

# CHEMICAL RESISTANCE GUIDE

This Chemical Resistance Guide is offered to assist in selecting pump materials that are most resistant to the chemicals that may be used with a FLOJET pump.

The information is based on FLOJET laboratory tests, field testing programs and general data from industry sources. It should be used only as a guide in the selection of pump materials. Suitability for the application should be determined by actual use and is the full responsibility of the customer. No warranty, expressed or implied, can be extended by FLOJET where failure is caused by chemical attack on pump materials. Temperature, aeration, concentration and other factors may change the effect of the specific fluid on the pump materials. Data shown is based on results at ambient temperatures, unless otherwise noted. Flojet recommends the use of our Soak Test kit number F100-168, available for free upon your request.

## RATING SYSTEM

**The “A” rating** indicates little effect on the physical properties of the material (Generally Satisfactory).

**The “B” rating** indicates minor to moderate effect (Generally Satisfactory But Should Be Qualified By Testing).

**The “C” rating** indicates a change in the physical properties in excess of acceptable tolerances could occur (Generally Not Satisfactory, Must Be Qualified By Testing).

**The “D” rating** indicates rapid physical deterioration, swelling of check valves, diaphragm or chemical attack on the pump housing material (Not Satisfactory).

**Where no rating is shown** data is not currently available, pump materials should be qualified by testing.

It is recommended that the pump be thoroughly flushed with water or other neutralizing agent after each use whenever possible.

	PLASTICS				ELASTOMERS				ALLOYS		
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Acetaldehyde	A	A	D		C	D	A	B		A	A
Acetamide	A	A	A		B	A	B	A		A	
Acetate Solvents (crude)	D	A	A		D	D	C	V		A	
Acetate Solvents (pure)	D	A	B		D	D	C	B		A	
Acetic Acid, Glacial	A	D	A		D	C	B	B		A	A
Acetic Acid, 10%	A	C	A		C	B		B		A	
Acetic Acid, 20%	A	B	A		C	B	B	B		A	
Acetic Acid, 50%	A	D	A		C	A		B		A	
Acetic Acid, 80%	B	D	A		C	C	B	A		A	
Acetic Acid, pure	A	D	A		D	C	V	V	A	A	A
Acetic Anhydride	C	A	C		D	D	C	C		A	A
Acetone	A	A	C	A	D	D	B	A		A	
Acetophenone	C				D	C		A		B	
Acetyl Chloride	D	D	D		A	D	C	D		B	
Acetylene	A	A	A		A	B	B	A		A	
Acetylene Tetrabromide	A		A		A	D				A	
Acetylsalicylic Acid	A	A								A	
Acrylonitrile	A	A	A		D	D	D	D	A	B	
Adipic Acid						A					
Aero Lubriplate					A	A	B				
Aero Safe 2300					D	D	C				
Alcohol - Amyl	A	A	B		C	B	D	A			
Alcohol - Benzyl	A	D	D		A	D		B		A	A
Alcohol - Butyl	A	A	A		A	A	B	B		A	A
Alcohol - Diacetone	A	A	B		C	D	D	A		A	A
Alcohol - Ethyl	A	A	B		B	C	B	A		A	A
Alcohol - Hexyl	A	A	A		B	A	B			A	A
Alcohol - Isobutyl	A	A	A		A	B	A	A		A	A
Alcohol - Isopropyl	A	B	A		A	B	A	A		A	A
Alcohol - Methyl	A	A	A		C	A	A	A		A	A
Alcohol - Octyl	A	A	A		B	B	B	A		A	A
Alcohol - Propyl	A	B	A		A	A	A	A		A	A
Aluminum Chloride, 20%	A	C	B		A	A	B	A		C	A
Aluminum Chloride	A	D	B		A	A	B	A		C	B
Aluminum Citrate											
Aluminum Flouride	A	A	A		C	A	B	A		C	
Aluminum Formate					D	D					
Aluminum Hydroxide	A	A	A		B	A		A		A	
Aluminum Nitrate	A		A		B	A					
Aluminum Oxychloride	A				D						
Aluminum Phosphate					A	A					
Aluminum Potassium Sulfate 10%	A	D	A		A	A	A	A		B	C
Aluminum Potassium Sulfate	A	D	A		A	A	A	A		A	
Aluminum Sulfate	A	A	A		A	A	A	A		B	B
Amines	B	D			D	D	B	B			
Ammonia, 10%	A	A	C		C	D			A		
Ammonia, anhydrous	A	A	A		D	C	D	A		A	B
Ammonia, liquid	A	B			D	C		A		A	
Ammonia Nitrate	A	D			D	C		A		A	
Ammonium Acetate					A	A		A			
Ammonium Alum						B					
Ammonium Bichromate						A		A			
Ammonium Bifluoride	A		A		A	B		A			
Ammonium Bisulfide	A										
Ammonium Carbonate	A	A	B		A	C	A			B	B
Ammonium Casenite										A	
Ammonium Chloride	A	C	A		A	B		A		C	B
Ammonium Dichromate						A					
Ammonium Flouride						B					
Ammonium Flouride, 10%	A				A	A					

