

CAT 3

24

3" & 5" BIMETAL CASE
STANDARD POCKET
THERMOWELL

THERMOMETERS THERMOWELLS



SEALFAST
THE SIMPLE SOLUTION



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TERMS OF SALE

DISCLAIMERS

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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STOCKING WAREHOUSES

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Houston, TX 77020

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DISCLAIMERS

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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 guarantee the integrity of an assembly if other manufacturers parts are used.

Product Availability

- Seal Fast reserves the right to discontinue products at any time without prior notice.

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.

THERMOMETERS

3" BIMETAL SS CASE

► Applications: Industrial Bimetal thermometers are ideal for most rugged industrial temperature measurement application, such as in Chemical and Petrochemical, Machine and Apparatus Construction, Food and Beverage, & Pulp and Paper industries.



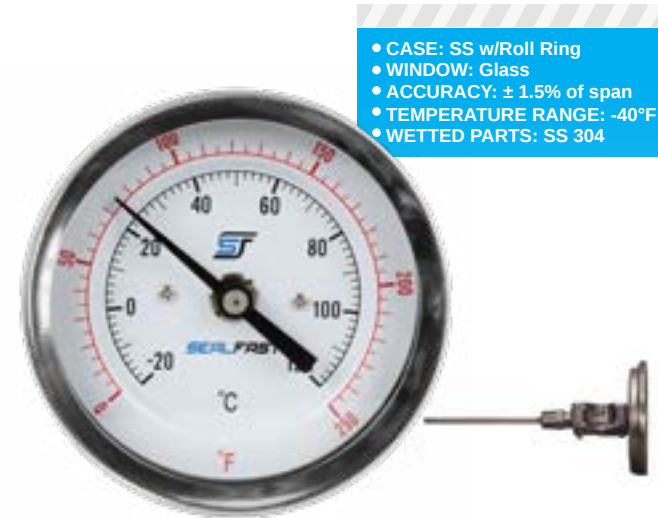
- CASE: SS w/Roll Ring
- WINDOW: Glass
- ACCURACY: ± 1.5% of span
- TEMPERATURE RANGE: -40°F to 500°F
- WETTED PARTS: SS 304

Range / Stem Length	3" SS Case	
	Part #	List
0-250°F X 2 1/2"	3250250	
50-500°F X 2 1/2"	3500250	
0- 250°F X 4"	3250400	
50-500°F X 4"	3500400	
0-250°F X 6"	3250600	
50-500°F X 6"	3500600	
0-250°F X 9"	3250900	
50-500°F X 9"	3500900	

Process connection: 1/2" NPT

5" BIMETAL ADJUSTABLE SS CASE

► Applications: Industrial Bimetal thermometers are ideal for most rugged industrial temperature measurement application, such as in Chemical and Petrochemical, Machine and Apparatus Construction, Food and Beverage, & Pulp and Paper industries.



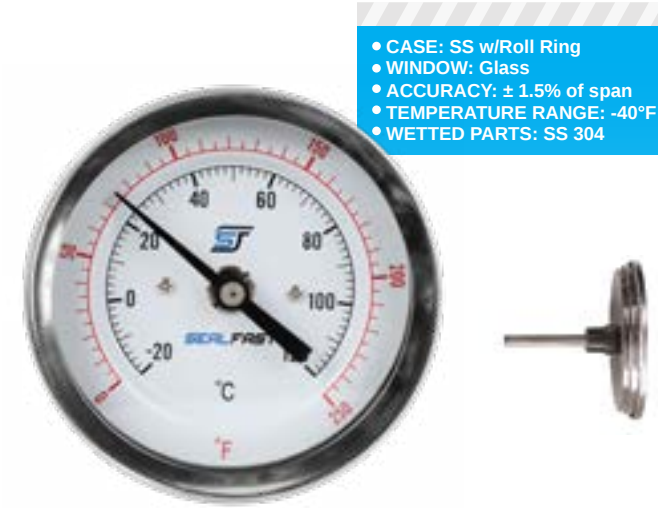
- CASE: SS w/Roll Ring
- WINDOW: Glass
- ACCURACY: ± 1.5% of span
- TEMPERATURE RANGE: -40°F to 500°F
- WETTED PARTS: SS 304

Range / Stem Length	5" SS Adjustable Face	
	Part #	List
0-250°F X 2 1/2"	5250250ADJ	
50-500°F X 2 1/2"	5500250ADJ	
0- 250°F X 4"	5250400ADJ	
50-500°F X 4"	5500400ADJ	
0-250°F X 6"	5250600ADJ	
50-500°F X 6"	5500600ADJ	
0-250°F X 9"	5250900ADJ	
50-500°F X 9"	5500900ADJ	

Process connection: 1/2" NPT

5" BIMETAL SS CASE

► Applications: Industrial Bimetal thermometers are ideal for most rugged industrial temperature measurement application, such as in Chemical and Petrochemical, Machine and Apparatus Construction, Food and Beverage, & Pulp and Paper industries.



