deliver. Prices, discounts and other specifications are subject to change without notice. All prices are subject to any applicable taxes imposed. The possessions of this price schedule is not to be construed as an offer to sell at the prices shown. Special price for volume quotes will be accepted in writing only.

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STOCKING WAREHOUSES

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- Seal Fast reserves the right to alter product appearance without notice. Some product features shown in pictures may no longer be available.

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- We reserve the right to alter product specifications without notice.

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- Our Sales Team will do their best to assist in choosing the best product for a particular application. However, it is ultimately the customer's responsibility to determine the correct product for the correct application.
- Seal Fast will not be held liable for the abuse or misuse of our products in a manner in which they are not designed.
- Seal Fast cannot guaral tee the integrity of an assembly if other manufacturers parts are used.

Product Availability

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Product Pricing

- Seal Fast is constantly doing our best to maintain pricing levels. However, circumstances change and while many prices go down, others will increase.
- Please contact your sales associate for current pricing.

Local: (713) 675-6324 National: (800) 231-0734 Local: (713) 675-6324 National: (800) 231-0734 FIRE PROTECTION

COUPLINGS

DISCLAIMERS

FIRE PROTECTION

VALVES

Size	Brass		
0.20	Part #	List	
1-1/2" NST x 1-1/2" NST x 1-1/2" NST	1410610		
2-1/2" NST x 1-1/2" NST x 1-1/2" NST	1410612		
2-1/2" NST x 2-1/2" NST x 2-1/2" NST	1410615		



Size	Hardcoat Aluminum		
	Part #	List	
(2) 2-1/2" Female NST Swivel Inlets x 2-1/2" Male NST Outlet. Optional Drain Valve.	585		

PLAIN WYE

Working PSI - (200)



Size	Hardcoat Al	luminum
CIEC	Part #	List
2-1/2" Female NST Inlet x (2) 2-1/2" Male NST Outlets	587	



Size	Cast B	rass
O120	Part #	List
3" F NPT x 2-1/2" M NST	2928050	
2-1/2" F NPT x 2-1/2" M NST	2928150	



Size	Brass	
0.20	Part #	List
1-1/2" F NPT x 1-1/2" M NST	2815725	
1-1/2" F NPT x 1-1/2" M NPSH	2815735	
2-1/2" F NPT x 2-1/2" M NST	2815750	

LEADER LINE WYE



Size	Bras	s
0120	Part #	List
2-1/2" Female NST x 1-1/2" MNST x 1-1/2" MNST	520-BC	

LEADER LINE WYE-1/4 TURNBALL TYPE



Size	Brass		
0120	Part #	List	
2-1/2" NH x 1-1/2" NH x 1-1/2" NH	1733730		
2-1/2" NPSH x 1-1/2" NH x 1-1/2" NH	1733731		

LEADER LINE WYE



Size

2-1/2" FNST x 1-1/2" MNST x 1-1/2" MNST



ANGLE HOSE - FEMALE X FEMALE

Working PSI - (150)



Size	Brass	
	Part #	List
1-1/2" F NPT x 1-1/2" F NPT	2815825	
2-1/2" F NPT x 2-1/2" F NPT	2815855	

FORESTRY WYES



Size	Hardcoat Aluminum	
GIEC .	Part #	List
1" Female NPSH x 1" Male NPSH x 1" Male NPSH	505	
1-1/2" Female NST $ imes$ 1-1/2" Male NST $ imes$ 1-1/2" Male NST	506	

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VALVES

SIAMESE SUCTION

HYDRANT WYES

▶ Working PSI - (200) | Used as suction inlet collector for pumpers | Self locking handles | weight 15.1 lbs



	Size	Hardcoat Aluminum		Brass	
	3120	Part #	List	Part #	List
ı	(2) 2-1/2" Female NST Swivel Inlets with Strainers	545	1452.83	545BC	

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Working PSI - (200) | weight 33 lbs

Bronze/Brass Size Part # 540-BC



VALVES

SIAMESE SUCTION - 3 WAY

▶ Working PSI - (200) | Used as suction collector for Pumpers | Self Locking Handle | weight 20 lbs



Size	Hardcoat Aluminum	
	Part #	List
(3) 2-1/2" Female NST Swivel Inlets with Strainer x 2-1/2" Female NST Outlet	555	

HYDRANT - 2 WAY

▶ Working PSI - (200) | Used as suction collector for Pumpers | Self Locking Handle | weight 20 lbs

Size





2-1/2" HYDRANT

▶ Working PSI - (200) | 2-1/2" Full Flow Waterway | Self locking handle for positive positioning | weight 7 lbs



Size	Hardo	oat Aluminum
	Part #	List
2-1/2" Female NST x 2-1/2" Male NST	595	

HYDRANT-3WAY

▶ Working PSI - (200) | weight 21.6 lbs

Size	Hard	coat Aluminum
<u> </u>	Part #	List
Female NST x (3) 2-1/2" Male NST w/Self Locking Handle	550	



2-1/2" GATE

Working PSI - (200) | Wedge Seat Gate Valve Non-Rising Stem Design | Crank Handle | weight 4.5 lbs