	PLASTICS				ELASTOMERS				ALLOYS		
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Ammonium Flouride, 25%	A										
Ammonium Hydroxide	A	A	A	C	B	C	A	A		A	B
Ammonium Metaphosphate	A		A		A	A		A			
Ammonium Nitrate	A	B	A		A	A		A		A	D
Ammonium Oxalate		B			A					A	
Ammonium Persulfate	A	C	A		B	C		B		A	D
Ammonium Phosphate, Dibasic	A	C	A		A	A	A	A		C	
Ammonium Phosphate, Monobasic	A	B	A		A	A	A	A		C	
Ammonium Phosphate, Tribasic	A	B	A		A	A	A	A		B	
Ammonium Sulfate	A	A	A		A	A	A	A		B	B
Ammonium Thiosulfate			A		A					A	
Amyl Acetate	C	A	A		D	D	D	A		A	A
Amyl Alcohol	B	A	B		B	B	D	A		A	
Amyl Chloride	D	C	D		B	D	D				A
Aniline	C	C	B	B	D	D	D	B	A	B	B
Anti-Freeze	D	D		A	A	A			A	A	
Aqua Regia	B	D	C		B	D	D			D	D
Arochlor	D	A	B		A	C	B	B		B	A
Aromatic Hydrocarbons	D		D		A	C	D	D		B	
Arsenic Acid	A		B		A	A	A	A		B	B
Asphalt	B	A	C		A	B	D	D		A	
Barium Carbonate	A	A	B		A	A		A		B	B
Barium Chloride	A	A	A		A	A	A	A		B	A
Barium Cyanide	D		B		A	C		A		B	
Barium Hydroxide	B	A	B		A	B	A	A		B	B
Barium Nitrate	A	A	B		A	A		A		B	B
Barium Sulfate	A	A	A		A	A	A	A		A	C
Barium Sulfide	B	A	A		A	A	A	A			
Beer	A	A	A	A	A	A	A	A		A	A
Beer Sugar Liquid	B	A			A	A	A	A		A	
Benzaldehyde	C	C	D		D	D	D	C		A	A
Benzalkonium Chloride											
Benzene	C	A	D	A	A	D	D	D		B	B
Benzoic Acid	B	C	C		A	D	B	C		B	B
Benzol	A	D	C		A	D		B		A	
Benzyl Benzote					A	D		C			
Benzyl Chloride					D	D	D	D			
Black Liquor	A	A		A	A	A	B	B			
Bleach	A	C	A		A	D	B	A			
Borax	A	A	A		A	C	B	A		A	A
Boric Acid	A	B	A		A	A	A	A		B	A
Brake Fluid				A	D	C	C	A	A		
Brewery Slop					A	A				A	
Brine	A				A	A					
Brine Acid	A		A		A	A		A			
Bromic Acid	D				A			B			
Bromine Dry		D			A	D	D	D			A
Bromine Gas		D			A	D	D	D			A
Bromine Liquid	D	D	D		A	D	D	D		D	A
Bromine Water	C	D	D		A	C	D	D			A
Bromobenzene							D				
Bromotoluene	D										
Butadiene	C	A	D		A	C	D	C		A	
Butane	A	A	C		A	A	D	C		A	B
Butanediol			A		A			D			
Butter			A		A	A	B	A		A	
Buttermilk	A	B	A		A	A				A	A
Butylene		B	C		A	B	D	D		A	
Butyl Acetate	B	A	C		D	D	D	B	A	B	A