- CASE: SS w/Roll Ring
- WINDOW: Glass
- ACCURACY: ± 1.5% of span
- TEMPERATURE RANGE: -40°F to 500°F
- WETTED PARTS: SS 304

Range / Stem Length	5" SS Case	
	Part #	List
0-250°F X 2 1/2"	5250250	
50-500°F X 2 1/2"	5500250	
0- 250°F X 4"	5250400	
50-500°F X 4"	5500400	
0-250°F X 6"	5250600	
50-500°F X 6"	5500600	
0-250°F X 9"	5250900	
50-500°F X 9"	5500900	

Process connection: 1/2" NPT

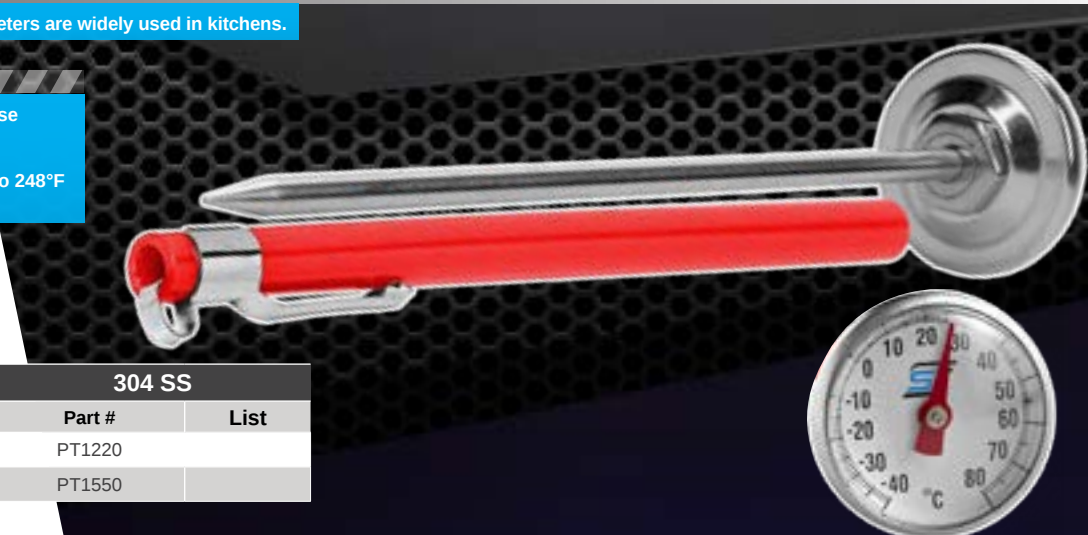
THERMOMETERS-THERMOWELLS

STANDARD POCKET

Applications: Pocket thermometers are widely used in kitchens.

- CASE: 04SS hermetiy sealed case
- WINDOW: Plastic
- ACCURACY: ± 2% of span
- TEMPERATURE RANGE: -40°F to 248°F
- WETTED PARTS: SS 304

Size	304 SS	
	Part #	List
1" DIAL, 5" STEM, 0/220 F°	PT1220	
1" DIAL, 5" STEM, 50/550 F°	PT1550	

