

# CHEMICAL RESISTANCE GUIDE



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## PRIMARY FLUID SYSTEMS INC. DISCLAIMER

Primary Fluid Systems Inc. takes no responsibility for the enclosed information in use with product selection against chemical resistance.

The data in the following tables were obtained from numerous sources in the industry, and believed to be reliable but cannot be guaranteed. The information is intended as a general guide for material selection. The end user should be aware of the fact that actual service conditions will affect the chemical resistance. It is recommended that you cross reference this guide with one or two others to insure consistency.

All data provided is based on testing at 70°F [21°C].

Thermoplastics, Metals and Elastomers have outstanding resistance to a wide range of chemical reagents. Such resistance, however, is a function both of temperatures and concentration, and there are many reagents which can be handled for limited temperature ranges and concentrations. In borderline cases, it will be found that there is limited attack, generally resulting in some swelling due to absorption. There are also many cases where some attack will occur under specific conditions, but for many such applications, the use of plastic will be justified on economic grounds when considered against alternative materials. Resistance is often affected [and frequently reduced] when handling a number of chemicals or compounds containing impurities. For this reason, when specific applications are being considered, it may be worthwhile to carry out tests using the actual product that will be encountered in service.

<b>A*</b>	Excellent – No Effect
<b>B</b>	Good – Minor Effect
<b>C</b>	Fair – Data not Conclusive Testing Recommended
<b>D</b>	Not Recommended
<b>Blank</b>	No Data Available

\* Data limited to % concentration at 70°F [21°C].

**TEMPERATURE EFFECTS:** Thermoplastics and thermosets will decrease in tensile strength as the temperature increases; therefore, the working pressure must be reduced accordingly. The following factors will apply:

**NOTE:** If the material of the valve you have chosen is rated below the working pressure of your system then you must reconsider your choice. The standard valve top material of construction is PVC and should be taken into temperature consideration. [Other materials of construction are available, consult price list or factory.]

**NOTE:** When considering working temperature include ambient and potential collective surface temperature [Radiant Heat]

### Temperature Correction Factors for Thermoplastics

Operating Temperatures [Factors] (NR = not recommended)

F	C	PVC	CPVC	PP	PVDF
70	21	1.00	1.00	1.00	1.00
80	27	1.00	1.00	1.00	1.00
90	32	1.00	1.00	1.00	1.00
100	38	0.90	1.00	1.00	1.00
110	43	0.83	1.00	0.91	1.00
115	46	0.75	1.00	0.87	1.00
120	49	0.66	1.00	0.83	1.00
125	52	0.58	0.97	0.79	1.00
130	54	0.50	0.95	0.75	1.00
140	60	0.33	0.90	0.66	1.00
150	66	NR	0.80	0.60	0.97
160	71	NR	0.70	0.53	0.93
170	77	NR	0.60	0.43	0.86
180	82	NR	0.50	0.33	0.80
200	93	NR	0.33	NR	0.66
210	99	NR	NR	NR	0.60
240	116	NR	NR	NR	0.40
280	138	NR	NR	NR	0.16

#### Example:

Working ambient, collective surface temperature and fluid conditions 100°F [38°C]  
 Valve chosen TVPR50-PVC set @ **75 PSIG**  
 ½" PVC Valve pressure rating 230 PSIG  
 (see chart below) Factor at 100°F =0.90  
 230 x .90 = 207  
 Valve is de-rated to **207 PSIG**  
 Therefore: Suitable for application

#### Maximum Suggested Design Pressure by Valve Size at 73° F 22° C

Valve Size	PVC/CPVC	PP/PVDF
1/2"	230 psig	150 psig
3/4"	230	150
1"	230	150
1 1/2"	200	150
2"	200	150

## **THERMOPLASTICS & ELASTOMERS**

### **PVC** [Polyvinyl Chloride]

The maximum working temperature of PVC valves is **140°F [60°C]**.

### **CPVC** [Corzan™] [Chlorinated Polyvinyl Chloride]

CPVC is similar to PVC in mechanical properties and chemical resistance. It is suitable for applications up to **200°F [95°C]**. [[www.corzancpvc.com](http://www.corzancpvc.com)]

### **PP** [Polypropylene]

With a design stress of 1000 psi at **73°F [22°C]**, polypropylene has gained wide acceptance where its resistance to sulfur-bearing compounds is particularly useful in alt water disposal lines, crude oil piping and low pressure gas gathering systems. Valves are suitable for service up to **195°F [90°C]**.

### **PVDF** [Kynar®] [Polyvinylidene Fluoride]

The working temperature range of PVDF valves is **-40°F** up to **250°F [-40°C - 120°C]**.

## **POLYCARBONATE**

Unbreakable material has a **290°F [145°C]** heat deflection temperature at 264 psi, absorbs very little moisture and resists acidic solutions.

### **TEFLON®** [Fluorocarbons av. PTFE]

Outstanding resistance to chemical attack by most chemicals and solvents. It is a self-lubricating compound and has a temperature rating of **-20°F - 400°F [-29°C - 204°C]**. [[www.dupont-dow.com](http://www.dupont-dow.com)]

## **ELASTOMER**

### **VITON®** [Fluorocarbon Rubber av. FPM]

Viton is more expensive than EPDM and is used an alternative for only a few applications. Viton is attacked by caustic [sodium hydroxide] and low molecular weight organics. Has a broad temperature range of **-20°F - 300°F [-29°C - 149°C]** but is not suitable for steam service. [[www.dupont-dow.com](http://www.dupont-dow.com)]

### **EPDM** [Ethylene Propylene Diene Monomer]

This is a synthetic rubber used as the standard seal material for most valves. It is the most economical choice of elastomer and has excellent all round chemical resistance to acids as well as alkalis, salts, alcohols and oxidizing chemicals. EPDM cannot be used on petroleum oils.