	PLASTICS				ELASTOMERS				ALLOYS		
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Butyl Acrylate Pure	D				D			A			
Butyl Acrylate Saturated	D				D	C		D			
Butyl Amine	D				D	C	B	D			B
Butylbenzine					A	D					
Butyl Benzorte					A	D		A			
Butyric Acid	C	B	C		C	D		B		B	B
Calcium Bisulfate							A			A	
Calcium Bisulfide	A	A			A	A		C		B	
Calcium Bisulfite	B	A	A		A	A	A	D		A	B
Calcium Carbonate	A	A	B		A	A	A	A		B	B
Calcium Chlorate					A	C		A			
Calcium Chloride	A	A	B		A	A	A	A		B	B
Calcium Hydroxide	A	A	B		A	B	A	A		B	A
Calcium Hypochloride	A	C	B		A	B	B	B		C	B
Calcium Sulfate	A	D	B		A	A		A		B	B
Calgon	A	A		B	A	A		A		A	
Cane Juice	C	A			A	A	A	A		A	
Carbolic Acid	B	D	B		A	C	D	B		B	
Carbon Bisulfide	C	A	D		A	C		D		B	
Carbon Dioxide (wet or dry)	A	A	B		A	C	B	B		A	A
Carbon Monoxide	A	A	A		A	A	A	A		A	A
Carbon Tetrachloride	D	C	D		B	C	D	D		B	B
Carbonated Water	B	A	A		A	A				A	
Carbonic Acid	A	A	A		A	B	A	A		B	A
Casein					A	A		A			
Castor Oil	A		C		A	A	A	B			
Catsup	A	A			A	A			C		A
Caustic Lime					B	A		A			
Caustic Potash	A				D	A		A			B
Caustic Soda	A				B	C		A			A
Chloral Hydrate	A	D			A	C					
Chloroacetic Acid	C	D	C		D	C		B		C	A
Chloric Acid		D			D					C	
Chloric Acid, 20%	D										
Chlorinated Glue					A	C		B		A	
Chlorine Dioxide	C				D						
Chlorine Dry	C	D	B		C	D	D	B		B	B
Chlorine Gas Dry	D				B	C		D			
Chlorine Gas Wet	D				C	C		D			
Chlorine Liquid	C	D	C		A	C				D	A
Chlorine Water	C		A		A	C		B		C	B
Chlorobenzene (Mono)	C	B	C		A	D	D	D		B	B
Chloroform	C	D	C		A	D	D	D		A	A
Chlorosulfonic Acid	D	D	D		D	D	D	D		D	A
Chlorox Bleach	D	A	B		A	B		B		A	
Chocolate Syrup	A	A			A	A				A	
Chresylic Acid, 50%			D		A	D					
Chrome Alum			A		A	A	A				
Chromic Acid, 05%	C	D	B		A	D	C	A		A	A
Chromic Acid, 10%	B	D	A		B	D	C	B		B	A
Chromic Acid, 20%	C	D	A		B	C	C	B			
Chromic Acid, 30%	C	D	A		A	D	C	B		B	
Chromic Acid, 50%	C	D	C		A	D	C	B		B	D
Chromium Alum	A				A			A			
Cider	A		B		A	A				A	
Citric Acid	A	A	A	A	A	A	A	A		A	A
Citric Oils	A				A	A		B		A	
Cobalt Chloride					A	A	B	A			
Coconut Oil	A		A		A	A	A	A		A	
Coffee	A	A			A	A	A	A		A	