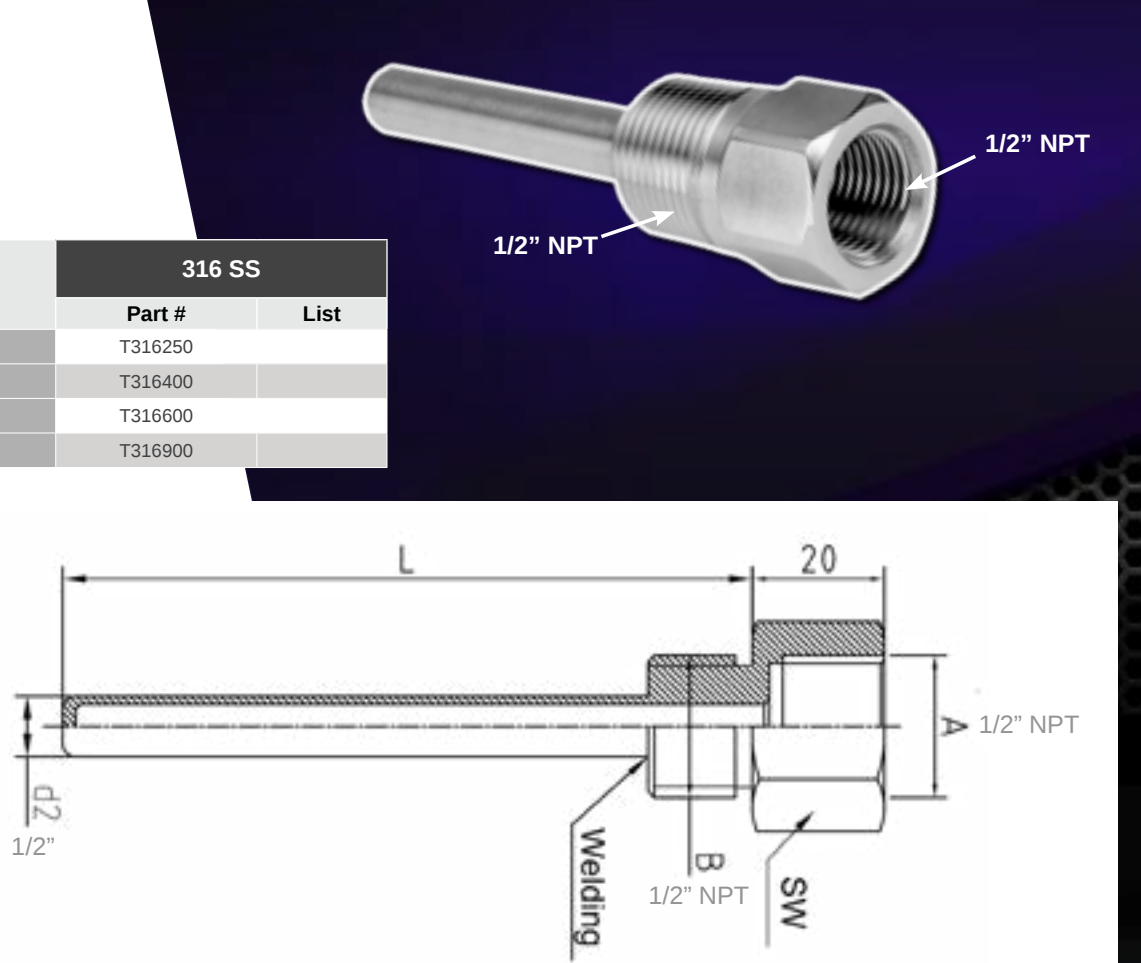


THERMOWELL

► Applications: Stainless Steel thermowells are designed to protect thermometers installed in industrial processes.

Stem Length "L"	316 SS	
	Part #	List
2-1/2"	T316250	
4"	T316400	
6"	T316600	
9"	T316900	

- A 1/2"NPT
- B 1/2" NPT
- d2 1/2



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 2. Good	3. Fair Conditional x. Not Satisfactory	NOTES: No rating indicates no data available
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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	X	2	2	2
Acetic Acid Vapor	X	X		3		X	2	2	3
Acetic Anhydride	X	X		2		X	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	X	3	2	2
Alums	X	3	2	3	1	X	3	2	2
Ammonia Gas	1	X	3	1	3	1	1	1	X
Ammonium Chloride	1	3		1*		3	3	1	1
Ammonium Hydroxide	2	X		2		1	1	1	3
Ammonium Nitrate	1	X		2		1	1	1	3
Ammonium Phosphate (Ammoniacal)		X				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		X	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	X	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	X	3	X	2	X	X	3	3
Chromic Acid		X	X	X	1	3	2	2	3
Citric Acid	X	3		1		3	X	1	2
Coke Oven Gas	1	3		2		1	1	1	2
Copper Sulfate	X	X		X		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	X	1	X	X	X	X
Ferric Sulfate	X	X		X		1	1	1	3
Formaldehyde	2	2		2		1	1	1	1

