
Reference Sheet

Chemical Resistance Chart



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Material Definitions

Fluorofilm™ - a PTFE/PFA (perfluoroalkoxy) copolymer

PTFE - polytetrafluoroethylene

PVDF - carbon fiber reinforced polyvinylidene fluoride

Polyprel® (AFLAS™) - an elastomeric copolymer of PTFE and propylene

Flexiprene™ (Santoprene®) - a thermoplastic elastomer vulcanizate

PVC - polyvinyl chloride

Viton® - a fluoroelastomer

Hypalon® - a chlorosulfonated polyethylene

Hastelloy® C - a nickel based, corrosion-resistant metal alloy*



**For applications where Hastelloy® C springs are not compatible, PVDF coated springs are available.*



For unlisted chemicals, consult factory.

Solution Temperature Maximum

For liquid handling components of LMI metering pumps operating at 100 psi (6.9 Bar)

Material	Example of Use	Temperature	
		°F	°C
PVDF (Carbon Fiber Reinforced)	Fittings and Pump Head	250*	121*
Polyprel®(AFLAS®)	Seal Rings	250*	121*
Polypropylene	Fittings and Pump Head	170	77
Polyvinyl Chloride Rigid (PVC)	Fittings and Pump Head	140	60
Polyvinyl Chloride (Flexible Vinyl)	Suction Tubing	140	60
Polyethylene	Discharge Tubing	110	43
Acrylic	Pump Head	140	60
PTFE	Liquifram™ and Seal Rings	250*	121*
Hypalon®	Diaphragm and Seal Rings	225	107
Viton®	Diaphragm and Seal Rings	225	107
Stainless Steel (316)	Fittings and Pump Head	250*	121*
Copolymer PTFE	Liquifram™	250*	121*
Hastelloy® C	Springs	250*	121*
Flexiprene™(Santoprene®)	Uni-Valve™ and Flapper	212	100
EPDM	Seal Rings	225	107
CPVC	Pipe, Corp Stop	180	82
BUNA-N	Gasket, Corp Stop	220	104