Size	Hardc	oat Aluminum
CIEC	Part #	List
2-1/2" Female NST x 2-1/2" Male Outlet	596	

WATER THIEF

▶ Working PSI - (200) | Self Locking Handle | Used for laying, extending, or adding 1-1/2" or 2-1/2" lines without interfering with operation of other lines | weight 13.5 lbs

Size	Hard	coat Aluminum
<u> </u>	Part #	List
2-1/2" Female NST x 2-1/2" Male NST x (2) 1-12" Male NST	510	



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TECHNICAL DATA

CORROSION RESISTANCE OF COUPLING MATERIALS

CAUTION: The following data has been compiled from generally available sources end should not be relied upon without consulting and following the specific recommendations of the manufacturer regarding particular coupling materials.

RATINGS: 1. Excellent 3. Fair Conditi 2. Good x. Not Satisfac	onal		lo rationg in						
z. Good X. Not Satisfat	Clory								
AGENT	Mall. From Steel	Brass	Bronze	Aluminum	Glass	Stainless 410, 416, 430	Stainless 302, 202, 304, 308	Stainless 316	Monel
Acetate, Solvents, Crude		3				2	1	1	2
Acetate, Solvents, Pure		1	1	1		1	1	1	1
Acetic Acid	X	X	X	2	1	Χ	2	2	2
Acetic Acid Vapor	X	X		3		Χ	2	2	3
Acetic Anhydride	X	X		2		Χ	2	2	2
Acetone	1	1	1	1	1	1	1	1	1
Acetylene	1	2		1		1	1	1	2
Alcohols	1	2		1		1	1	1	1
Aluminum Sulfate	X	3	3	3	1	Χ	3	2	2
Alums	X	3	2	3	1	Χ	3	2	2
Ammonia Gas	1	Χ	3	1	3	1	1	1	Χ
Ammonium Chloride	1	3		1*		3	3	1	1
Ammonium Hydroxide	2	Χ		2		1	1	1	3
Ammonium Nitrate	1	X		2		1	1	1	3
Ammonium Phosphate (Ammoniacal)		Χ				1	1	1	2
Ammonium Phosphate (Neutral)		3				1	1	1	2
Ammonium Phosphate (Acid)		3				3	2	1	2
Ammonium Sulfate	1	3				2	1	1	2
Asphalt	1	2				2	1	1	1
Beer	2	2	1	1		Χ	1	1	1
Beet SugarLiquors	1	2		1		2	1	1	1
Benzene, Benzol	1	1	1	1	1	1	1	1	1
Benzine (petroleum-naphtha)	1	1		1		1	1	1	1
Borax	2	2				1	1	1	1
Boric Acid	X	3		1		3	2	1	1
Butane, Butylene	1	1	1	1		1	1	1	1
Butadiene		1				1	1	1	1
Calcium Bisulfate		X				X	2	1	X
Calcium Hypochlorite	3	3	3	Х	3	X	3	2	3
Cane Sugar Liquors	1	2		1		2	1	1	1
Carbon Dioxide (Dry)	1	1		1		1	1	1	1
Carbon Dioxide (Wet & Aqueous Sol)	2	3		2		2	1	1	2
Carbon Disulfide	2	3		2		2	1	1	3
Carbon Tetrachloride	3	1	2	3	1	1	1	1	1
Chlorine (Dry)	2	2	2	1	2	2	2	2	1
Chlorine (Wet)	X	Χ	3	Χ	2	X	Χ	3	3
Chromic Acid		Х	Х	Х	1	3	2	2	3
Citric Acid	X	3		1		3	Χ	1	2
Coke Oven Gas	1	3		2		1	1	1	2
Copper Sulfate	X	X		Χ		1	1	1	3
Core Oils		1	1			1	1	1	1
Cottonseed Oil	1	1	1	1		1	1	1	1
Creosote	2	3		1		1	1	1	1
Ethers	2	1		1		1	1	1	1
Ethylene Glycol	2	2				1	1	1	1
Ferric Chloride	X	X	X	Χ	1	X	X	X	X
Ferric Sulfate	X	X		X		1	1	1	3
Formaldehyde	2	2		2		1	1	1	1
							_	_	

*3 to X at high temperatures. Local: (713) 675-6324

Chemical Chart is reprinted from 1996 RMA Hose Handbook

National: (800) 231-0734

CORROSION RESISTANCE OF COUPLING MATERIALS

CAUTION: The following data has been compiled from generally available sources end should not be relied upon without consulting and following the specific recommendations of the manufacturer regarding particular coupling materials.