TECHNICAL DATA

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RATINGS: 1. Excellent 2. Good	3. Fair Conditional x. Not Satisfactory	NOTES: No rating indicates no data available
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AGENT	Mall. From Steel	Brass	Bronze	Aluminum	Glass	Stainless 410, 416, 430	Stainless 302, 202, 304, 308	Stainless 316	Monel
Formic Acid	X	2		X		X	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	X
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		1	1	1	1
Hydrochloric Acid	X	X	X	X	1	X	X	X	X
Hydrocyanic Acid	3	X		1		3	1	1	2
Hydrofluoric Acid	X	3	3	X	X	X	X	X	X
Hydrogen Fluoride		3				X	X	3	1
Hydrogen	1	1		1		1	1	1	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 Solvents	3	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		X		1	1	1	1
Magnesium Sulfate	2	2		3		1	1	1	1
Mercuric Chloride	3	X		X		X	X	3	X
Mercury	1	X		X		1	1	1	2
Milk	3	3		1		2	1	1	3
Molasses	2	X		2		2	1	1	1
Natural Gas	1	2		1		1	1	1	1
Nickel Chloride		X		X		X	3	2	2
Nickel Sulfate		3		X		3	2	1	1
Nitric Acid	X	X	X	3	1	2	2	2	X
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				3	1	1	X
Petroleum Oils (Refined)	1	1	1	1		1	1	1	1
Phosphoric Acid 25%	3	X		3	3	X	3	1	2
Phosphoric Acid 25-50%	X	X		X	3	X	X	2	2
Phosphoric Acid 50-85%	X	X		X	X	X	X	2	2
Picric Acid	3	X		3		2	1	1	X
Potassium Chloride	2	3		3		3	2	1	1
Potassium Hydroxide	3	X		X		1	1	1	1
Potassium Sulfate	2	2		1		1	1	1	1
Propane	1	1				1	1	1	1
Rosin (Dark)	1	2			1	1	1	1	1
Rosin (Light)		X		1		1	1	1	2

TECHNICAL DATA

CORROSION RESISTANCE OF COUPLING MATERIALS

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RATINGS: 1. Excellent 3. Fair Conditional
2. Good x. Not Satisfactory **NOTES:** No rationg indicates no data available

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				X	X	3	2
Soda Ash (Sodium Carbonate)	1	2		X		1	1	1	1
Sodium Bicarbonate	3	1		X		1	1	1	1
Sodium Bisulfate	X	3		3		X	1	1	1
Sodium Chloride	2	3	2	X	1	3	2	1	1
Sodium Cyanide	2	X		X		1	1	1	2
Sodium Hydroxide	3	X	3	X	X	2	2	2	1
Sodium Hypochlorite	X	X		X		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				X	2	1	1
Sodium Silicate	1	3		X		1	1	1	1
Sodium Sulfate	1	2		3		1	1	1	1
Sodium Sulfide	1	X				1	1	1	2
Sodium Thiosulfate (Hypo)	3	X		X		1	1	1	2
Stearic Acid	3	3		3		2	2	1	1
Sulfate Liquors		X				1	1	1	2
Sulfur	2	X		2		2	2	1	3
Sulfur Chloride	X	X				X	3	2	2
Sulfur Dioxide (Dry)	2	1		1		1	1	1	1
Sulfur Dioxide (Wet)		X				X	2	1	X
Sulfuric Acid 10%	X	X	3	3		X	X	2	2
Sulfuric Acid 10-75%	X	X	X	X		X	X	X	2
Sulfuric Acid 75-95%	3	X	X	X		3	3	2	3
Sulfuric Acid 95%	2	X	X			2	2	2	X
Surlfurous Acid	X	X		X		X	3	2	X
Tannic Acid	3	3	1	X			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	X		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		X		3	2	1	1
Zinc Sulfate	3	3		3		3	2	1	1

TECHNICAL DATA

OIL & GASOLINE RESISTANCE

Rubber hose is used to convey petroleum products both in the crude and refined stages. The aromatic content of re-fined 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:		
CLASS A	(HIGH OIL RESISTANCE).....	VOLUME CHANGE MAXIMUM +25% TENSILE STRENGTH RETAINED 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. T o 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	RELASTOMERS/PLASTICS	
A - Good Resistance, usually suitable for service.	NR - Natural Rubber	EPDM - Ethylene-propylene-diene-terpolymer
F - Fair Resistance, the chemical has some deteriorative effects, but the elastomer is still adequate for moderate service.	IR - Isoprene, synthetic	MQ - Dimethyl-polysiloxane
	SBR - Styrene-butadiene	FKM - Fluoracarbon rubber
C- Depends on Condition, moderate service may be possible if chemical exposure is limited or infrequent.	CR -Chloroprene	CM - Chloro-polyethylene
	NBR - Nitrile-butadiene	ECO/CO - Ephichlorohydrin
X- Not recommended, unsuitable for service.	IIR - Isobutene-isoprene	EXLPE - Chloro-sulfonyl-polyethylene
I - Insufficient Information, not enough data available at the time of publication to determine rating.	CSM - Chloro-sulfonyl-polyethylene	