* Limited by other pump components

Chemical or Solution	Hastelloy® C		PTFE/Fluorofilm™		Polyprel® (AFLAS™)		Polypropylene		Stainless Steel (316)		Polyethylene		Viton®		Hypalon®		NOTES
Acetaldehyde	1	1	1	2	1	2	3	1	3	2	1	3	3				⚠
Acetic Acid, Glacial	1	1	1	3	3	1	3	2	3	3	3	2	3				⚠
Acetic Acid, 5%	1	1	1	3	1	1	1	1	1	1	1	1	2				
Acetic Anhydride	1	1	3	2	1	3	3	1	3	3	3	1	3				⚠
Acetone	1	1	2	3	2	1	3	1	3	3	3	2	3				⚠
Acetyl Chloride	1	1	2		1	1	1	1	3	3	1	3	3				⚠
Acrylonitrile	1	1	2	2		1		1	1	3	3	2	3				⚠
Adipic Acid		1	1		1	1	1	1	1	1			1				
Allyl Alcohol		1	1		1	1	2	1	3	3	2		2				⚠
Alcohol, Amyl	1	1	1	2	2	1	1	1	3	3	1	1	2				⚠
Alcohol, Benzyl	1	1	2	3	2	1	3	1	3	3	1	1	3				⚠
Alcohol, Butyl	1	1	1	1	1	2	2	1	3	3	1	1	2				⚠
Alcohol, Diacetone	1	1	1	3	1	2		1	3		3	3					
Alcohol, Ethl	1	1	1	1	1	1	1	1	3	3	3	1	3				⚠
Alcohol, Isopropyl	1	1	1	1	1	1	1	1	2	1	3	1					
Alcohol, Methyl	1	1	1	1	1	1	1	1	2	1	3	1	1				
Alcohol, Propyl	1	1			1	1	1	1			1	1					
Aluminum Ammonium Sulfate		1	1		1	1	1	1	1	1	1	1	1				
Aluminum Chloride	1	1	1	1	1	1	1	1	1	1	1	1	1				
Aluminum Hydroxide	1	1	1	1	1	1	1	1	1	1	1	2	1				
Aluminum Sulfate (Alum)	1	1	1	1	1	1	1	1	1	1	1	1	1				
Amines	1	1	2	2	2	1	3	1			3	3	3				
Alums	1	1	1	1	1	1	1	2	1	1	1	1	1				
Ammonia, Anhydrous, Liquid	1	1	3	1	1	1	1	1	3	1	3	3	1				
Ammonium Carbonate	1	1	1	2	1	1	1	1	3	1	1	1	1				
Ammonium Chloride 28%	3	1	1	2	1	1	1	2	3	1	1	1	1				
Ammonium Flouride		1	1		1	1	1	1	1	1			1				
Ammonium Hydroxide	1	1	1	1	1	1	1	1	1	1	3	1	3				
Ammonium Nitrate	1	1	1	3	1	1	1	1	1	1	1	1	1				
Ammonium Phosphate	1	1	1	3	1	1	1	3	1	1	1	1	1				
Ammonium Sulfate	1	1	1	3	1	1	1	3	1	1	3	1	1				
Amyl Acetate	1	1	1	3	2	1		1	3	3	3	3	3				⚠
Aniline	1	1	1	1	1	2	2	1	3	2	3	3	3				⚠
Aqua Ammonia		1	1		1	1	1	2	2	1	1	1	1				
Arsenic Acid	1	1	1		2	1	1	3		1	1	1	1				
Barium Carbonate	1	1	1	1	1	1	1	2	1	1	1	1	1				
Barium Chloride	1	1	1	1	1	1	1	2	1	1	1	1	1				
Barium Hydroxide	1	1	1	1	1	1	1	1	1	1	1	1	1				
Barium Sulfate	1	1	1	1		1	1	1	1	1	1	1	1				
Beer	1	1	1	1	1	1	1	1	1	1	1	1	1				
Beet Sugar Liquors		2	1	1	1	1	1	1	1	1	1	1	1				
Benzene	1	1	1	3	3	3	3	1	3	3	1	3	3				⚠
Benzoic Acid	2	1	1	1	1	1	2	2	1	1	1	3	2				
Benzyl Chloride	3	1	1			1	3	2	3	3	1		3				⚠

1 = GOOD **2 = FAIR** **3 = UNSATISFACTORY** = INSUFFICIENT DATA
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Chemical or Solution	Hastelloy® C		PTFE/Fluorofilm™		PVDF		Polyprel® (AFLAS™)		Flexiprene™		Polypropylene		PVC		Stainless Steel (316)		Acrylic		Polyethylene		Viton®		Hypalon®		Vinyl		NOTES
Bismuth Carbonate			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Black Liquor			1	1	1	2	1	1	2	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	
Bleach 5.25% Active Chlorine	1	2	1	1	1	1	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Borax™	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Boric Acid	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Bromine Water			1	1	2		2	3	3	3	3	3	3	1	1	3											⚠
Bromic Acid			1	1	2	1	1	1																			
Butylamine	1	1	3	2	2			3	2	3	3	3															⚠
Butyl Bromide			1	1		2		3	2	3	3																⚠
Butyl Chloride			1	1		2		3	2	3	3																⚠
Butyric Acid	1	1	1	1	1	1			2																		
Calcium Bisulfite	1	1	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Carbonate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Chlorate			1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Chloride	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Hydroxide	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
Calcium Hypochlorite	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Nitrate	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Sulfate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Carbon Disulfide			1	1		3	1	3	2	3	3	1	2	3													⚠
Carbon Tetrachloride	1	1	1	3	3	3	2	1	3	3	3	1	2	2													⚠
Carbonic Acid	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Castor Oil			1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Caustic Soda	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	2	1	2	1	2	1	
Chloral Hydrate			1	1																							
Chloroacetic Acid	1	1	1	3	1			3	3			3	3	1	3												⚠
Chlorox™ Bleach 5.25% Active	1	1	1	1	1	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Chlorobenzene	1	1	1	2	3	2	3	1	3	3	3	1	3	3													⚠
Chloroform	1	1	1	3	3	3	3	1	3	3	3	1	3	3													⚠
Chlorosulfonic Acid	1	1	3	2	1	3	2	3				3	3	3	3												⚠
Chrome Alum			1	1	1	1	2	1				1	1	1													
Chromic Acid, 50%	3	1	1	2	1	1		3	3	1	1	1	1														
Chromic Acid, 30%	3	1	1	2	1	1	1	2	3	1	1	1	1	1													
Chromic Acid, 10%	1	1	1	2	1	1	1	1	3	1	1	1	1	1													
Citric Acid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Copper Chloride			1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Copper Cyanide	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Copper Nitrate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Copper Sulfate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Corn Oil			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cottonseed Oil			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cresol	1	1	1	1	2	1	3	1	3	3	3	2	3	3													⚠
Cresylic Acid	2	1	1	1	2	3	1	1				1	1	3													
Crude Oil			1	1	1	2			2			3	1	3													⚠