following the specific red	commendations of	the manufac	turer regard	ling particul	ar coupling i	materials.			
RATINGS: 1. Excellent 3. Fair Co		NOTES: No	rationg indi	cates no da	ta available				
2. Good x. Not Sa	itisfactory		3						
AGENT	Mall. From Steel	Brass	Bronze	Aluminum	Glass	Stainless 410, 416, 430	Stainless 302, 202, 304, 308	Stainless 316	Monel
Formic Acid	X	2		Х		Х	2	1	2
Freon	3	1	1	1		1	1	1	1
Furfural	1	2		1		1	1	1	1
Gasoline (Sour)	3	3		3		3	1	1	Χ
Gasoline (Refined)	1	1	1	1		1	1	1	1
Gelatin	1	3		1		1	1	1	1
Glucose	1	1		1		1	1	1	1
Glue	1	3		1		1	1	1	1
Glycerine or Glycerol	1	2		1	4	1	1	1	1
Hydrochloric Acid	X	X	X	X	1	X	X	X	X
Hydrocyanic Acid	3	X	2	1 X	V	3 3	1 X	1 X	2 X
Hydrofluoric Acid Hydrogen Fluoride	X	3	3	X	Χ				1
Hydrogen Fluoride Hydrogen	1	3		1		X 1	X 1	3	1
Hyrogen Peroxide	X	X		1		1	2	1	2
Hydrogen Sulfide (Dry)	3	3		2		3	2	1	3
Hydrogen Sulfide (Wet)	3	3		2		3	2	1	3
Lacquers and Lacquer Solver		2		1		1	1	1	1
Lactic Acid	X			3		_	3	2	1
Lime-Sulfur	2	X		2		1	1	2	
Linseed Oil	1	1		1		_	1	1	1
Magnesium Chloride	3	3		X		3	2	1	1
Magnesium Hydroxide	1	2		Х		1	1	1	1
Magnesium Sulfate	2	2		3		1	1	1	1
Mercuric Chloride	3	Х		Х		Х	Χ	3	X
Mercury	1	Χ		X		1	1	1	2
Milk	3	3		1		2	1	1	3
Molasses	2	Χ		2		2	1	1	1
Natural Gas	1	2		1		1	1	1	1
Nickel Chloride		X		X		Χ	3	2	2
Nickel Sulfate		3		X		3	2	1	1
Nitric Acid	X	X	X	3	1	2	2	2	Χ
Oleic Acid	2	3		1		2	2	1	1
Oxalic Acid	3	3		2		3	2	1	1
Oxygen	1	1	1	1		1	1	1	1
Palmitic Acid	1	3		1		2	2	1	1
Petroleum Oils (Sour)		3		4		3	1	1	X
Petroleum Oils (Refined)	1	1	1	1	_	1	1	1	1
Phosphoric Acid 25% Phosphoric Acid 25-50%	3	X		3	3	X	3	1	2
Phosphoric Acid 25-50% Phosphoric Acid 50-85%	X	X		X	3	X	X	2	2
	X 3	X		X 3	X	X 2	X 1	2	2 X
Picric Acid				3				1	
Potassium Chloride Potassium Hydroxide	3	3 X		X		3	2	1	1
Potassium Hydroxide Potassium Sulfate	2	2		1		1	1	1	1
Propane Propane	1	1				1	1	1	1
Rosin (Dark)	1	2			1	1	1	1	1
Rosin (Light)		X		1	_	1	1	1	2
(9)									

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CORROSION RESISTANCE OF COUPLING MATERIALS

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RATINGS: 1. Excellent 2. Good 2. Not Satisfact 2. Satisfa	onal	NOTES: N							
AGENT	Mall. From Steel	Brass	Bronze	Aluminum	Glass	Stainless 410, 416, 430	Stainless 302, 202, 304, 308	Stainless 316	Monel
Shellac		2		2		1	1	1	1
Sludge Acid		X				Χ	Χ	3	2
Soda Ash (Sodium Carbonate)	1	2		X		1	1	1	1
Sodium Bicarbonate	3	1		Χ		1	1	1	1
Sodium Bisulfate	X	3		3		Χ	1	1	1
Sodium Chloride	2	3	2	Χ	1	3	2	1	1
Sodium Cyanide	2	Χ		Χ		1	1	1	2
Sodium Hydroxide	3	Χ	3	Χ	Χ	2	2	2	1
Sodium Hypochlorite	Х	Χ		Χ		X	3	2	3
Sodium Metaphosphate	X	3		1		2	1	1	1
Sodium Nitrate	1	3		1		1	1	1	1
Sodium Perborate	3	3		1		1	1	1	1
Sodium Peroxide	3	3		1		1	1	1	1
Sodium Phosphate (Alkaline)		3				1	1	1	1
Sodium Phosphate (Neutral)		2				1	1	1	1
Sodium Phosphate (Acid)		2				Χ	2	1	1
Sodium Silicate	1	3		Χ		1	1	1	1
Sodium Sulfate	1	2		3		1	1	1	1
Sodium Sulfide	1	Χ				1	1	1	2
Sodium Thiosulfate (Hypo)	3	Χ		Χ		1	1	1	2
Stearic Acid	3	3		3		2	2	1	1
Sulfate Liquors		Χ				1	1	1	2
Sulfur	2	X		2		2	2	1	3
Sulfur Chloride	X	Χ				X	3	2	2
Sulfur Dioxide (Dry)	2	1		1		1	1	1	1
Sulfur Dioxide (Wet)		Χ				Χ	2	1	Χ
Sulfuric Acid 10%	X	Χ	3	3		Χ	Χ	2	2
Sulfuric Acid 10-75%	X	Χ	Χ	Χ		Χ	Χ	Χ	2
Sulfuric Acid 75-95%	3	X	X	Χ		3	3	2	3
Sulfuric Acid 95%	2	Χ	Χ			2	2	2	Χ
Surlfurous Acid	X	Χ		Χ		Х	3	2	Х
Tannic Acid	3	3	1	Χ			1	1	1
Tar	1	2		1		2	1	1	1
Toluene, Toluol	1	1		1		1	1	1	1
Trichlorethylene	3	1		3		1	1	1	1
Turpentine		3		1		3	1	1	1
Varnish	2	2				1	1	1	1
Vegetable Oils	1	2		1		1	1	1	1
Vinegar	3	3		3		3	2	1	2
Water (Acid Mine Water)	3	X		3		2	1	1	3
Water (Fresh)	3	1		1		1	1	1	1
Water (Salt)	3	3	2	Χ		3	2	2	1
Whiskey	X	2				3	1	1	2
Wines	X	2				3	1	1	2
Xylene, Xylol	2	1		1		1	1	1	1
Zinc Chloride	X	X		Χ		3	2	1	1
Zinc Sulfate	3	3		3		3	2	1	1