### **NEOPRENE** [Chloroprene Rubber av. CR]

This is an economical o-ring alternative where resistance to petroleum products is required. Moderate temperature range of **-20°F - 160°F [-29°C - 71°C]**.

### **NITRILE** [Acrylonitrile-Butadiene Copolymer av. NBR] [BUNA-N]

Nitrile diaphragms and butterfly valve seats offer high abrasion resistance along with good chemical resistance. Has a moderate temperature range of **-20°F - 180°F [-29°C - 82°C]**

### **HYPALON®** [Chlorosulfonated Polyethylene av. CSM] Hypalon® chlorosulfonated polyethylene

Hypalon is used as an alternative to EPDM seals when necessary for butterfly and diaphragm valves. Normal temperature range is **-20°F - 200°F [-29°C - 93°C]**. [[www.dupont-dow.com](http://www.dupont-dow.com)]

## **METAL**

### **316 S/S**

316 stainless steel has very good corrosion resistance to a wide range of environments.

### **ALLOY 20**

Has exceptional corrosion resistance in sulfuric acid environments, and is used in a range of applications involving this acid including mixing tanks, heat exchangers, process piping, pickling equipment, pumps, valves, fasteners and fittings.

### **TITANIUM**

Titanium is resistant to dilute sulfuric and hydrochloric acid, most organic acids, most chlorine gas, and chloride solutions.

Titanium is immune to corrosive attacks by saltwater and marine atmosphere and exhibits exceptional resistance to a broad range of corrosive gases, acids and alkalis.

### **HASTELLOY® C-276**

Has outstanding resistance to a wide variety of chemical process environments, including strong oxidizers such as wet chlorine, chlorine gas, and ferric chloride. Resistant to nitric, hydrochloric and sulfuric acids at moderate temperatures. [[see www.haynesintl.com](http://www.haynesintl.com)]

### **CARBON STEEL**

Good resistance to stress corrosion and sulfides. Has high and low temperature strength. Used in applications up to **850°F [454°C]**.

CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Acetaldehyde	D	D	B	C	C	A	D	B	C	D	C	A	A	A	A	C
Acetaldehyde, Aqueous,40%	D		A	D	D	A	B	A				A		A	A	
Acetamide	D		A	D	D	A	C	A	C	A	C	A	A		A	D
Acetate Solvents, Crude	D	D	D	A	D							A			B	
Acetate Solvents, Pure	D		D	A	D	A	D	C	D	D	D	A				D
Acetic Acid 05%			A	A	C	A	A	A	B	B	A	A		A	A	D
Acetic Acid 10%	A	A	A	A	C	A	D	B	B	B	B	A		B	A	D
Acetic Acid 20%	A	A	A	A	C	A	C	B	C	B	B	A	A	A	A	D
Acetic Acid 30%	A		A		C	A	C	A	B	B	B	A		A	A	D
Acetic Acid 50%	A	D	A	A	B	A	C	B	C	A	A	A	A	A	A	D
Acetic Acid 60%	A		B	A		A	C	C	C			A		A	A	
Acetic Acid 80%	B	D	C	A		A	C	B	C	C	A	A	A	A	A	D
Acetic Acid Glacial 100%	D	D	A	A		A	D	B	C	C	C	A	A	B	A	C
Acetic Aldehyde (Acetaledehyde)						A	D	A	B	D	A	B	B		A	D
Acetic Anhydride,		D	B	B	N	A	D	C	B	C	A	A	B	B	A	C
Acetic Ester (See Ethyl Acetate)						A	D	B	D	D	D					
Acetic Ether (See Ether Acetate)						A	D	B	D	D	D					
Acetol						A										
Acetone	D	D	A	D	D	A	D	A	C	C	B	A	A	A	A	A
Acetonitrile (MethylCyanide)	D		B	A		A	C	A	A	C	B	A	A	A	A	A
Acetophenone	D		A	A		A	D	A	D	C	D	A			B	A
Acetyl Acetone	D			D		A	D	A	D	D	D	A				D
Acetyl Benzene						A	D	A	D	D	D	A				
Acetyl Bromide				A		A	A					A				
Acetyl Chloride	D	D	A	A		A	C	D	D	C	D	A	A			A
Acetyl Oxide						A	D	B	B	C	D					
Acetyl Propane						A	D	B	D	D	D	A				
Acetylene	B	A	A	A		A	A	A	B	A	A	A	A		B	A
Acetylene Dichloride	D					A	A		D	D	D					
Acetylene Tetrachloride	D					A	A	D	D	D	D	D				
Acid Mine Water	A		B	A		A	A	C								
Acrylic Acid	C	D		A		A										
Acrylic Emulsions			D												A	
Acrylonitrile	D	D	A	A	D	A	D	D	C	C	C	A	A		B	A
Adipic Acid Aqueous	A	A	A	A	A	A	A	A	A	A	A	A	B	A	A	A
Air	A		A	A	A	A	A	A	A	A	A	A				A
Alcohol (See Ethyl Alcohol)						A	B	A	A	A	A	A				A
Alcohol Amyl	C	B	A	A		A	A	A	B	A	A	A		A	A	
Alcohol, Allyl	D	D	A	A		A	B	A	A	A	A	A	A		A	A
Alcohol, Benzyl,	D		A	A			A	C	C	D		A		A	A	
Alcohol, Butyl	C	B	A	A		A	A	A	A	A	A	A		A	A	D
Alcohol, Diacetone,	D		C	B		A	D	A	C	C	A	A		A	A	
Alcohol, Ether						A	B	A	C	C	B					
Alcohol, Ethyl	A	A	A	A		A	B	A	A	A	A	A		A	A	A
Alcohol, Hexyl,	A		A			A	A	A	B	A		A		A	A	
Alcohol, Isobutyl				A		A	A	A	A	B		A		A	A	
Alcohol, Isopropyl,	A		A	B	A	A	A	A	B	B		A		A	A	A
Alcohol, Methyl	A	A	A	A	C	A	D	A	A	A	A	A		A	A	A
Alcohol, Octyl,							A		B	B		A		A	A	A
Alcohol, Polyvinyl	A		A			A	A	A								
Alcohol, Propargyl	A															
Alcohol, Propyl	A	A	A	A		A	A	A	A	A	A	A		A	A	C
Aldehyde						A	D	A	C	D	C					
Alkanes						A	A	D		A	D					