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Chemical or Solution	Material Compatibility														NOTES
	Hastelloy® C	PTFE/Fluorofilm™	PVDF	Polypret® (AFLAS™)	Flexiprene™	Polypropylene	PVC	Stainless Steel (316)	Acrylic	Polyethylene	Viton®	Hypalon®	Vinyl		
Dextrose	1	1	1	1	1	1	1	1	1	1	1	1	1		
Detergents, General	1	1	1	2	1	1	1	1	1	1	1	1	1		
Dibutyl Phthalate	1	1	1	2	2	2	3		3	3	3	3	3	⚠	
Dichloroethene	1	2		3	2			1			2	3		⚠	
Diesel Fuel	1	1	1	1	2		1	1	1	2	1	1	1	⚠	
Diethylene Glycol	2	2		1	1	1		1			1	1		⚠	
Dimethyl Formamide	1	1	3	3	2	1	3	1	3	1	3		3		
Dinitrotoluene		1		3	1			1			3	3		⚠	
Diethyl Phthalate		2	2	1	2	2			3	3	2	3		⚠	
Disodium Phosphate		1	1		1	1					1	1		⚠	
Ethanol, 1-95%	1	1	1	1	1	1	1	2	1	1	3	1	1		
Ethers	2	1		3	2	2	3	1	3		3	3	3	⚠	
Ethyl Acetate	1	1	3	3	2	2	3	1	3	3	3	3	3	⚠	
Ethyl Chloride		1	1	1	2	2	3	1	3	3	3	3	3	⚠	
Ethyl Ether	2	1	1	3	1	2	3	1	3	3	3	3	3	⚠	
Ethylene Chloride		1	1	1		2	3	1	3	3	2	3	3	⚠	
Ethylenediamine	3	1	2	2	1		3	2	3	3	3		3	⚠	
Ethylene Dichloride	1	1	1	1	2	2		1			1	3		⚠	
Ethylene Glycol	2	1	1	1	1	1	1	1	1	1	1	1	1		
Ethylene Oxide	1	1	3	3	1	2		1			3	3		⚠	
Fatty Acid	1	1	1	2	1	1	1	1	1	1	1	3	1		
Ferric Chloride	1	1	1	1	1	1	1	3	1	1	1	1	1		
Ferric Nitrate	2	1	1	1	1	1	1	1	1	1	1	1	1		
Ferric Sulfate	1	1	1	1	1	1	1	2	1	1	1	1	1		
Ferrous Chloride	2	1	1	1	1	1	1	3	1	1	1	1	1		
Ferrous Sulfate	1	1	1	1	1	1	1	3	1	1	1	1	1		
Fluoboric Acid	1	1	1		1	1		2			1	1		⚠	
Fluosilicic Acid	1	1	1	1	1	1	1	2	1	1	1	1	1	⊘	
Formaldehyde	1	1	1	3	1	1	1	2	1	1	3	2	1		
Formic Acid	1	1	1	1	1	1	2	2	1	1	2	1	3		
Fruit Juice Pulp	1	1	1	1	1	1	1	1	1	1	1	1	1		
Fuel Oil	1	1	1	1	1	2		1	1	2	1	3		⚠	
Gallic Acid	2	1	1	2	1	1	1	1		1	1	2			
Gasoline, Refined	1	1	1	2	2	2	1	2	1	1	1	1	1		
Glucose	1	1	1	1	1	1	1	1	1	1	1	1	1		
Glycerine or Glycerol	1	1	1	1	1	1	1	1	1	1	1	1	1		
Glycolic Acid, 30%	1	1	1	2	1	1		1		1	1	1			
Heptane	1	1	1	3	3	2		1			1	1	2	⚠	
Hexane	1	1	1	3	2	2		1			1	2	2	⚠	
Hexanol, Tertiary	1	1	1		2	1	3	1		1	1	2	2		
Hydrazine		1	1	2	1			1			1	1		⚠	
Hydrobromic Acid, 20%	1	1	1	1	1	1	1	3	1	1	1	1	1		
Hydrochloric Acid, Concentrate	3	1	1	1	1	1	1	3	1	1	1	3	2		
Hydrochloric Acid, Dilute	2	1	1	1	1	1	1	3	1	1	1	2	1		