TECHNICAL DATA

ELASTOMERS

Commonly used Elastomers:						Special Elastomers:						
MATERIAL	NR lor IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	CM	ECO CO	XLPE
(Maximum Temperature 100° F (38°C) Unless Otherwise Specified												
Acetic Acid, Dilute, 10%	F	C	C	C	A	C	A	A	X	A	F	A
Glacial	C	X	X	X	F	C	F	F	X	A	X	A
Anhydride	C	C	F	F	F	A	I	C	X	A	X	A
Acetone	A	A	F	X	A	F	A	A	X	A	X	A
Acetylene	A	A	F	A	A	F	A	C	A	I	I	I
Air 150°F (65°C)	A	A	A	A	A	A	A	A		A	A	A
Aluminum Chloride 150°F (65°C)	A	A	A	A	A	A	A	A	A	A	A	A
Aluminum Fluoride 150°F (65°C)	A	A	A	A	A	A	A	F			A	A
Aluminum Sulfate 150°F (65°C)	A	A	A	A	A	A	A	A	A	A	I	A
Alums 150°F (65°C)	A	A	A	A	A	A	A	A		A	I	A
Ammonia Gas	A	A	A	A	A	A	A	A	X	A	I	A
Ammonium Chloride	A	A	A	A	A	A	A	C	A	A	A	A
Ammonium Hydroxide	C	F	F	F	A	A	A	A	A	A	I	A
Ammonium Nitrate	A	A	A	A	A	A	A	A		I	A	A
Ammonium Phosphate, monobasic	A	A	A	A	A	A	A	A		A	I	A
dibasic	A	A	A	A	A	A	A	A		I	I	A
tribasic	A	A	A	A	A	A	A	A		I	I	A
Ammonium Sulfate	A	A	A	A	A	A	A	A	A	A	I	A
Amyl Acetate	F	X	X	X	F	X	A	A	X	C	X	A
Amyl Alcohol	A	A	A	A	A	A	A	A	A	A	A	A
Aniline, Aniline Oil	X	X	C	X	A	X	C	C	A	C	X	A
Aniline Dyes	F	F	F	F	A	F	C	C			I	I
Asphalt	X	X	F	F	X	F	X		A		A	X
Barium Chloride 150°F (65°C)	A	A	A	A	A	A	A	A	A	A	A	A
Barium Hydroxide 150°F (65°C)	A	A	A	A	A	A	A	A	A	A	A	A
Barium Sulfide 150°F (65°C)	A	A	A	A	A	A	A	A	A	I	A	A
Beer	A	A	A	A	A	A	A	A	A	I	A	A
Beet Sugar Liquors	A	A	A	A	A	A	A	A	A	I	I	A
Benzene, Benzol	X	X	X	C	X	X	X	C	A	C	X	A
Benzine, petroleum ether and												
Benzine, petroleum naphtha	X	X	C	F	X	F	X	C	A		I	A
Black Sulfate Liquor	A	A	A	A	A	A	A	A		I	I	A
Blast Furnace Gas	C	C	A	C	C	C	C	C	A	I	I	A
Borax	A	A	A	A	A	A	A	A	A	I	I	A
Boric Acid	A	A	A	A	A	A	A	A	A	I	A	A
Bromine	X	X	X	X	X	C	X	F	A	C		F
Butane	X	X	F	A	X	A	X	A	A	A	A	A
Butyl Acetate	C	X	X	X	F	X	F	A	X	F	X	A
Butyl alcohol, butanol	A	A	A	A	A	A	A	A	A	F	I	A
Calcium bisulfate	C	C	A	A	F	A	F	C	A	A	I	A
Calcium chloride	A	A	A	A	A	A	A	A	A	A	A	A
Calcium hydroxide	A	A	A	A	A	A	A	A	A	A	A	A
Calcium hypochlorite	X	X	X	X	A	F	A	C	A	A	F	F
Caliche liquors	A	A	A	A	A	A	A				I	A
Cane sugar liquors	A	A	A	A	A	A	A	A	A	A	A	A
Carbolic acid, phenol	C	C	C	C	C	C	A	A	A	A		A