	PLASTICS				ELASTOMERS				ALLOYS		
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Copper Chloride	A	A	B		A	A	A	A		C	B
Copper Cyanide	A	A	A		A	A	A	A		A	B
Copper Fluoborate					A	B				D	B
Copper Nitrate	A	D	B		A	A				B	C
Copper Culfate	A	C	B		A	A	A	A		B	B
Cream	A	A			A	A				A	
Cresols	D	D	C		A	D	D	D		A	B
Cresylic Acid	D	D	B		A	D	D	D		A	B
Cyanic Acid					A	C					
Cyclohexane	C	A	B		A	B	D	D	D	A	B
Detergents	B	A	A	B	A	A	A	A		A	B
Diacetone Alcohol	A				D	D	D	A			
Diazo Salts	A		A								
Dibutyl Amine					C	C	C	D			
Dibutyl Ether					C	C	D	C			
Dibutyl Phthalate	B	A			B	D	B	A			B
Dibutyl Sebacate					C		B	B			
Dichlorethane	A	C	C		C						B
Dichloromethane					B	D		D			
Diesel Fuel	B		C	A	A	A	D	D		A	B
Diethylamine	B	A	D		C	C	B	B			B
Diethyl Ether	B			A	C	D	D	C	A		B
Diethyl Oxide					D	B		D			
Diethylene Glycol	A	A	B		A	A	D	A		A	
Diglycolic Acid	A				A			A			
Diisobutyl Ketone					D			D			
Diisobututylene					A		D	D			
Diisooctyl Phthalate					B			B			
Diisopropyl Ketone					D			D		B	
Dimethyl Amine	A				D	B		C			
Dimethyl Benzene					A	D		D			
Dimethyl Ether					B	B		B			
Dimethyl Formamide	A	A		A	C	B	B	B	A		
Dimethyl Ketone					D	D		A			
Dimethyl Phthalate					B	C		B			
Dimethylamine	A				D			D			
Diocetyl Phthalate	D		D		A	D	C	B			
Dioxane	B	A			D	D	D	B			
Diphenyl Oxide	D		D		A	D	C	D			B
Dyes		A			A						A
Epsom Salts	A	A	A		A	A	A	A		B	A
Ethane	C	D	D		A	A	D	D		A	A
Ethanolamine	B	A			D	B	B	B		A	B
Ether	D	A	C		C	D	D	C		B	B
Ethyl Acetate	B	A	B	A	D	D	B	B		B	A
Ethyl Chloride	C	A	B		A	A	D	A		A	B
Ethyl Sulfate					A	A					D
Ethylene Chloride	C	B	C		B	D	D	D		A	B
Ethylene Dichloride	B	B	C	A	A	D	D	C		A	A
Ethylene Glycol	A	B	A	B	A	A	A	A		A	B
Ethylene Oxide	C	A	C		D	D	D	C			C
Fatty Acids	B	A	B		D	D	D	C		A	A
Ferric Chloride	B	C	A		A	B	B	A		C	C
Ferric Nitrate	B	A	B		A	A	C	A		A	B
Ferric Sulfate	B	A	A		A	A	B	A		A	B
Ferrous Chloride	A	C	A		A	A				C	D
Ferrous Sulfate	A	C	A		A	A		A		B	B
Flouboric Acid	A	D	B		A	A		A		C	A
Fluorine	C	D	C		B	C	D	A		C	B
Fluosilic Acid	A	D	B		A	A	B	A			B

	PLASTICS				ELASTOMERS				ALLOYS		
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Formaldehyde	C	D	B		D	C	B	A		A	B
Formaldehyde, 40%	A	C	A		A	B	A	A		A	B
Formic Acid	A	C	B		C	B	B	A		C	B
Freon 11	D	D	C		A	B	D	D	C	A	
Freon 12	D	D	C		B	A	D	B		A	
Freon 22	A	B	A		D	D	D	A		A	
Freon 113	D	D			B	A	D	D		A	
Freon T.F.	D	D	D		B	A	D	D		A	
Fructose	A	A	A		A	A		A		A	
Fruit Juice	A	A	B		A	A				A	
Fruit Pulp	A	A			A					A	
Fuel Oils	B	A	D		A	A	C	D		A	B
Furan Resin	D	D			D	D	D	C		A	A
Furfural	C	B	D		D	D	D	B		A	B
Gallic Acid	A	B	D		A	A		A		B	B
Gasoline	D	A	D	A	B	A	D	D		A	A
Gelatin	A	A	A		A	A	A	A		A	B
Glucose	A	B	A		A	A	A	A		A	
Glue		A	A		A	A	A	A		A	
Glycerin	A	A	A		A	A	A	A	A	A	A
Glycerol	A	A	A		A	A	A	A	A	A	A
Glycolic Acid	A		A	C	A	A	A	A		A	B
Gold Monocyanide					A	A				A	
Grape Juice		A	B		A	A				A	
Grease					A	D				A	
Heptane	C	A	C	A	A	A	D	D		A	B
Hexane	C	A	C		A	A	D	D		A	B
Honey	A	A	B		A	A				A	
Hydraulic Oil (Petroleum)	D	A	D		C	A	C	D		A	
Hydraulic Oils (Synthetic)	D	A	A		A	C				A	
Hydrazine	C				A	B	C	A		A	
Hydrobromic Acid 20%	A	D	B		A	D	A	D		B	
Hydrobromic Acid	A	D	A		A	D	D	A		D	B
Hydrochloric Acid dry gas	B	A	A					C		D	A
Hydrochloric Acid, 20%	B	D	A	D	A	C	C	A	A	D	B
Hydrochloric Acid, 37%	B	D	C		A	B	B	A		D	A
Hydrochloric Acid, 100%	D	B			A	D	D	C		D	A
Hydrocyanic Acid	A	C	A		A	B	C	A		B	A
Hydrocyanic Acid (Gas 10%)	A				A	B		A			
Hydrofluoric Acid, 20%	A	C	A		A	C	D	A		C	B
Hydrofluoric Acid, 50%	A	D	A		A	C	D	A		D	B
Hydrofluoric Acid, 75%	C	D	C		A	D	D	C		D	B
Hydrofluosilicic Acid	A	D	B		A	B	D	A		D	B
Hydrogen Gas	A	A	A		A	A	C	A		A	A
Hydrogen Peroxide, 10%	B	C	A	A	A		B			B	D
Hydrogen Peroxide, 30%	B	D	C		A		B			B	D
Hydrogen Peroxide, 50%	B	D	C		A		B			A	C
Hydrogen Peroxide, 100%	B	D	C		A	B	B	A		A	A
Hydrogen Sulfate (aqua)	A	C	A		D	D	C	A		C	A
Hydrogen Sulfide (dry)	A	C	A		D	A	C	A		B	B
Hydroxyacetic Acid			A		A	A		A			
Hydroxyacetic Acid (70%)			A		A	A		A			
Hydroxylamine Sulfate	A							A			
Hypochlorous Acid	A		A		B	D		B		D	
Ink	A	C	D		A	A				A	
Iodine	B	D	B		A	B		B		C	B
Isotane	D	D			A	A					
Isopropyl Acetate	B	B	B		D	D	D	B		B	B
Isopropyl Ether	C	A	C		D	B	D	D		A	
Jet Fuel JP-3	A	A	C		A	A	D	D		A	A