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Chemical or Solution	Material Compatibility													NOTES
	Hastelloy® C	PTFE/Fluorofilm™	PVDF	Polypropylene	PVC	Stainless Steel (316)	Acrylic	Polyethylene	Viton®	Hypalon®	Vinyl			
Hydrocyanic Acid	1	1		1	1	1	1	2		1	1	1		
Hydrofluoric Acid	1	1	1	1	1	1	2	3	3	1	1	1		⊘
Hydrofluosillicic Acid	1	1	1	1	1	1	1	2	1	1	1	1	1	⊘
Hydrogen Peroxide, 90%	1	1	1	3	3	2	1	2	3	2	1	2		⚠
Hydrogen Peroxide, 50%	1	1	1	2	2	2	1	1	3	2	1	1		⚠
Hydrogen Sulfide, Aqueous	1	1	1	1	1	1	1	2	1	1	3	1	1	
Hypochlorous Acid	1	1	1	1	1	1	1			1	1	3	1	
Iodine Water Solution		1	1	1	1	1	2	3	1	2	1	1	2	⚠
Kerosene	1	1	1	2	2	2	1	1	1	2	1	3		⚠
Lactic Acid	2	1	1	1	1	1	1	2	1	1	1	1	1	
Lard Oil	1	1	1	1	1	1	1	1	1	1	1	3	1	
Lauric Acid		1	1	2	1	2	1							⚠
Lead Acetate	2	1	1	3	1	1	1	2		1	3	3		
Linoleic Acid		1	1	2	1	2	1	1			2	3		⚠
Linseed Oil	1	1	1	1	1	2	1			3	1	2	1	⚠
Lithium Salts		1	1	1	1		1			1				
Magnesium Carbonate	1	1	1	1	1	1	1	1	1	1	1	2	1	
Magnesium Chloride	1	1	1	1	1	1	1	3	1	1	1	1	1	
Magnesium Hydroxide	1	1	1	1	1	1	1	1	1	1	1	1	1	
Magnesium Nitrate	1	1	1	1	1	1	1	1	1	1	1	1	1	
Magnesium Oxide		1	1	1	1	1	1	1	1	1	2	1	1	
Magnesium Sulfate	1	1	1	1	1	1	1	1	1	1	1	1	1	
Maleic Acid	1	1	1	1	1	1	1	1		1	1	3		
Malic Acid	1	1	1	2	1	1	1	1		1	1	1		
Mercuric Chloride	3	1	1	1	1	1	1	3		1	1	1		
Methanol	1	1	1	1	1	1	1	1	3	1	3	1	1	
Methyl Ethyl Ketone	1	1	3	3	2	2	3	1	3		3	3		⚠
Methyl Isobutyl Ketone	1	1	3	3	2	2	3	1	3	3	3	3	3	⚠
Methyl Isopropyl Ketone		1	3	3	2		3	1	3		3	3	3	⚠
Methyl Sulfate		1	1			3	1		3	1			3	
Milk	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mineral Oil	1	1	1	1	2	2	1	1	1	1	1	1	1	
Naptha, Petroleum	1	1	1	1	3	2	1	2	1	3	1	3	1	⚠
Napthalene	1	1	1	3	3	2	3	1		3	1	3	3	⚠
Nickel Chloride	1	1	1	1	1	1	1	2	1	1	1	1	1	
Nickel Sulfate	1	1	1	1	1	1	1	2	1	1	1	1	1	
Nitric Acid, Anhydrous		1	1	2	2	3	1	2	3	3	2	3	3	⚠
Nitric Acid, 68%	2	1	1	2	2	2	1	2	3	3	1	3	2	⚠
Nitric Acid, 10%	1	1	1	1	1	1	1	1	3	1	1	2	2	
Oils and Fats	1	1	1	1		1	1	1	1	1				
Oleic Acid	1	1	1	1	1	1	1	1		1	2	2		
Oleum	3	1	3	3	3	3	3	2	3	3	1	3	3	⚠
Olive Oil	1	1	1	1	1	1	1	2	1	1	1	1	1	
Oxalic Acid	1	1	1	1	1	1	1	2	1	1	1	1	1	