CHEMICAL	THERMOPLASTIC					ELASTOMER						METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Alkazene						A	B	D	D	D	D					
Allyl Aldehyde						A	A			B	B					
Allyl Bromide						A	B		D	D	D					A
Allyl Chloride	D	D	B	A		B	B	D	D	D	D	A		A	A	D
Allyl Trichloride						A	A			D	D					
Alum	A	A	A	A		A	A	A	A	A	A	A		A	A	C
Alum, Ammonium	D	D	A	A		A	A	A	B	A	A					
Alum, Chrome	A	A	A	A		A	A		A	A	A	A				
Alum, Potassium	A	A	A	A		A	A	A	A	A	A					
Aluminum, Acetate		B				A	C	A	C	B	C	A	A			D
Aluminum, Ammonium Sulfate			A	A		A	A	A	A	B		A	A			C
Aluminum, Bromide						A	A	A	A	A	A					
Aluminum, Chloride	A	A	A	A		A	A	A	A	A	A	C	A	C	A	B
Aluminum, Cholrohydroxide						A										
Aluminum, Citrate																
Aluminum, Fluoride	A	A	A	A			A	A	A	A	A	C	B	C	B	
Aluminum, Formate						A	D			D	D					
Aluminum, Hydroxide	A	A	A	A	D	A	C	A	A	A		A	A	A		C
Aluminum, Nitrate	A	A	A	A		A	B	A	A	A	A	A	A			C
Aluminum, Oxychloride	A		A	A			D									
Aluminum, Phosphate						A	A	A	A	A	A	A				
Aluminum, Potassium Sulfate	A		A	A		A	A	A	A	A	A	A	A			D
Aluminum, Salts	A		A	A	A	A	A	A	A	A	A	D				
Aluminum, Sulfate	A	A	A	A		A	A	A	A	A	A	B		A	A	C
Amber Acid	A		A	A		A	A	A								
Amines	C	D		B		A	D	C	C	D	D	A		B	A	
Ammonia 10%	A	D	A			A	A		A	D		A		A	A	
Ammonia, Anhydrous 99.5%	D		A	B		A	D	A	A	C	A	A		B	A	A
Ammonia, Aqueous 25%	A	A	A	A						C		A				A
Ammonia, Dry Gas	A		A			A	D	A	A	A	A	A	A	A	A	A
Ammonia, Liquid	D		A	A		A	D	A	A	B	A	A	A		A	A
Ammonia, Nitrate	B		A	A		A	A	A	C	B		A				A
Ammonium Phosphate, Monobas	A	A	A	A		A	A	A	A	A		A		A	A	
Ammonium Phosphate, Tribasic	A		A			A	A	A	A	A		A		A	A	
Ammonium, Acetate	A	A	A			A	A	A	A	A	A	A	B			C
Ammonium, Alum						A			B	B						
Ammonium, Bichromate						A		A	A	A	A					
Ammonium, Bifloride	A	A	A	A		A	A	A	D	B		A	B		B	D
Ammonium, Bisulfide	A			A		A					A					
Ammonium, Carbonate	A	A	A	A		A	A	A	A	C	A	B	B	A	B	A
Ammonium, Casenite									A			A				
Ammonium, Chloride	A	A	A	A		A	A	A	A	B	A	B	B	A	B	C
Ammonium, Dichromate	A	A				A		A	A	A	A	A				A
Ammonium, Fluoride		A		A		A	C	A	B	B	A	C				C
Ammonium, Fluoride 10%	A		A	A		A	A	A	A	A	A	C		B	A	
Ammonium, Fluoride 20%	A		A	A		A	A	A								
Ammonium, Fluoride 25%	D		A	A		A		A				C				C
Ammonium, Hydroxide	A	C	A	A	D	A	B	A	A	A	A	A		A	A	C
Ammonium, Metaphosphate	A		A	A		A	A	A	B	A	B					
Ammonium, Nitrate	B	A	A	A		A	A	A	A	A	A	A	A		A	D
Ammonium, Oxalate	A		A		A	A			A	A		A			A	D
Ammonium, Persulfate	A	A	C	A		A	C	B	A	C	A	A	A	A	A	D
Ammonium, Phosphate	A	A	A	A		A	A	A	A	A	A	C				D
Ammonium, Phosphate Di Basic	A		A	A		A	A	A	A	A		A		A	A	D
Ammonium, Phosphate Monobasic	C		A	A		A	A	A	A	A	A	C	A	A	A	D

CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Ammonium, Phosphate Tribasic	C		A	A		A	A	A	A	A	A		A	A	A	D
Ammonium, Salts	A		A	A	C	A	C	A	A	A	A	D				
Ammonium, Sulfate	A	A	A	A		A	C	A	A	A	A	B	A	A	A	D
Ammonium, Sulfide	A	A	A	A		A	C	A	A	A		B				C
Ammonium, Thiocyanate	A	A	A			A	A	A	A	A	A	A	A		A	C
Ammonium, Thiosulfate						A	A	A	A	A	A	A		A		D
Amyl Acetate	D	D	D	C	D	A	D	A	D	C	D	A		D	A	C
Amyl Alcohol (See Alcohol Amyl)	C	C	A			A	A	A	A	A	A	A	A	C	C	B
Amyl Borate				A		A	A	D	A	A	A					
Amyl Bromide						A	B	D	D	D	D					
Amyl Chloride	D	D	D	A	D	A	A	D	D	D	C	B	A	C	A	A
Aniline	D	D	A	C	C	A	B	A	D	D	A	A	A	B	C	C
Aniline Chlorohydrate	D														A	
Aniline Hydrochloride	D	D	D	A		A	B	B	D	C	C	D		A	D	C
Anthraquinone Sulfonic Acid	A			A	A		A									
Antichlor						A	A	A	A	A	A					
Anti-Freeze	A		A			A	A	A	A	A		A			A	A
Antimony Chloride			A	A		A	A		D	D						
Antimony Pentachloride						A			D	D	D					
Antimony Trichloride	A	A	A	A		A	A	A	A	A	A	D	A			C
Aqua Regia 80% HCL, 20% Nitric	D	C	C	A		A	C	C	C	C	B	D	B	B	C	D
Argon						A	A	A	D	C	D	A				A
Arochlor 1248						A	A	C	D	D		C				C
Aromatic Hydrocarbons	D						A	D	D	D		A				C
Arsenic Acid	A	A	A	A		A	A	A	A	A	A	B	A		A	D
Arsenous Acid	C			A		A		A		C		A				D
Aryl Sulfonic Acid	D		D	C						A						
Asphalt	C		A	A		A	A	D	C	B	C	A	A		A	A
Aviation Fuel(115-145 OCT)						A	A	D		C		A				A
Aviation Turbine Fuel						A										
Baking Soda (See Sodium Bicarbonate)						A	A	A	A	A	A				A	
Barium Acetate																
Barium Carbonate	A	A	A	A		A	A	A	A	A	A	B	A	A	A	B
Barium Chloride	A	A	A	A		A	A	A	A	A	A	B	A	A	A	C
Barium Cyanide	D					A	A		A	A		A				C
Barium Hydrate						A	A	A	A	A	A	A				
Barium Hydroxide	A	A	A	A		A	A	A	A	A	A	A	A	B	B	C
Barium Nitrate	A	A	A			A	A	A	A	A	A	A	A	A		A
Barium Salts	A		A	A		A	A	A	A	A	A	A				
Barium Sulfate	A	A	A	A		A	A	A	A	A	A	A	A	A	A	C
Barium Sulfide	A	A	A	A		A	A	A	A	A	A	A	A			C
Beer	A	A	A	A		A	A	A	A	C	A	A	A	A	A	C
Beet Sugar Liquid	A		A			A	A	A	A	A	A	A				A
Beet Sugar Liquors	A	A	A	A		A	A	A	A	A	A	A	A			B
Benzaldehyde	D	D	C	C	D	A	C	A	D	D	C	A	A	A	A	A
Benzalkonium Chloride	A															
Benzene [Benzol]	D	D	C	B	D	A	B	D	C	C	D	A	A	A	B	A
Benzene Sulfonic Acid	D	A	B	B		A	A	D	A	C	A	A	A			C
Benzene Sulfonic Acid 10%	D		D	B		A	A									
Benzil Chloride	B	D	A	A		A	A	D	D	D	D					
Benzoic Acid	A		A	A	C	A	A	B	C	D	A	B	A	A	A	D
Benzol (See Benzene)																
Benzyl Alcohol (See Alcohol Benzyl)		D				A	A	C	D	C	C	A	A			B
Benzyl Benzoate						A	A	C	D	D	D	C			B	C
Benzyl Chloride		D	A	D		A	D	D	D	D	D	C				A