	PLASTICS				ELASTOMERS				ALLOYS		
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Jet Fuel JP-4	B	A	C		A	B	D	D		A	A
Jet Fuel JP-5	B	A	C		A	A	D	D		A	A
Kerosene	A	A	C	A	A	A	D	D		A	A
Ketones	B	A	C		D	D		C		A	B
Laquer	B	A	C		D	D	D	D		A	
Laquer Thinner	B	A	B		D	D	D	A		A	
Lactic Acid	A	C	B		A	A	A	B		A	B
Lard	A	A	B		A	A	B	C		A	A
Latex	A	A	A		A	A		B		A	
Lead Acetate	A	B	B		D	B	D	A		B	B
Lead Chloride	A				A			A			
Lead Nitrate	A				A	A	B	A		B	B
Lead Sulfamate	A	B	A		A	B	B	A		B	
Ligroin	B	D	C		A	A	D	C		A	
Lime	A	A	B		A	A	B	C		A	
Linoleic Acid	A				B	B	B	D		A	
Linseed Oil	A	A	D	A	A	A	A	B		A	A
Lubricants	A	A	D		A	A	D	D		A	B
Magnesium Carbonate	A		A		A	A		A		A	B
Magnesium Chloride	A	A	A		A	A	A	A		A	A
Magnesium Hydroxide	A	B	A		A	A	A	A		A	B
Magnesium Nitrate	A	A	A		A	A		A		A	B
Magnesium Oxide					A					A	
Magnesium Sulfate	A	A	A		A	A	A	A		B	A
Maleic Acid	A	B	B		A	D	B	D		B	B
Maleic Anhydride	D				A	D		D		A	
Mash		A			A	A		A		A	
Mayonnaise		A	B		A	A				A	
Melamine	A	A			A	C		A		D	
Mercuric Chloride	A	D	A		A	A				C	D
Mercuric Cyanide	A	A	A		A	A				B	D
Mercury	B	A	A		A	A		A		A	B
Methyl Acetate	D	A	B		D	D	D	B		A	B
Methyl Acrylate	D		B		D	D	D	B			
Methyl Acetone		A			A	D				A	
Methyl Bromide	C	C	D		A	D			D	A	
Methyl Butyl Ketone	D	D	A		D	D	D	A		A	B
Methyl Cellosolve	B	C	B		D	C	D	B		A	B
Methyl Chloride	D	C	C		A	D	D	C		A	B
Methyl Dichloride	D	C			A	D	D	D			
Methyl Ethyl Ketone	A	A	B		D	D	D	A	A	A	B
Methyl Isobutyl Ketone	C	A	A		D	D	D	C		A	
Methyl Isopropyl Ketone	D	D	D		D	D	D	B		A	
Methyl Methacrylate					D	D	C	D			
Methylamine	D				D	D		A		A	
Methylene Chloride	B	C	C		B	D	D	D		B	A
Milk	B	A	A		A	A	A	A		A	A
Mineral Oil	A	A	D	A	A	A	B	D		A	
Molasses	A	A	A		A	A		C		A	A
Motor Oil	C			A	A	A		D			
Mustard	A	A	A		D	C	A	A		A	A
Naptha	C	A	A		A	C	D	D		A	B
Napthalene	B	A	A		A	D	D	D	A	B	
Natural Gas	A				A	A	A	D			
Neon					A	A	A	A			
Nickle Chloride	A	C	B		A	A	A	A		C	A
Nickle Sulfate	A	A	B		A	A	A	A		B	B
Nitric Acid (5-10%)	A	C	B	D	A	D	C	D		A	D
Nitric Acid (20%)	A	D	C		A	D	D	B		A	D
Nitric Acid (50%)	D	D	C		A	D	D	D		A	D