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TECHNICAL DATA

ELASTOMERS

Commonly used Elastomers:						Special Elastomers:						
MATERIAL	NR lor IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	CM	ECO CO	XLPE
(Maximum Temperature 100° F (38°C) Unless Otherwise Specified												
Carbon dioxide, dry/wet	A	A	A	A	A	A	A	A	A	A	A	A
Carbon disulfide	X	X	X	X	X	X	X	C	A	C		C
Carbon monoxide 150°C (65°C)	C	C	C	C	C	F	C	A	A	I		A
Carbon tetrachloride	X	X	X	C	X	X	X	C	A	C	F	A
Castor oil	A	A	A	A	A	A	A	A	A	A	A	A
Cellosolve acetate	F	F	X	X	A		A	C	C			A
CFC-12	X	X	A	A	F		F	X	A		A	I
China wood oil, tung oil	X	X	F	A	A	F	A	A	C		I	A
Chlorine, dry/wet	X	X	X	X	X	X	X	X	C	X	X	F
Chlorinated solvents	X	X	X	X	X	X	X	C	C	C		A
Chloroacetic acid	X	C	C	C	X	A	I	C	X			A
Chlorosulfonic acid	X	X	C	C	X	X	X	C	X			F
Chromic acid	X	X	X	X	C	A	I	C	C	A		F
Citric acid	A	A	A	F	A	A	A	A	A	A	A	A
Coke oven gas	C	C	C	C	C	A		A	X	A	X	C
Copper chloride 150°F (65°C)	C	A	F	A	A	F	A	A	A	A	I	A
Copper sulfate 150°F (65°C)	C	A	A	A	F	A	A	A	A	A	A	A
Corn oil	X	C	F	A	A	F	C	A	A	A	A	A
Cottonseed oil	X	C	F	A	A	F	C	A	A	A	I	A
Creosote, coal tar	X	X	F	A	X	F	X	C	F		X	A
Wood	X	X	F	A	X		X	C	A			A
Creosols, cresylic acid	C	X	X	C	C	F	X	C		F		A
Ethers	C	C	C	C	C	F	X	C	X	A		A
Ethyl acetate	F	X	X	X	F	X	F	F	X	F	X	A
Ethyl alcohol	A	A	A	A	A	A	A	A	A	A	A	A
Ethyl cellulose	F	F	F	F	F		F	C	X	F		A
Ethyl chloride	A	F	F	X	A	F	A	C	F	F	F	F
Ethylene glycol	A	A	A	A	A	A	A	A	A	A	A	A
Ferric chloride 150°F (65°C)	A	A	A	A	A	A	A	A	I	A	A	A
Ferric Sulfate 150°F (65°C)	A	A	A	A	A	A	A	A	A	A	A	A
Formaldehyde	A	A	C	A	A	A	A	A	A	A	F	A
Formic acid	A	A	C	F	A	A	A	A	X	A	F	F
Fuel oil	X	X	A	A	X	F	X	C	A	F	A	A
Furfural	X	C	C	X	A	F	C	C	X	A	X	A
Gasoline, Non Leaded	X	X	X	A	X	X	X		A	C	A	A
Gasoline, + MTBE	X	X	X	A	X	X	X	C	A	C	A	A
Hi-test-+ MTBE	X	X	X	A	X	X	X	C	A	C	A	A
Gelatin	A	A	A	A	A	A	A	A	A		A	A
Glucose	A	A	A	A	A	A	A	A	A		A	A
Glue	F	F	A	A	F	A	A	A	C		A	A
Glycerine, glycerol	A	A	A	A	A	A	A	A	A	A	A	A
Green sulfate liquor	A	A	A	A	A	A	A	A	A	A	A	A
HFC-134A	F	X	A	A	A	F	A		X	F		A