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OIL & GASOLINE RESISTANCE

Rubber hose is used to convey petroleum products both in the crude and refined stages. The aromatic content of refined gasoline is often adjusted to control the octane rating. The presence of aromatic hydrocarbons in this fuel generally has a greater effect on rubber components than do aliphatic hydrocarbons. Aromatic materials in contact with rubber tend to soften it and reduce its physical properties. For long lasting service, the buyer of gasoline hose should inform the hose manufacturer of the aromatic content of the fuel to be handled so that the proper tube compound can be recommended for the specific application.

The effects of oil on rubber depend on a number of factors that include the type of rubber compound, the composition of the oil, the temperature and time of exposure. Rubber compounds can be classified as to their degree of oil resistance based on their physical properties after exposure to a standard test fluid. In this RMA classification, the rubber samples are immersed in IRM 903 oil at 100°C for 70 hours. (See ASTM Method D-471 for a detailed description of the oil and the testing procedure.) As a guide to the user of hose in contact with oil, the oil resistance classes and a corresponding description are listed.

PHYSICAL PROPERTIES AFTER EXPOSURE TO OIL:

		VOLUME CHANGE MAXIMUM	TENSILE STRENGTH RETAINED
CLASS A	(HIGH OIL RESISTANCE)	+25%	80%
CLASS B	(MEDIUM/HIGH OIL RESISTANCE)	+65%	50%
CLASS C	(MEDIUM OIL RESISTANCE)	+100%	40%

CHEMICAL RECOMMENDATIONS

The materials being handled by flexible rubber hose are constantly increasing in number and diversity. To assist in the selection of the proper elastomer for the service conditions encountered, the following table has been prepared. The reader is cautioned that it is only a guide and should be used as such, as the degree of resistance of an elastomer with a particular fluid depends upon such variables as temperature, concentration, pressure, velocity of flow, duration of exposure, aeration, stability of the fluid, etc. Also variations in elastomer types and special compounding of stocks to meet specific service conditions have considerable influence on the results obtained. When in doubt, it is always advisable to test the tube compound under actual service conditions. If this is not practical, tests should be devised that simulate service condtions or the hose manufacturer contacted for Recommendations.

The following table lists the more commonly used materials, chemicals, solvents, oils, etc. The recommendation are based on room temperature and pressure conditions normally recommended for the particular type of hose being used. Where conditions beyond this can be met readily, they have been so indicated; where conditions are not normal and cannot be readily met, the hose manufacturer should always be consulted. The table does not imply conformance to the Food & Drug Administration requirements of Federal or State Laws when handling food products.

TABLE OF CHEMICAL, OIL & SOLVENT RESISTANCE OF HOSE:

WARNING: The following data has been compiled from generally available sources and should not be relied upon without consulting and following the hose manufacturer's specific chemical recommendations. Neglecting to do so might result in failure of the hose to fulfill its intended purpose, and may result in possible damage to property and serious bodily injury

RESISTANCE RATING

- A Good Resistance, usually suitable for service.
- F Fair Resistance, the chemical has some deteriorative effects, but the elastomer is still adequate for moderate service.
- C- Depends on Condition, moderate service may be possible if chemical exposure is limited or infrequent.
- X-Not recommended, unsuitable for service.
- I Insufficient Information, not enough data available at the time of publication to determine rating.