	PLASTICS				ELASTOMERS				ALLOYS		
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Nitric Acid (Concentrated)	D	D	C		A	D	D	D		A	
Nitrobenzene	B	B	C		B	D	D	D	A	A	C
OILS											
Aniline	A	A			C	D	D	B		A	
Anise		A								A	
Bay					A					A	
Bone	A				A	A				A	
Castor	A	A			A	A	A	B		A	
Cinnamon		A			A					A	
Citric		A			A						
Clove		A			A	A				A	
Coconut	A	A			A	A	A	C		A	
Cod Liver	A				A	A	B	A		A	
Corn	A	A	C		A	A	A	C		A	
Cotton Seed	A	A	B		A	A	A	C		A	
Creosote	C	D	C		A	B	D	D		B	
Diesel Fuel	A	A	C		A	A	D	D		A	
Fuel	C	A	C		A	B	C	D		A	
Ginger		A			A	A		A		A	
Hydraulic	D	A	C		A	A	C	D		A	
Lemon		A			A			D		A	
Linseed	A	A	C		A	A	A	C		A	
Mineral	B	A	B		A	A	C	D		A	
Olive	A	A	A		A	A	D	B		A	
Orange		A			A	A	D			A	
Palm		A			A	A				A	
Peanut	D	A			A	A	A	C		A	
Peppermint		A			A	D				A	
Pine	D	A			A	B	D	A		A	
Rape Seed	D				A	B	D	A		A	
Rosin	A	A	B		A	A				A	
Sesame Seed		A			A	A				A	
Silicone	A	A	A		A	A	C	A		A	
Soybean	A	A	A		A	D	A	C		A	
Sperm					A	A				A	
Tanning					A	A				A	
Oil, Turbine	B		C		A	B	D	D		A	
Oleic Acid	A	B	D	A	B	B	D	C		B	B
Oleum	D	D	A		D	D	D			B	
Oxalic Acid	A	B	A		A	B	B	A		B	B
Oxygen Gas	A				A	C	B	A			
Ozone	C		C		A	D	A	A			
Palmitic Acid	A	B			A	A	D	B			
Paraffin	A	A	B		B	A	D			A	A
Pentane	D	A	D		A	A	D	D		C	
Perchloroethylene	C	C	D		A	D	D	D		A	B
Petrolatum	C	D	B		A	A	C	C		A	
Phenols 10%	B	D	A	B	B	D	D	C		B	
Phenols 100%	A	D	B		D	D	D			A	
Phosgene Gas	C				D	D		A			
Phosgene Liquid	D				D	D		A			
Phosphoric Acid < 40%	A	D	B		A	C	D	B		A	A
Phosphoric Acid > 40%	A	B	A		A	C	C	B		B	B
Phosphoric Acid (crude)	B	B	C		A	C	C	B		C	A
Phosphoric Acid (molter)	D										C
Phosphoric Acid Anhydride	A										
Phosphorus Trichloride	C		A		C	D		C		A	D
Photographic Developer	A		B		A	A	A	B		A	
Phthalic Acid	D	B			A			A		B	
Phthalic Anhydride	D				A	C		A		B	A