CHEMICAL	THERMOPLASTIC					ELASTOMER						METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Bismuth Carbonate	A	A	A	A		A	A	A	A	A						
Black Liquor	A	A	A	A		A	A	B	A	A	A	A	A			A
Bleach (See Sodium Hypochlorite)	A	A	A	A		A	A	A	D	D	A				A	
Borax	A	A	A	A		A	A	A	A	A	A	A	A	A	A	C
Boric Acid	A	A	A	A		A	A	A	A	A	A	B	A	A	A	D
Brake Fluid						A	D	A	B	C	B	A	A		A	A
Brewery Slop						A	A		A	A		A				A
Brine	A	A	A	A		A	A	A	A	A	A	A	A		A	C
Brine Acid	A	A	A	A		A	A	A		A					A	
Bromic Acid	A		D	A		A	A	B							A	
Bromine Dry						A	A	D	D	D	D	D				D
Bromine Gas	C		D	A		A	A	D	C	D	A	C	A		A	C
Bromine Liquid	D	D	D	A		A	A	D	D	D	A	D	C		A	D
Bromine Water	D	D	D	A		A	A	D	C	C	A	D		A	A	D
Bromobenzene	D	D	D		D	A	A	D	D	C	D	A				C
Bromotoluene	D	D	D			A	C	C	C	D	C	A				A
Butadiene Gas	B	A	D	A	D	A	A	D	D	D	B	A	A		A	A
Butane	A	A	A	A		A	A	D	A	A	A	A	A		B	A
Butanediol (Butylene Glycol)	A			A			A	D								
Butanol (See Alcohol, Butyl)	C	C	A		C	A	A	A	A	A	A	A	A		A	A
Butter						A	A	A	B	A	B	A				D
Buttermilk						A	A	A	A	A		A				D
Butyl Acetate	D	D	C	B	D	A	D	B	D	C	C	C			B	A
Butyl Acrylate Pure	D		D	A		A	D	A								
Butyl Acrylate Saturated	C		C	A	A	A	D	A	D	A		A				C
Butyl Amine	D		D	B		A	D	D	D	D	C					
Butyl Benzoate						A	A	A	D	D	D					
Butyl Bromide				A		A	B			D	D					
Butyl Butyrate (Butyl Butanoate)						A	C	A	D	D	D					
Butyl Carbitol		D				A	A	A	B	C	A					
Butyl Cellosolve (Ethylene Glycol Monobutyl Ether)	A	D		A		A	D	B	C	C	B	A	A			
Butyl Chloride (Chlorobutane)				A		A	A	C	C	D	C	B	B		B	B
Butyl Diol	B	A	A	A		A	A	A								
Butyl Ether	D		D	A		A	D	D	C	B	C					
Butyl Formate						A			D	D						
Butyl Hydrate						A	A	B	A	A	A					
Butyl Hydride (See Butane)						A	A	D	A	A	B					
Butyl Hydroxide						A	A	B	A	A	A					
Butyl Mercaptan	D			A		A						A				
Butyl Phenol	C		A	A					C		B					
Butyl Phthalate [Dibutyl Phthalate]	D		A	A		A	C	B		D	D					
Butyl Stearate				A		A	A	B	A	B	D	A	A			C
Butylbenzene (Phenylbutane)						A	A			D	D					
Butylene (Liquified Petroleum Gas)	A		D	A		A	A	D	C	B	C	A				A
Butyraldehyde						A	D	B	D	D	C				A	
Butyric Acid	D	D	A	A	D	A	B	B	C	D	C	B	A	A	A	D
Cadmium Cyanide	A						A		A							
Cadmium Salts			A	A		A	A									
Caffeine Citrate	A			A		A										
Calamine						A	A		B	B	A					
Calcium Acetate	A		A	A		A	D	A	C	B	B	C				C
Calcium Bisulfide	A	A	A	A		A	A	D	A	A	C	B	A	A	A	
Calcium Bisulfite	A	A	A	A		A	A	D	A	A	A	A				D
Calcium Carbonate	A	A	A	A		A	A	A	A	A	A	A	A	A	A	C



CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Calcium Chlorate	A	A	A	A		A	A	A	A	A	A	A	A		B	C
Calcium Chloride	A	A	A	A		A	A	A	A	A	A	B	A	A	A	C
Calcium Cyanide						A		A	A	A	A					A
Calcium Hydroxide	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	C
Calcium Hypochloride						A	A	A	D	D	A					
Calcium Hypochlorite	A	A	A	A	D	A	A	A	C	C	A	B	B	B	B	D
Calcium Nitrate	A	A	A	A		A	A	A	A	B	A	A	A			D
Calcium Oxide	A	A		A		A		A	A	A	A	A				A
Calcium Phosphate						A	A	A	C	A	A	B				C
Calcium Sulfate	A	A	A	A		A	A	A	A	A	A	A	A	A	B	B
Calcium Sulfide	A		A	A		A	A	A	A	A	A					C
Calcium Thiosulfate						A	A		A	B	A					
Calgon (Sodium Hexametaphosphate)			C	A		A	A	A	A	A		A				
Cane Sugar Liquors	A	A	A	A		A	A	A	A	A	A				A	A
Caprylic Acid (Octanic Acid)				A		A				C	B	A	A		A	A
Carbinol (See Alcohol, Methyl)						A	D	A	A	A	A			B	A	
Carbolic Acid (See Phenol)				A		A	A	C	D	C	D	A		B	A	D
Carbon Bisulfide	D		D	A		A	A	D	D	D	D	B			A	A
Carbon Dioxide (Wet or Dry)	A		A	A		A	A	B	A	A	A	A	A	A	A	A
Carbon Disulfide	D	D	D	A	D	A	A	D	D	C	D	A	A		A	A
Carbon Monoxide	A	A	A	A		A	A	A	A	A	A	A	A		A	A
Carbon Tetrachloride	D	D	C	A	C	A	B	D	D	C	C	A	A	A	A	B
Carbonic Acid	A	A	A	A		A	A	A	A	B	A	B	A		A	D
Casein				A		A	A	A	A	A	A	B				
Castor Oil	A	C	A	A		A	A	A	A	A	A	A	A		A	A
Catsup	A		A			A	A	A	C	A		A			A	D
Caustic Lime (Calcium Hydroxide)						A	B	A	A	A	A	A			A	
Caustic Potash (Potassium Hydroxide)	A	A	A	A		A	D	A	B	A	A					
Caustic Soda (Sodium Hydroxide)	A	A	A	A		A	B	A	B	C	A					
Cellosolve (See Butyl Cellosolve)	B	D	B	A		A	C	B	D	C	A	A	A			A
Chloral Hydrate (Knockout Drops)	A	A	A	A			A		B	C	A	C				
Chlorasetic Acid	A		D			A	D	B	D	D		D		A	A	D
Chloric Acid 10%	A	A	D	A		A			D	D	A	D				D
Chloric Acid 20%	A		D	A		A						D	A		A	C
Chlorinated Glue							A	B	D	C		A				D
Chlorine Dioxide	A		C	A		A	A	D	D	D		D				D
Chlorine Dry	D	D	C	A	C	A	C	B	C	D	C	B		D	A	D
Chlorine Gas Dry	D	D	D	A		A	B	D	C	C	C	B	A		A	D
Chlorine Gas Wet	D	D	D	A		A	C	D	D	C	D	D	C		A	D
Chlorine Liquid	D	D	D	A		C		C	C	C	B	C			A	C
Chlorine Water	A	A	C	A		A	A	B	C	C	B	D	A	A	A	C
Chlorosulfonic Acid	D	B	D	C		A	D	D	D	D	C	D	B	A	A	C
Chlorox Bleach 5.5%	A		C	A		A	A	B	D	C	B	A		D	A	D
Chocolate Syrup			A			A	A	A	A	A		A			B	D
Chresylic Acid 50%	A			B			A		D	D		A			B	
Chrome Alum (Chr. Potass. Sulf.)	A	A	A	A		A	A	A	A	A		A				D
Chromic Acid 05%	A		A	A	C	A	A	A	D	D		A		A	A	D
Chromic Acid 10%	A	D	A	A		A	A	B	D	D	A	A	A	A	A	C
Chromic Acid 20%	B		D	A		A	B	B	C	C	A	B		A	A	
Chromic Acid 30%	B	D	A	A		A	A	C	D	D	A	B	A	A	A	C
Chromic Acid 50%	D	D	B	A	C	A	A	C	D	D	A	B	B	A	B	D
Chromium Alum	A		A	A		A	A	A	A	A		A				D
Citric Acid	A	A	A	A	A	A	A	A	A	B	A	A		A	A	D
Citric Oils		D	A			A	A	B	D	A	D	A				D
Cobalt Chloride						A	A	A	A	A	A					

CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Coconut Oil	A	C	A	A		A	A	B	B	A	B	A	A			B
Cod Liver Oil						A	A	A	B	B	B	A				
Coffee			A			A	A	A	A	A	A	A	A			C
Coke Oven Gas	D		A	A		A	A	A	D	D		A				B
Cola Concentrates			A													
Copper Acetate	A	A	A	A		A	D	A	B	B	C	A	A		A	C
Copper Borofluoride	A		A	A		A	A	A								
Copper Carbonate	A	A	A	A		A	A	A		D		A	A			
Copper Chloride	A	A	A	A		A	A	A	A	A	A	C	A	A	A	D
Copper Cyanide	A	A	A	A		A	A	A	A	A	A	A	A	B	A	D
Copper Fluoborate	A					A	A		A	B		D			A	D
Copper Fluoride	A	A	A	A		A	A	A	A	B	A					
Copper Nitrate	A	A	A	A		A	A	A	A	A	A	A	A	A	A	D
Copper Salts	A		A	A		A	A	A	A	A	A					
Copper Sulfate	A	A	A	A		A	B	A	A	A	A	A	A	A	A	D
Copper Sulfate 5%	A		A			A	A		A	A		A		A	A	D
Corn Oil	A	D	A			A	A	B	C	A	C	A	A			A
Corn Syrup	A	A	A	A		A	A	B	A	A	A					
Cottonseed Oil	A	D	A	A		A	A	B	C	A	A	A	A			A
Cream	A	A	A			A	A		B	A		A				D
Creosol	D	D	D	A	D	A	A	D	D	D	B	A				A
Creosote	D	D				A	A	D	D	B	A	A	A		A	A
Cresols	D	D	C	A		A	A	D	D	D	C	A				A
Cresylic Acid	C	B	D	A		A	A	D	D	D	C	A	A	A	B	B
Croton Aldehyde	D	D	A	C		A	A	B	A	D		A				A
Crude Oil	A	A	A	A		A	A	D	D	D		A	A			B
Cryolite	B		A	A		A	A	A	A	B						
Cupric Cyanide (See Copper Cyanide)																
Cupric Fluoride	A		A	A		A	A	A								
Cupric Nitrate						A	A	A	A	A	A					
Cupric Salts	A		A	A		A	A	A	D			D				
Cupric Sulfate (See Copper Sulfate)	A	A	A	A		A	A	A		A						
Cutting Oil						A	A	D	B	A	B	A				B
Cyanic Acid (Isocyanic Acid)						A		A	A	A	A	A				
Cyclohexane	D	D	C	A	C	A	A	D	D	C	C	A	A	A	A	A
Cyclohexanol	D	D	A	A		A	A	B	C	B	C	A	A			C
Cyclohexanone	D	D	C	C		A	D	C	D	C	C	A	A		A	C
Decalin	D		B	A	D	A	A	D	D	D	D					
Decanal						A	D	D		D	D					
Decane				A		A	A	D	D	B	C					
Detergents	A	C	A	A		A	A	A	A	A		A				
Detergents, Heavy Duty	A		A	A		A		A	A	A	A	A	A			A
Developers						A	A	C	A	A		C		A	A	D
Dextrin	A	A	A	A		A	A	A	A	A		A	A			B
Dextrose	A	A	A	A		A	A	A	A	A	A	A	A			D
Diacetone Alcohol	D	D	A	B		A	D	A	C	D	B	A	A		A	A
Diallyl Phthalate																
Diazo Salts	A	A	A	A												
Dibenzyl Ether				A		A	D	C	D	D		A				A
Dibutyl Amine				A		A	C	D	D	C						A
Dibutyl Ether				A		A	C	C	D	C	C	A				A
Dibutyl Phthalate [ see Butyl Phthalate]	D	D	A	A		A	B	A	D	D	D	A	A			A
Dibutyl Sebacate	B			A		A	C	B	D	D	D	A				A
Dicalcium Phosphate																
Dichlorethane	D			C		A	C		D			A			A	A