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TECHNICAL DATA

ELASTOMERS

Commonly used Elastomers:												Special Elastomers:											
MATERIAL	NR lor IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	CM	ECO CO	XLPE											
(Maximum Temperature 100° F (38°C) Unless Otherwise Specified																							
Hydraulic fluids																							
Petroleum	X	X	A	A	X	F	X			A	A												
Phosphate ester alkyl	X	X	C	X	A	X	A			A	X												
Phosphate ester arly	X	X	X	X	C	X	C			C	X												
Phosphate ester blends		X	X	X	X	X	X	C			C	X											
Silicate ester	X	X	C	C	X	C	X			C	C												
Water-Glycol	A	A	A	A	A	A	A		A	A	A												
Hydrobromic acid	C	X	C	C	A	A	A	C	A	A		I											
Hydrochloric acid	A	X	X	X	C	C	C	C	A	A	X	A											
Hydrocyanic acid	F	F	C	F	C	A	C	A	A			A											
Hydrofluoric acid	X	X	X	X	C	A	C	X	A	A		A											
Hydrofluosilicic acid	A	F	F	F	A		A	A	A	A		I											
Hydrogen Gas	F	F	A	A	A		A	A	A		A	A											
Hydrogen peroxide	X	X	C	C	C	C	C	A	A	A		I											
Hydrogen sulfide, dry	C	C	F	C	A	A	A	C	F			A											
wet	C	C	F	C	A	A	A	C	C		F	A											
Kerosene	X	X	F	A	X	C	X	C	A	A	A	A											
Lacquers	X	X	X	X	C	X	X		X		X	F											
Lacquers solvents	X	X	X	X	C	X	X		X		X	F											
Lactic acid	C	C	C	C	C	A	C	A	A			A											
Linseed oil	C	X	F	A	A	A	A	A	A	A	A	A											
Lubricating oil, crude	X	X	F	A	X	C	X	C	A		A	A											
refined	X	X	F	A	X	C	X	C		A	A	A											
Magnesium chloride 150°F (65°C)	A	A	A	A	A	A	A	A	A	A	A	A											
Magnesium hydroxide 150°F (65°C)	A	F	F	F	A	A	A	F	A	A	A	A											
Magnesium sulfate 150°F (65°C)	A	A	A	A	A	A	A	A	A	A	A	A											
Mercuric chloride	F	F	C	F	A	A	A	A	A		A	A											
Mercury	A	A	A	A	A	A	A	A	A		A	A											
Methyl alcohol, methanol	A	A	A	A	A	A	A	A	C	A	F	A											
Methyl chloride	C	C	C	C	C	X	C	X	A			F											
Methyl ethly ketone	X	X	X	X	F	C	A	C	X	C	X	A											
Methyl isopropyl ketone	X	X	X	X	F	C	C	C	X	F	X	A											
MTBE												A											
Milk	C	C	F	F	A	A	A	A	A	A	A	A											
Mineral oils	X	C	F	A	X	F	X	A	A	A	A	A											
Natural gas	C	C	A	A	C	A	X	C	A	A	A	A											
Nickel chloride 150°F (65°C)	A	A	A	A	A	A	A	A	A	A	I	A											
Nickel sulfate 150°F (65°C)	A	A	A	A	A	A	A	A	A	A	I	A											
Nitric acid, crude	X	X	X	X	C	C	X	X	C	A	X	F											
Diluted 10%	X	X	C	X	C	C	X	X	C	A	X	F											
Concentrated 70%	X	X	X	X	C	C	X	X	C	X	X	F											
Nitrobenzene	X	X	X	X	X	X	X	C	F	C	X	A											
Oleic acid	X	F	C	F	F	F	F	A	C	A		A											
Oleum spirits	X	C	C	C			I		C			I											

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TECHNICAL DATA

ELASTOMERS

Commonly used Elastomers:												Special Elastomers:											
MATERIAL	NR lor IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	CM	ECO CO	XLPE											
(Maximum Temperature 100° F (38°C) Unless Otherwise Specified																							
Oxalic acid	F	C	F	F	A	A	A	A	A	A	F	A											
Oxygen	F	C	A	C	A		A	A	A	A	F	A											
Palmitic acid	X	F	A	A	F	F	F	C	A	A	F	A											
Perchlorethylene	X	X	X	C	X	X	X	C	A	C	F	A											
Petroleum oils and crude 200°F (95°C)	X	X	F	A	X	C	X	C	A	C	F	A											
Phosphoric acid, crude	A	C	C	C	C	A	C	C	A	A		A											
pure 45%	A	C	C	C	C	A	C	C	A	A		I											
Picric acid, molten	C	C	C	C	C		I					I											
water solution	A	C	F	F	A	A	I	A	A			I											
Potassium chloride	A	A	A	A	A	A	A	A	A	A	A	A											
Potassium cyanide	A	A	A	A	A	A	A	A	A	A	A	A											
Potassium hydroxide	F	F	C	C	A	A	A	A	C	A	A	A											
Potassium sulfate	A	A	A	A	A	A	A	A	A	A	A	A											
Propane	X	X	F	A	X	F	X	A	A	A	A	A											
Sewage	C	C	F	A	C	A	C	C	A		I	A											
Soap solutions	A	A	F	A	A	A	A	A	A	A	A	A											
Soda ash, sodium carbonate	A	A	A	A	A	A	A	A	A	A	A	A											
Sodium bicarbonate, baking soda	A	A	A	A	A	A	A	A	A	A	A	A											
Sodium bisulfate	A	A	A	A	A	A	A	A	A	A	A	A											
Sodium chloride	A	A	A	A	A	A	A	A	A	A	A	A											
Sodium cyanide	A	A	A	A	A	A	A	A	A	A	A	A											
Sodium hydroxide	F	F	C	C	A	C	A	A	C	A	F	A											
Sodium hypochlorite	X	X	X	X	A	F	A	C	A	A	F	F											
Sodium metaphosphate	A	A	C	A	A	F	A	A	A	A	I	A											
Sodium nitrate	C	C	C	C	A	A	A	C		A	A	A											
Sodium perborate	C	C	C	C	A	A	A	A	A			A											
Sodium peroxide	C	C	C	C	A	A	A	C	A			A											
Sodium phosphate.monobasic	A	F	C	F	A	A	A	A	A	A		A											
dibasic	A	F	C	F	A	A	A	A				A											
tribasic	A	F	C	F	A	A	A	A				A											
Sodium silicate	A	A	A	A	A	A	A	A	A	A	I	A											
Sodium sulfate	A	A	A	A	A	A	A	A	A	A	A	A											
Sodium sulfide	A	A	A	A	A	A	A	A	A	A	I	A											
Sodium thiosulfate, “hypo”	A	A	A	A	A	A	A	A	A	A	I	A											
Soybean oil	X	C	F	A	A	A	A	A	A	A	A	A											
Stannic chloride	A	A	A	A	F	A	F	A	A	A	I	A											
Steam 450°F (230°C)	C	C	C	C	A	A	F	C	X		X	X											
Stearic acid	X	X	C	F	F	C	F	A	I		F	A											
Sulfur	F	F	A	F	A	A	A	F	A		F	C											
Sulfur chloride	X	X	C	C	X	A	X	C	A			A											
Sulfur dioxide , dry	C	C	C	C	C	A	C	A	A		I	I											
Sulfur trioxide, dry	X	C	C	C	C	F	C	A	A			I											
Sulfuric acid, 10%	A	A	A	A	A	A	A	A	A	A	A	A											