RELASTOMERS/PLASTICS

NR - Natural Rubber **IR** - Isoprene, synthetic **SBR** - Styrene-butadiene

CR-Chloroprene **NBR** - Nitrile-butadiene

IIR-Isobutene-isoprene **CSM** - Chloro-sulfonylpolyethylene

EPDM - Ethylene-propylenediene-terpolymer MQ - Dimethyl-polysiloxane

FKM-Fluoracarbon rubber **CM** - Chloro-polyethylene ECO/CO-Ephichlorohydrin

EXLPE- Chloro-sulfonvlpolyethylene

National: (800) 231-0734 Local: (713) 675-6324

TECHNICAL DATA

ELASTOMERS

Commonly used Elastomers:									Special	Elastor	ners:	
MATERIAL	NR lor IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	СМ	ECO CO	×
		(1	Maximu	□ m Tempe	erature	100° F (3	38°C) Un	less Ot	herwise	Specifie	ed	
Acetic Acid, Dilute, 10%	F	С	С	С	Α	С	Α	Α	X	Α	F	
Glacial	С	X	X	X	F	С	F	F	X	Α	X	
Anhydride	С	С	F	F	F	Α	1	С	X	Α	X	
Acetone	Α	Α	F	X	Α	F	Α	Α	X	Α	X	
Acetylene	Α	Α	F	Α	Α	F	Α	С	Α	- 1	1	
Air 150°F (65°C)	Α	Α	Α	Α	Α	Α	Α	Α		Α	Α	
Aluminum Chloride 150°F (65°C)	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	
Aluminum Fluoride 150°F (65°C)	Α	Α	Α	Α	Α	Α	Α	F			Α	
Aluminum Sulfate 150°F (65°C)	Α	Α	Α	А	Α	Α	А	Α	Α	Α	I	
Alums 150°F (65°C)	Α	Α	Α	Α	Α	Α	Α	Α		Α		
Ammonia Gas	Α	Α	Α	Α	Α	Α	А	Α	X	Α	I	
Ammonium Chloride	Α	Α	Α	Α	Α	А	Α	С	Α	Α	Α	
Ammonium Hydroxide	С	F	F	F	Α	Α	Α	Α	Α	Α	- 1	
Ammonium Nitrate	Α	Α	Α	Α	Α	Α	Α	Α		ı	Α	
Ammonium Phosphate, monobasic	Α	Α	Α	Α	Α	Α	Α	Α		A	I	
dibasic	A	A	A	A	A	A	A	A		I .	l l	
tribasic	A	A	Α	Α	Α	A	Α	Α		1		
Ammonium Sulfate	A	A	A	A	A	A	A	A	A	A		
Amyl Acetate	F	Χ	Χ	Χ	F	Χ	А	Α	Χ	С	Χ	
Amyl Alcohol	Α	А	А	А	А	А	Α	А	А	Α	А	
Aniline, Aniline Oil	X	X	C	X	A	X	C	C	A	C	X	
Aniline Dyes	F	F	F	F	A	F	С	С				
Asphalt	X	X	F	F	X	F	X		Α		A	
Barium Chloride 150°F (65°C)	А	Α	Α	Α	Α	Α	А	А	А	А	Α	
Barium Hydroxide 150°F (65°C)	А	А	А	А	А	А	А	А	А	А	А	
Barium Sulfide 150°F (65°C)	A	A	A	A	A	A	A	A	A	1	A	
Beer	A	A	A	A	A	A	A	A	A	i	A	
Beet Sugar Liguors	A	Α	Α	Α	A	A	Α	A	A	i	1	
Benzene, Benzol	X	X	X	C	X	X	X	С	Α	С	X	
Benzine, petroleum ether and												
Benzine, petroleum naphtha	Х	Χ	С	F	X	F	Χ	С	А		1	
Black Sulfate Liquor	Α	Α	А	Α	Α	Α	Α	A		1	i	
Blast Furnace Gas	С	С	Α	С	С	С	С	С	Α	ı	ı	
Borax	А	А	А	А	А	А	А	А	А	I	- 1	
Boric Acid	А	А	А	А	А	А	А	А	А	1	А	
Bromine	Х	X	X	X	X	С	X	F	Α	С		
Butane	X	X	F	Α	X	Α	X	A	Α	A	А	
Butyl Acetate	С	X	X	X	F	X	F	Α	X	F	X	
Butyl alcohol, butanol	Α	Α	Α	Α	Α	А	Α	Α	Α	F	- 1	
Calcium bisulfate	С	С	Α	Α	F	Α	F	С	Α	Α	-	
Calcium chloride	Α	Α	Α	Α	Α	А	Α	Α	Α	Α	А	
Calcium hydroxide	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	А	
Calcium hypochlorite	X	X	Χ	X	Α	F	Α	С	Α	Α	F	
Caliche liquors	А	Α	А	Α	Α	Α	Α				ı	
Cane sugar liquors	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	
Carbolic acid, phenol	С	С	С	С	С	С	Α	Α	Α	Α		