	PLASTICS				ELASTOMERS				ALLOYS		
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Plating Solutions - Antimony	A				A	A				A	
Plating Solutions - Arsenic	A	A			A	A				A	
Plating Solutions - Brass	A	A	B		A	A				A	
Plating Solutions - Bronze	A	A			A	A		A		A	
Plating Solutions - Cadrium	A	C			A	A					A
Plating Solutions - Chrome	A	D			A		D				
Plating Solutions - Copper	A	C			A	A					A
Plating Solutions - Gold	A	A			A	A					A
Plating Solutions - Indium	A	D			A	A					A
Plating Solutions - Iron	A	D			A	A					A
Plating Solutions - Lead	A	D			A	A					A
Plating Solutions - Nickel	A	C			A	A					A
Plating Solutions - Silver	A	A			A	A		A			A
Plating Solutions - Tin	A	D			A	A					A
Plating Solutions - Zinc	A	D			A	A					A
Potash	A	A	B		A	A					A
Potassium Bicarbonate	A	A	A		A	A				B	B
Potassium Bromide	A	A	A		A	A				B	A
Potassium Carbonate	A	A	A		A	A				B	B
Potassium Chlorate	A	A	A		A	A				B	B
Potassium Chloride	A	B	A		A	A	A	A		B	B
Potassium Chromate	A	A	A		A	A				B	A
Potassium Cyanide Solutions	A	A	A		A	A	A	A		B	B
Potassium Dichromate	A	D	A		A	A	A	A		B	B
Potassium Ferrocyanide	A	B	A		A	A				B	B
Potassium Hydroxide	A	C	A		B	B	C		A	B	B
Potassium Iodide	A				A	A		A			A
Potassium Nitrate	A	B	B		B	A	A	A		B	D
Potassium Perborate	A		A								
Potassium Perchlorate	A		A			A		A			
Potassium Permanganate	A	D	A		B	A		A		B	B
Potassium Persulfate	A	A	A		A	A		A			
Potassium Sulfate	A	A	A		A	A	A	A		B	
Potassium Sulfide	A	A	A		A	A	A	A			A
Potassium Thiosulfate					A	A					
Propane	B	A			A	A	D	D		A	
Propanol					A	A		A	A		
Propargyl Alcohol	A		A								
Propyl Acetate					D	D	D	B			
Propylene					A	D	D	D			
Propylene Dichloride	C		C		D	D		D			
Propylene Glycol	A		B		A	A		A		A	B
Pyridine	A	A	B		D	D	D	B	A	A	A
Pyrogalic Acid	A				A					B	B
Rosins	A	A	B		A	A				A	A
Rum	A	A			A	A		A			A
Rust Inhibitors	A				A	A					A
Salad Dressing	A	A			A	A					A
Sea Water	A	A	A		A	A	A	A	A	A	A
Sewage	A				A	A	B	B			A
Shellac (Bleached)	A	A	A			A					A
Shellac (Orange)	A	A	A			A					A
Silicic Acid	A	A			A	A					
Silicone	A	A			A	A	C	A			A
Silver Bromide										B	B
Silver Cyanide	A				A			A			
Silver Nitrate	A	A	B		A	B	A	A		B	B
Silver Salts	A		A		A	A					A
Silver Sulfate	A				A	C		A			
Soap Solutions	A	A	B		A	A	A	A		B	B