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Chemical or Solution	Material Compatibility													NOTES
	Hastelloy® C	PTFE/Fluorofilm™	PVDF	Polyprel® (AFLAS™)	Flexiprene™	Polypropylene	PVC	Stainless Steel (316)	Acrylic	Polyethylene	Viton®	Hypalon®	Vinyl	
Palmitric Acid	1	1	1	1	1	1	1	1	1	1	2			
Perchloric Acid, 70%	1	1	1	2		1	1	3	3	1	1	2	2	
Perchloric Acid, 10%	1	1	1	2	1	1	1	3	3	1	1	2	1	
Perchloroethylene	1	1	1	3	3		1	1	3	3	1	3	3	⚠
Petroleum Oils (Sour)		1	1	2	3	2	1	2	1	3	1	2	1	⚠
Phenol	1	1	1	1	1	1	1	2	3	3	1	3	3	⚠
Phosphoric Acid, 50%	1	1	1	1	1	1	1	3	1	1	1	2	1	
Phosphoric Acid, 25%	1	1	1	1	1	1	1	3	1	1	1	1	1	
Photographic Solution	2	1	1	2	1	1	1	1	1	1	1	1	1	
Phthalic Acid	2	1	1	2	1	1	1	1	1	1			1	
Picric Acid	1	1	1	1	1	2	3	1	1	2	1	1	1	⚠
Plating Solution	1	1	1	1	1	1	1	1		1	1	3	1	
Potassium Carbonate	1	1	1	1	1	1	1	2	1	1	1	1	1	
Potassium Bromide	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Chlorate	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Chloride	1	1	1	1	1	1	1	2	1	1	1	1	1	
Potassium Dichromate	1	1	1	1	1	1	1	2	1	1	1	1	1	
Potassium Ferrocyanide	1	1	1	1	1	1	1	2	1	1	1	1	1	
Potassium Hydroxide (KOH)	2	1	1	1	1	1	1	1	1	1	3	1	2	
Potassium Nitrate	2	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Permanganate, 10%	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Phosphate	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Sulfate	2	1	1	1	1	1	1	1	1	1	1	1	1	
Propylene Dichloride	2	1	1		2	2	3		2	3			3	⚠
Pyridine	1	1	1	3	2	1		1	3		3	3		⚠
Sea Water	1	1	1	1	1	1	1	3	1	1	1	1	1	
Silver Nitrate	1	1	1	1	1	1	1	1	1	1	1	1	1	
Silver Plating Solutions	1	1	1	1	1	1	1	1	1	1	1		1	
Soaps	1	1	1	1	1	1	1	2	1	1	1	1	1	
Sodium Acetate	1	1	1	3	1	1	1	1	1	1	3	3		
Sodium Bicarbonate	2	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Bisulfate	2	1	1	1	1	1	1	3	1	1	1	1	1	
Sodium Bisulfite	1	1	1	1	1	1	1	2	1	1	1	1	1	
Sodium Carbonate	1	1	1	1	1	1	1	2	1	1	1	1	1	
Sodium Borate	1	1	1	1	1	1	1		1	1	1	1	1	
Sodium Chlorate	2	1	1		1	1	1	2	1	1	1	1	2	
Sodium Chloride	1	1	1	1	1	1	1	2	1	1		1	1	
Sodium Cyanide	1	1	1	1	1	1	1	2	1	1	1	1		
Sodium Fluoride	1	1	1	1	1	1	1	3	1	1	1	1	1	⊘
Sodium Ferrocyanide	1	1	2	1	1	1	1	2		1	1	1		
Sodium Hexametaphosphate		2	1	1	1	1	1	1	1	1	1	1	1	
Sodium Hydroxide, Caustic	1	2	1	1	1	1	1	2	1	1	2	1	2	
Sodium Hypochlorite, 12.5%	1	1	1	1	1	3	1	3	1	1	1	1	1	
Sodium Metaphosphate		1	1	1	1	1	1	1	1	1	1	1	1	