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ELASTOMERS

Commonly used Elastomers:									Special	Elastor	ners:	
MATERIAL	NR Ior IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	СМ	ECO CO	XLP
		(Ma	aximum	Temper	ature 1	00° F (38	3°C) Unle	ss Oth	erwise S	pecified	1	
Carbon dioxide, dry/wet	А	Α	Α	Α	Α	А	А	Α	Α	Α	Α	А
Carbon disulfide	X	Χ	Χ	Χ	X	Χ	Χ	С	Α	С		С
Carbon monoxide 150°C (65°C)	С	С	С	С	С	F	С	А	А	I		А
Carbon tetrachloride	X	Χ	Χ	С	Χ	X	Χ	С	Α	С	F	Α
Castor oil	А	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Δ
Cellosolve acetate	F	F	X	X	Α		Α	С	С			<u> </u>
CFC-12	X	X	Α	Α	F		F	Χ	Α		Α	I
China wood oil, tung oil	X	Χ	F	Α	Α	F	Α	Α	С		- 1	A
Chlorine, dry/wet	X	Χ	Χ	Χ	Χ	Χ	Χ	Χ	С	Χ	Χ	F
Chlorinated solvents	X	Χ	X	X	Χ	X	X	С	С	С		A
Chloroacetic acid	X	С	С	С	X	A	l	С	X			A
Chlorosulfonic acid	X	X	С	С	X	X	X	С	X			F
Chromic acid	X	X	X	X	С	A	I	С	С	A		F
Citric acid	А	А	А	F	Α	А	А	А	А	А	А	F
Coke oven gas	С	С	С	С	С	Α		Α	X	Α	X	
Copper chloride 150°F (65°C)	С	Α	F	Α	Α	F	А	Α	Α	Α	I	P
Copper sulfate 150°F (65°C)	С	Α	Α	А	F	Α	Α	Α	Α	Α	Α	A
Corn oil	Х	С	F	Α	Α	F	С	Α	Α	Α	Α	Δ
Cottonseed oil	X	С	F	Α	А	F	С	А	А	А	I	P
Creosote, coal tar	X	Χ	F	А	Χ	F	Χ	С	F		Χ	A
Wood	Х	Χ	F	Α	X		X	С	Α			P
Creosols, cresylic acid	С	Χ	X	С	С	F	Χ	С		F		A
Ethers	С	С	С	С	С	F	X	С	Χ	Α		P
Ethyl acetate	F	Χ	Χ	Χ	F	Χ	F	F	X	F	Χ	F
Ethyl alcohol	А	Α	А	А	А	А	А	А	А	Α	А	P
Ethyl cellulose	F	F	F	F	F		F	С	Χ	F		P
Ethyl chloride	А	F	F	X	Α	F	Α	С	F	F	F	F
Ethylene glycol	А	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	P
Ferric chloride 150°F (65°C)	А	Α	Α	Α	Α	Α	А	Α	1	Α	Α	P
Ferric Sulfate 150°F (65°C)	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	P
Formaldehyde	А	Α	С	Α	Α	А	А	Α	Α	Α	F	P
Formic acid	Α	Α	С	F	Α	Α	Α	Α	X	Α	F	F
Fuel oil	X	Χ	Α	Α	Χ	F	Χ	С	А	F	Α	P
Furfural	X	С	С	X	A	F	С	С	X	A	Χ	A
Gasoline, Non Leaded	X	X	X	Α	X	X	X		Α	С	Α	P
Gasoline, + MTBE	X	X	X	Α	X	X	X	С	Α	С	Α	A
Hi-test-+ MTBE	X	X	X	A	X	X	X	С	A	С	Α	A
Gelatin	А	Α	Α	Α	Α	Α	А	Α	Α		Α	A
Glucose	A	A	A	A	A	A	A	Α	A		A	A
Glue	F	F	A	A	F	A	A	A	С		A	A
Glycerine, glycerol	Α	Α	Α	Α	Α	Α	Α	Α	А	Α	Α	A
Green sulfate liquor	A	A	Α	Α	Α	A	Α	Α	A	A	Α	Α
HFC-134A	F	Χ	Α	Α	Α	F	Α		X	F		A

Local: (713) 675-6324 10 National: (800) 231-0734 Local: (713) 675-6324 11 National: (800) 231-0734