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TECHNICAL DATA

ELASTOMERS

Commonly used Elastomers:

Special Elastomers:

MATERIAL	NR lor IR	SBR	CR	NBR	IIR	CSM	EPDM	MQ	FKM	CM	ECO CO	XLPE
(Maximum Temperature 100° F (38° C) Unless Otherwise Specified)												
11%-75%	C	C	C	C	F	A	C	C	A	A	F	A
76%-95%	X	X	X	X	C	A	X	X	A	X	X	A
fuming	X	X	X	X	X	X	X	X	X	X	X	X
Sulfurous acid	C	C	C	C	C	A	C	C	A	A	C	A
Tannic acid	A	C	A	C	A	A	A	A	A	A	I	A
Tar	X	X	C	C	X	C	X	C	F		F	X
Tartaric acid	A	C	C	C	F	A	F	A	A	A	F	A
Toluene, toluol	X	X	X	C	X	X	X	C	A	C	X	A
Trichloroethylene	X	X	X	X	X	X	X	C	A	C	X	A
Turpentine	X	X	X	F	X	X	X	C	A	F	A	A
Vinegar	C	C	C	C	A	A	A	A	A	A		A
Water, acid mine	A	A	C	A	A	A	A	A	A	A	I	A
Water, fresh	A	A	C	A	A	A	A	A	A	A	A	A
distilled	A	A	C	A	A	A	A	A	A	A	A	A
Whiskey and wines	A	A	A	C	A	A	A	A	A	A	I	A
Xylene,xylol	X	X	X	C	X	X	X	C	A	X	X	A
Zinc chloride	C	C	C	C	A	A	A	A	A	A	I	A
Zinc sulfate	A	A	A	A	A	A	A	A	A	A	I	A

NOZZLES - SPECS

Nozzle Style & Size	Inlet PSI	Pressure KPA	Straight GPM	Stream IPM	30 GPM	30 IPM	60 GPM	60 IPM	90 GPM	90 IPM
	50	345	18	68	21	79	24	91	27	102
10464	75	517	22	83	25	95	28	106	32	121
1"	100	690	24	91	28	106	32	121	36	136
	50	345	45	170	50	189	55	208	60	227
10464	75	517	50	189	55	208	65	246	75	284
1-1/2"	100	690	55	208	60	227	75	284	85	322
	50	345	90	341	120	454	130	492	145	549
10464	75	517	100	379	140	530	150	568	180	681
2-1/2"	100	690	110	416	165	625	180	681	205	776

Threads Per Inch

1-1/2" Size	2.100 (NYFD)	1.990 (NST)	2.093 (NYCORP)	1.878 (NPSH)
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Threads Per Inch

	6"	7"	7-1/2"	8"
	3.058	3.13	2.990 (CHICAGO)	3.062
	3.093		3.062 (NST)	3.093
	3.125		3.125 (DETROIT)	3.140
	3.156			3.156
2-1/2"	3.187			3.312
	3.234			3.031 (NYFD)
	3.250			3.00 (NY CORP)
	3.312			2.841 (NPSH)
	3.062 (PITTSBURGH)			3.78 (CLEVELAND)

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