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Chemical or Solution	Material Compatibility													NOTES
	Hastelloy® C	PTFE/Fluorofilm™	PVDF	Polyprel® (AFLAS™)	Flexiprene™	Polypropylene	PVC	Stainless Steel (316)	Acrylic	Polyethylene	Viton®	Hypalon®	Vinyl	
Sodium Nitrate	1	1	1	3	1	1	1	1	1	1	1	1	1	
Sodium Peroxide	1	1	1	2	1		1			1	1	1	1	
Sodium Phosphate	1	1	1	1	1	1	1	2	1	1	1	1	1	
Sodium Silicate	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Sulfate	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Sulfide	2	1	1	1	1	1	1	3		1	1	1	1	
Sodium Sulfite	1	1	1	1	1	1	1	2		1	1	1	1	
Sodium Thiosulfate	1	1	1	1	1	1	1			1	1	1	1	
Sour Crude Oil		1	1	2	3	2	1			3			1	⚠
Stannic Chloride	1	1	1			1	1	3		1	1	3		
Stannous Chloride	1	1	1		1	1	1	2		1	1	1		
Stearic Acid	1	1	1	1	1	1	1	1		1	1	1	1	
Sulfur	1	1	1	1	1	1	1	1	1	1	1	2	1	
Sulfur Trioxide		1	3	1		2	1	3		3	1	3		⚠
Sulfuric Acid, 10%	2	1	1	1	1	1	1	3	1	1	1	2	1	⚠
Sulfuric Acid, 75%	2	1	1	1	1	2	1	3	3	2	1	2	2	⚠
Sulfuric Acid, 98.5%	3	1	1	1	1	2	1	3	3	2	1	2	3	⚠
Sulfurous Acid	1	1	1	1	1	1	1	3		1	1	1		
Tannic Acid	2	1	1	2	1	1	1	1		1	1	1		
Tanning Liquors	1	1	1	1	1	1	1			1	1			
Tartaric Acid	1	1	1	2	1	1	1			1	1	1		
Tetrachlorethane	1	1	1	3	3			1			1	3		⚠
Tetrahydrofuran	1	1	3	3	1	2	3			3	3	3		⚠
Tetraethyl Lead		1	1	3	1	1	1				1	3		⚠
Tetralin		1	1		3	2	1		3	2	1		1	⚠
Tin Salts	3	1	1	1	1	1	1		1	1		1	1	
Toluene	1	1	1	3	3	3	3	1	3	3	1	3	3	⚠
Trichloroethylene	1	1	1	3	3	3	3	2	3	3	1	3	3	⚠
Triethanolamine	1	1	1	3	1	1	2			2	3	2		⚠
Turpentine	1	1	1	1	3	2	3	1	3	3	1	3	3	⚠
Vinegar	1	1	1	1	1	1	1	1	1	1	1	1	1	
Vegetable Oils	1	1	1	1	1	1	1	1	1	1	1	3	1	
Water, Acid, Mine	1	1	1	1	1	1	1	1	1	1	1	1	1	
Water, Fresh	1	1	1	1	1	1	1	1	1	1	1	1	1	
Water, Distilled	1	1	1	1	1	1	1	1	1	1	1	1	1	
Water, Salt	1	1	1	1	1	1	1	2	1	1	1	1	1	
Whiskey		1	1	1	1	1	1	1	1	1	1	1	1	
Wines		1	1	1	1	1	1	1	1	1	1	1	1	
Xylene	1	1	1	3	3	2	3		3	3	1	1	3	⚠
Zinc Chloride	1	1	1	1	1	1	1	3	1	1	1	1	1	
Zinc Sulfate	1	1	1	1	1	1	1	2	1	1	1	1	1	

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