TECHNICAL DATA

ELASTOMERS

Commonly used Elastomers:									Special	Elastor	ners:	
MATERIAL	NR lor IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	СМ	ECO CO	XLI
		(1)	/laximu	m Tempe	erature	100° F (38°C) Un	less Otl	nerwise	Specifie	ed	
Hydraulic fluids												
Petroleum	Х	X	Α	Α	X	F	Х			Α	Α	
Phosphate ester alkyl	Χ	X	С	X	Α	X	А			Α	X	
Phosphate ester arly	X	X	X	X	С	X	С			С	Х	
Phosphate ester blends		X	Χ	X	Χ	X	X	С			С	
Silicate ester	X	Χ	С	С	Х	С	Χ			С	С	
Water-Glycol	А	А	А	А	Α	А	Α		Α	Α	Α	
Hydrobromic acid	C	X	C	C	A	Α	A	С	Α	Α	7.	
Hydrochloric acid	A	X	X	X	С	С	C	С	Α	Α	X	
Hydrocyanic acid	F	F	C	F	C	A	С	A	Α			
Hydrofluoric acid	X	X	X	X	С	A	С	X	Α	Α		
Hydrofluosilicic acid	Α	F	F	F	Α		Α	Α	Α	Α		
Hydrogen Gas	F	F	Α	Α	Α		Α	Α	Α		Α	
Hydrogen peroxide	Χ	X	С	С	С	С	С	Α	Α	Α		
Hydrogen sulfide, dry	С	С	F	С	Α	Α	Α	С	F			
wet	С	С	F	С	Α	А	А	С	С		F	
Kerosene	V	V		٨	V	С	X	0	٨	٨	٨	
Lacquers	X	X	F X	A X	X C	X	X	С	A X	Α	A X	
Lacquers solvents	X	X	X	X	С	X	X		X		X	
Lactuers solvents Lactic acid	C	C	C	C	С	A	C	Α	A		^	
Linseed oil	С	X	F	A	A	A	A	A	A	Α	Α	
Emocca on				, ,	, ,	7.	, (, ,	7.	7.	7.	
Lubricating oil, crude	Χ	X	F	А	Χ	С	X	С	Α		Α	
refined	X	Χ	F	Α	X	С	X	С		Α	Α	
lagnesium chloride 150°F (65°C)	Α	Α	Α	Α	Α	А	Α	Α	Α	Α	Α	
lagnesium hydroxide 150°F (65°C)	Α	F	F	F	Α	Α	Α	F	Α	Α	Α	
lagnesium sulfate 150°F (65°C)	А	А	Α	А	Α	А	А	Α	А	А	А	
	_	_	0	_			•		•			
Mercuric chloride	F	F	С	F	A	Α	A	A	A		A	
Mercury	A	A	A	A	A	A	A	A	A	۸	A	
Methyl alcohol, methanol	A	A C	A	A	A	A	A	A	С	Α	F	
Methyl chloride Methyl ethly ketone	C	X	C	C	C F	X	C A	X C	A X	С	Χ	
Methyl ethly Retorie			^		1	C		C	^	C	^	
Methyl isopropyl ketone	Χ	X	Χ	X	F	С	С	С	X	F	X	
MTBE												
Milk	С	С	F	F	Α	Α	Α	Α	Α	Α	Α	
Mineral oils	Х	С	F	Α	X	F	X	Α	Α	Α	Α	
Natural gas	С	С	Α	Α	С	Α	X	С	Α	Α	Α	
Nickel chloride 150°F (65°C)	Α	Α	Α	А	Α	Α	Α	Α	Α	Α	T	
Nickel sulfate 150°F (65°C)	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	- 1	
Nitric acid, crude	Х	Х	Χ	Х	С	С	Х	Χ	С	Α	X	
Diluted 10%	Χ	X	С	X	С	С	X	Χ	С	Α	X	
Concentrated 70%	Х	Х	Х	X	С	С	X	Χ	С	X	X	
Nitrobenzene	Χ	X	Χ	X	Χ	Χ	X	С	F	С	X	
Oleic acid	Х	F	С	F	F	F	F	Α	С	Α		
Oleum spirits	Χ	С	С	С			1		С			

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ELASTOMERS

Commonly used Elastomers:									Special	Elaston	ners:	
	NR											
MATERIAL	lor IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	СМ	ECO CO	XLPE
		(Ma	aximum	Temper	ature 1	□ 00° F (38	°C) Unle	ess Oth	erwise S	pecified	l	
Oxalic acid	F	С	F	F	Α	Α	Α	Α	Α	Α	F	Α
Oxygen	F	С	Α	С	Α		Α	Α	Α	Α	F	Α
Palmitic acid	Χ	F	Α	Α	F	F	F	С	А	А	F	Α
Perchlorethylene	Х	Х	X	С	Χ	Х	X	С	Α	С	F	Α
Petroleum oils and crude 200°F (95°C)	X	X	F	Α	Χ	С	X	С	А	С	F	Α
Phosphoric acid, crude	А	С	С	С	С	Α	С	С	Α	Α		Α
pure 45%	А	С	С	С	С	А	С	С	А	Α		- 1
Picric acid, molten	С	С	С	С	С		I					I
water solution	А	С	F	F	А	А	- 1	Α	А			- 1
Potassium chloride	А	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α
Potassium cyanide	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	А	Α
Potassium hydroxide	F	F	С	С	Α	Α	Α	Α	С	Α	Α	Α
Potassium sulfate	А	А	Α	А	Α	А	А	Α	А	А	Α	А
Propane	Χ	Χ	F	Α	Χ	F	Χ	Α	А	Α	Α	Α
Sewage	С	С	F	Α	С	Α	С	С	Α		ı	Α
Soap solutions	Α	Α	F	Α	А	Α	Α	Α	Α	Α	Α	Α
Soda ash, sodium carbonate	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α
Sodium bicarbonate, baking soda	А	А	А	А	А	А	А	А	А	Α	Α	А
Sodium bisulfate	Α	Α	Α	Α	А	А	Α	Α	А	А	Α	Α
Sodium chloride	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α
Sodium cyanide	Α	Α	Α	Α	Α	А	Α	Α	А	Α	Α	Α
Sodium hydroxide	F	F	С	С	Α	С	Α	Α	С	Α	F	Α
Sodium hypochlorite	X	Χ	Χ	Χ	Α	F	А	С	А	Α	F	F
Sodium metaphosphate	А	Α	С	Α	А	F	А	А	А	А	1	Α
Sodium nitrate	C	C	С	C	Α	A	A	C	7 (A	A	A
Sodium perborate	С	С	С	С	Α	Α	Α	А	А	, ,	7.	Α
Sodium peroxide	С	С	С	С	Α	Α	Α	С	Α			Α
Sodium phosphate.monobasic	A	F	С	F	Α	Α	Α	А	Α	А		А
dibasic	А	F	С	F	А	А	А	А				А
tribasic	А	F	С	F	А	Α	Α	Α				А
Sodium silicate	А	Α	Α	Α	Α	Α	Α	Α	Α	Α	1	А
Sodium sulfate	А	Α	Α	Α	А	А	Α	Α	А	Α	А	А
Sodium sulfide	А	А	А	А	Α	А	А	Α	А	А	I	А
Sodium thiosulfate, "hypo"	А	А	А	А	А	А	А	А	А	А	I	А
Soybean oil	X	С	F	Α	Α	A	Α	Α	A	Α	A	A
Stannic chloride	Α	А	Α	Α	F	Α	F	Α	Α	Α	1	Α
Steam 450°F (230°C)	С	С	С	С	А	А	F	С	X		Χ	Χ
Stearic acid	X	X	С	F	F	С	F	Α	1		F	Α
Sulfur	F	F	Α	F	Α	Α	Α	F	Α		F	С
Sulfur chloride	X	X	С	С	Χ	Α	Χ	С	А			Α
Sulfur dioxide , dry	С	С	С	С	С	Α	С	Α	Α		I	I
Sulfur trioxide, dry	X	С	С	С	С	F	С	Α	А			-1
Sulfuric acid, 10%	А	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α