	PLASTICS			ELASTOMERS				ALLOYS			
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Sodium Acetate	A	B	B		D	B	D	A		B	
Sodium Aluminate	A	A	A		A	A		A		A	B
Sodium Bicarbonate	A	A	A		A	B	D	A		B	B
Sodium Bisulfate	A	A	A		A	B		A		B	B
Sodium Bisulfide	A	A	A		A	A		A		B	
Sodium Borate	A	A	A		A	A		A		B	
Sodium Carbonate	A	B	B	A	A	A		A		A	B
Sodium Chlorate	A	D	B		A			A		B	
Sodium Chloride	A	A	A	B	A	A		A	A	B	A
Sodium Chromate		D			A	A				B	
Sodium Cyanide	A	A	A		A	A		A		A	
Sodium Hydroxide 20%	A	A	A	A	B	B	B	A		A	A
Sodium Hydroxide 50%	A	A	A	B	B	B	B	A	A	B	A
Sodium Hydroxide 80%	A		B	C	B	B		A			B
Sodium Hypochlorite < 20%	B	D	A	D	A	B	B	B		C	
Sodium Hypochlorite 100%	B	D	B		A	B	B	B	D		
Sodium Hyposulfate									A	A	
Sodium Metaphosphate	A	A	A		A	A		A		A	
Sodium Metasilicate	A				A	A		A		A	A
Sodium Nitrate	A	A	A		A	B	D	A		B	B
Sodium Perborate	A	B	A		A	B	B	A		B	B
Sodium Peroxide	B	A	A		A	B	D	A		A	C
Sodium Phosphate Alkaline	A	A			A	A		A			B
Sodium Phosphate Neutral	A	A			A	A		A			B
Sodium Polyphosphate	A	A	A		A	A	D	A		B	
Sodium Silicate	A	A	A		A	A		A		A	C
Sodium Sulfate	A	A	A		A	A		A		B	B
Sodium Sulfide	A	A	A		A	A		A		B	B
Sodium Sulfite	A	D	B		A	A		A		B	D
Sodium Tetraborate		A	A		A	A				A	
Sodium Thiocyanate			A		A			A	D		
Sodium Thiosulfate	A	B	A	A	A	B		A		A	
Sorghum		A			A	A				A	
Soy Sauce		A			A	A				A	
Soybean Oil			A		A			A		A	
Stannic Chloride	A	B	A		A	A	B	A		D	B
Stannic Fluoborate					A	A				A	
Stannous Chloride	A	C	B		A	A	B	B		A	B
Starch	A	A	B		A	C		A		A	
Stearic Acid	A	A	B		A	B	B	C		A	C
Stoddard Solvent	C	A	C		A	A	D	D		A	
Styrene		A			C	D	D	D		A	
Sugar (liquids)	A	A			A	A		A		A	B
Sulfate Liquors	A	B	A		A	A		A		B	B
Sulfur	D	A	B		A	C		C			
Sulfur Chloride	C	A	C		A	D	C	D		D	A
Sulfur Dioxide Dry	A	B	A		A	D	B	A		A	B
Sulfur Dioxide Wet	A	C	B		A	D	B	A		A	D
Sulfur Trioxide	D	A	C		A	D	B	C		A	
Sulfuric Acid (to 10%)	A	C	A	C	A	D	D	B		B	C
Sulfuric Acid (10-75%)	A	D	A	D	A	D	D	B		D	C
Sulfuric Acid (75-95%)	C	D	B	D	A	D	D	A		D	C
Sulfuric Acid (95-100%)	C	D	B	D	A	D	D	D	A	D	A
Sulfurous Acid	A	D	B		A	B	D	B		C	C
Syrup	A				A	A				A	
Tallow	A	A	C		A	A				A	
Tannic Acid	A	C	B		A	A	B	A		A	B
Tanning Liquors	A	A	A		A	A		B		A	B
Tartaric Acid	A	B	A		A	A	A	B		C	B
Tetrachlorethane	C	C			A	D	D			A	

	PLASTICS			ELASTOMERS				ALLOYS			
	POLYPROPYLENE	NYLON	POLYETHYLENE	ACETAL COPOLYMER	VITON	BUNA	SILICONE	EPDM	SANTOPRENE	316 STAINLESS STEEL	HASTELLOY
Tetrahydrofuran	C	A	C		D	D	B	D		A	B
Toluene, Tuluol	C	A	C	A	A	D	D	B		A	A
Tomato Juice	A	A	A			A		D		A	A
Trichloroethane	C	C			A	D	D	D		A	
Trichloroethylene	C	C	C		A	C	D	D	D	B	B
Trichloropropane					A	A				A	A
Tricresylphosphate	A	A	B		B	D	C	A		A	
Triethylamine	D	A			A	A		A		A	
Turpentine	B	A	C		A	A	D	D	C	A	B
Urine	A	A	A		A	A		A		A	
Varnish	A	C	C		A	B	D	D		A	A
Vegetable Juice		A			A	C				C	
Vinegar	A	C	B		A	B	A	A		A	B
Vinyl Acetate					D	D		B			
Vinyl Chloride		A			A	D		C		A	
Water Acid Mine	A	B	A		A	A	B	A		A	A
Water Deionized	A		A		A	A		A		A	B
Water Distilled	A	A	A	B	A	A		A		A	A
Water, Fresh	A	A	A		A	A	B	A	A	A	A
Water, Salt	A	A	A		A	A		A	A	A	A
Weed Killers		A			A	B				A	
Whey					A	A		A		A	
Whiskey & Wines	A	A			A	A		A		A	
Xylene	C	A	C		B	D	D	D	C	A	B
Xylol	D				A	C	D	D			
Yeast	A		A		A	A					
Zeolite					A	A		B			
Zinc Acetate	A				C	B		A		B	
Zinc Chloride	A	C	A		A	A	D	A	A	C	B
Zinc Hydrosulphite		A			A			A		A	
Zinc Sulfate	A	C	B		A	A	A	A		A	B
Zirlite	A		B		C	B		A			

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