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ELASTOMERS

Commonly used Elastomers:									Special Elastomers:					
MATERIA	L	NR lor IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	СМ	ECO CO	XLPI	
					m Tempe		100° F (erwise	Specifie			
11%-75%		С	С	С	С	F	Α	С	С	А	А	F	Α	
76%-95%		Х	Χ	Χ	Х	С	Α	X	X	Α	X	X	Α	
fuming		Х	Χ	Χ	X	Χ	X	Χ	Χ	Χ	Χ	Χ	Χ	
Sulfurous acid		С	С	С	С	С	Α	С	С	Α	Α	С	Α	
Tannic ac	id	А	С	Α	С	А	А	А	А	А	А	I	Α	
Tar		Χ	X	С	С	X	С	Χ	С	F		F	X	
Tartaric acid		Α	С	С	С	F	Α	F	A	Α	Α	F	Α	
Toluene, toluol		X	X	X	С	Χ	X	X	С	Α	С	X	Α	
Trichloroethylene		Х	X	X	X	Х	X	X	С	Α	С	X	Α	
Turpentine		X	Χ	Χ	F	Χ	Χ	X	С	Α	F	Α	Α	
Vinegar		С	С	С	С	Α	Α	Α	Α	Α	Α		Α	
Water, acid mine		Α	Α	С	Α	Α	Α	Α	Α	Α	Α	ı	Α	
Water, fresh		Α	Α	С	Α	Α	Α	Α	Α	Α	Α	Α	Α	
distilled		Α	Α	С	A	Α	Α	Α	Α	Α	Α	A	Α	
Whiskey and	wines	А	А	А	С	А	Α	А	Α	А	А	ı	А	
Xylene.xylol		X	Χ	Χ	С	Χ	Χ	X	С	А	Χ	Χ	А	
Zinc chloride		С	С	С	С	Α	Α	Α	Α	Α	Α	1	Α	
Zinc sulfate		А	Α	А	А	Α	А	Α	А	А	А	1	Α	
DZZLES - SPECS														
Nozzle Style & Size		Inlet PSI		ssure PA	Straight GPM		tream IPM	30 GPM	30 IPM	60 GPN	60 // IPM	90 GPM	9i	
		50		45	18		68	21	79	24	91	27	10	
10464		75	517		22		83	25	95	28	106	32	12	
1"		100	690		24		91	28	106	32	121	36	13	
		50	345		45		170	50	189	55	208	60	22	
10464		75	517		50		189	55	208	65	246	75	28	
1-1/2"		100	690		55		208	60	227	75	284	85	32	
		50	3	45	90		341	120	454	130	492	145	54	
10464		75	517		100		379	140	530	150	568	180	68	
2-1/2"		100	690		110		416	165	625	180	681	205	77	
				Threa	ds Per Ir	nch								
1-1/2" Size	2.100 (N		1.990 (NST)			2.093 (NYCORP)				1.878 (NPSH)				
				Threa	ds Per Ir	nch								
	6"				7"			7-1/2"			8"			
		3.058		3.13			2.990 (CHICAGO)				3.062			
3.093 3.125								3.062 (NST)			3.093			
							3.1	25 (DETR	TROIT)		3.140			
		3.156										156		
2-1/2"		3.187										312		
		3.234										(NYFD)		
		3.250									3.00 (N		')	
		3.312										(NPSH)		
	2 062 (DITTE	62 (DITTSDLIDGU)								1 2	70 (()	=\/EI	רח	

3.78 (CLEVELAND)

3.062 (PITTSBURGH)