CHEMICAL	THERMOPLASTIC					ELASTOMER					METAL					
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Dichloro Benzene	D	D		C		A	B	D	C	D	C	A	A			
Dichlorobenzene	D	D		A		A	A	D	D	D	D					
Dichloroethylene [acetylene dichloride]	D	D	A	A		A	A	D	D	D	D	B				
Dichloroisopropyl Ether				A			D	D	D	D						
Dichloromethane						A	B	D	D	D	D					
Diemethyl Phthalate																
Diesel Fuel [gas oil]	A	A	B	A		A	A	D	D	A	D	A	A			A
Diethanolamine							D	C	D	D		A				A
Diethyl Cellosolve				A				D	A	C		A	A			
Diethyl Ether [ethers]	D	D	D	A	D	A	C	C	D	D	C	A				A
Diethyl Ketone [acetone]						A	D	B	D	D	D					
Diethyl Oxide						A	D	D	C	B	C					
Diethylamine	D	D	A	C		A	D	B		B	C	A				A
Diethylbenzene	D		D		D	A	A	D	D	D	D	A				
Diethylene Glycol [carbitol]	A	A	A	A	B	A	A	C	A	A		A		A		
Diethylenetriamine				A		A		C	D	B	C					
Diglycolic Acid	A	A	A	A		A	A	A			A	A				
Diisobutyl Ketone				A		A	D	D	D	D		A				A
Diisobutylene				A		A	A	D	D	C	A	A				C
Diisooctyl Phthalate						A	B	B		D	D					
Diisopropyl Ketone				B		A	D	B		D		A				A
Dimethyl Amine	D	D	A	B		A	D	C	C	B	C	A	A			
Dimethyl Benzene						A	A	D	D	D	D					
Dimethyl Ether						A	B	B	C	B	C					
Dimethyl Formamide	D	D	A	A		A	C	B	C	B	A	A	A			B
Dimethyl Ketone						A	D	A	C	D	C					
Dimethyl Phthalate	D	D	D	B		A	B	B	D	D	D	A				
Dimethylamine	D	D	A	D			D	D								
Dioctyl Phthalate	D	D	D	A		A	A	A	D	D	D	A				A
Dioxane	D	D	B	D		A	D	B	D	D	D	A		A	A	A
Dioxolane				D			D	D	D	D						
Diphenyl			D			A	A	D	D	D	D	C				C
Diphenyl Ether (See Diphenyl Oxide)																
Diphenyl Oxide	D	B		B			A	D	D	D		A				A
Dipropylene Glycol	B		A	B		A	A	C		A	A	A				
Disodium Methylarsonate																
Disodium Phosphate	A	A	A	A		A		A		A	A	A	A			
Distilled Water	A	A	A	A												
Divinylbenzene	D		D	D		A	A			D						
Dolomite						A	A	B	A	A	A					
Dowtherm (Ethylene Glycol)									D			A				B
Dry Cleaning Solvents						A	A	D	D	A	D	A		A		A
Epichlorohydrin	D	D	A	A		A	D	D	D	D		A		A		C
Epsom Salts [magnesium sulfate]	A		A	A		A	A	A	A	A	A	A		A	B	A
Esters	D	D	C	A		A										
Ethane	D	D	C			A	A	D	C	A	B	A		A		A
Ethanol (See Alcohol, Ethyl)																
Ethanolamine	D		A	D		A	D	A	D	B		A				A
Ethers	D	D	D	A	D	A	C	C	D	D	D	A	A		B	B
Ethyl Acetate	D	D	A	A	D	A	D	B	D	D	D	A	A		A	A
Ethyl Acetoacetate	D	D	D	A		A	D	A	D	D						A
Ethyl Acrylate	D	D	D	A		A	D	B	D	D	D	A	A		A	A
Ethyl Alcohol	A	C	A	A	C	A	B	A	A	A	A	A	A	A	A	A
Ethyl Benzene	D	D	D	A	D	A	A	D	D	D	D	A	A		A	B
Ethyl Bromide		D	D				A	D	D	C		A				A

CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Ethyl Butyrate	D		B		D	A	D	D	D	D		A				A
Ethyl Cellosolve							D	A	D	D						
Ethyl Chloride	D	D	D	A	D	A	A	A	C	B	A	A	A	A	A	A
Ethyl Ether	D	D	C	A		A	C	D	D	D	C	A				A
Ethyl Formate	D	D	D	A		A	B	B	B	D	C	A	A			A
Ethyl Hexanol				A		A	A	A	B	B	A	A				A
Ethyl Sulfate						A	D		A	C	D	D				C
Ethylcellulose									A		A					
Ethylene Bromide	D	D	B	A		A	B	C	D	D	D	A	A	B	A	A
Ethylene Chloride	D	D	C	A	D	A	A	C	D	D	C	A	A	B	B	D
Ethylene Chlorohydrin	D	D	A	A		A	A	A	A	D	A	C				C
Ethylene Diamine	D	D	A	C		A	D	A	A	A	B	A	B			A
Ethylene Dichloride	D	D	D	A		A	A	D	D	D	C	A	A	A	B	
Ethylene Glycol	A	C	A	A	C	A	A	A	A	A		A	A		A	A
Ethylene Oxide	D	D	C	A	D	A	D	D	D	D	D	A	A		A	A
Extrin	A		A	A		A	A	A								
Fatty Acids	A	A	A	A		A	A	D	B	B	C	A	A	A	A	D
Ferric Acetate (Iron Acetate, Basic)	B					A	D			D	A					
Ferric Chloride, Anhydrous	A	A	A	A		A	A	A	B	B	B	D		A	B	D
Ferric Hydroxide	A	A	A			A	C	A	A	A	A	A	A			
Ferric Nitrate	A	A	A	A		A	A	A	A	A	A	A	A	A	A	D
Ferric Sulfate	A	A	A	A		A	A	A	A	A	A	B	A	A	A	D
Ferrous Chloride	A	A	A	A		A	A	A	A	A	B	D	C	A	B	D
Ferrous Nitrate	A		A	A		A	A	B	A	A	A	A	A			
Ferrous Sulfate	A	A	A	A		A	A	A	A	A	A	A	A	A	A	D
Fish Solubles	A	A	B	A												
Fluoboric Acid (Fluoro Boric Acid)	A	A	A	A		A	A	A	A	A	A	B	A	D	A	A
Fluorine Gas (Wet)	A	D	D	A		A	A	A	D	D	D	A	A			C
Fluorine, Liquid	C		D	A		B	B	C	D	D	D	D		D	A	
Fluosilicic Acid [hydrofluosilicic Acid]	A	A	A	A		A	A	A	A	A	A	B	A	D	B	D
Formaldehyde	D	D	A	A	A	A	B	B	A	B	A	A	A	A	B	A
Formaldehyde 35%	A		A	A		A	A	A	A	C	A	A	A		A	B
Formaldehyde 50%	A		A	A		A	B	D	A	C	C	A	A		A	B
Formic Acid	A	A	A	A	C	A	D	A	A	C	A	B	A	C	A	D
Freon 11 (MF)	D	C	A	A		A	B	D	D	B	A	A	A			B
Freon 113 (TF)	A	C		A		A	B	D	A	A	A	A	A			B
Freon 114	A	C		A		A	A	C	A	A	A	A	A			B
Freon 12	C	C	B	A		A	B	A	A	B	A	A	A			A
Freon 12 (Wet)	B	C	A			A	A	B	B	A		D				
Freon 22	D	C	A	A		A	D	B	A	D	A	A	A		A	A
Freon TF	B	C	D			A	B	D	A	A		A				A
Fructose	A	A	A	A		A	A	A	A	A	A	A	A			
Fruit Juice	A	A	A	A		A	A	A	A	A	A	A				D
Fruit Pulp	A		A	A			A									
Fuel Oil	B		B	A	C	A	A	D	B	A	A	A		A	A	A
Fumaric Acid (Boletic Acid)						A	A		B	A	B					A
Furan						A	D	D	D	D						
Furfural (Ant Oil)(Bran Oil)	D	D	D	B		A	D	C	D	D	A	A	A		A	A
Furfuryl Alcohol				B		A	D	C	D	D		A				A
Gallic Acid	A	A	A	A		A	A	A	A	A	A	A	A		A	D
Gas Natural	A	A	A	A			A	D		A		A				B
Gasoline, Leaded	A	A	D	A		A	B	D	B	A	A	A	A	D	A	A
Gasoline, Sour	A		D	A	C	A	A	D	C	A	D	A	A	D	A	A
Gasoline, Unleaded	C	D	D	A		A	B	D	B	A	A	A	A	D	A	A
Gelatin	A	A	A	A		A	A	A	A	A	A	A	A		A	D

CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Gin	A		A	A		A	A	A				A				
Gluconic Acid 50%																
Glucose	A	A	A	A	A	A	A	A	A	A	A	A	A		A	A
Glue	A	A	A	A		A	A	B	A	A	A	A	A	A	A	A
Glycerin (See Glycerol)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Glycerol (Glycyl Alcohol)	A		A	A		A	A	A	A	A	A				A	
Glycolic Acid (See Hydroxyacetic Acid)	A	A	A	A		A	A	A	A	A	C	A	A		B	C
Glycols	A	A	A	A		A	A	A	A	A		B				B
Glyoxal							A		A	C	C	A	A			C
Gold Monocyanide				A		D	A		A	A		A				D
Grape Juice	A			A		A	A		A	A		A				D
Grape Sugar	A		A	A		A	A	A	A	A						
Grease	A		A	A		A	A	D	B	A	C	A	A		A	A
Green Liquor	A	A	A	A		A	A	A	B	B	A	A	A			D
Helium			A			A	A	A	A	A	A	D				D
Heptane	A	C	B	A		A	A	D	B	A	A	A	A		A	A
Hexane	D	A	B	A	D	A	A	D	B	A	A	A	A		A	A
Hexene						A	A	D	B	A	C					
Hexyl Alcohol (Hexanol)	A		A	A		A	A	B	B	A	A	A	A		A	A
Honey	A		A	A		A	A		A	A		A				A
Hydraulic Oil	A		D	A		A	A	D	B	A	A	A	A			A
Hydraulic Oil (Synthetic)	A		D	A		A	A	A	C	C		A				A
Hydrazine	D	D	D	A		A	D	A	C	C	A	A	A			D
Hydrobromic Acid	A		A	A		A	A	A	D	D		D		A	A	D
Hydrobromic Acid 20%	A		A	A		A	A	A	C	D		D	C	A	A	C
Hydrobromic Acid 50%	A		B	A		A	A	A	B	D	A	C	C	D	B	C
Hydrochloric Acid (Dry Gas)	A		A	A	C	A	A	A	C	D		D			A	D
Hydrochloric Acid 10%	A		A	A		A	A	A	A	B		D		C	A	
Hydrochloric Acid 20%	A		A	A		A	A	A	B	B	A	D	B	C	A	C
Hydrochloric Acid 25%	A	A	A	A		A	A	A	B	C	A	D				
Hydrochloric Acid 37% (Muriatic Acid)	A	A	A	A	D	A	A	C	C	C		D	B	C	B	D
Hydrocyanic Acid [prussic acid]	A	A	A	A		A	A	A	C	B	A	A		A	A	D
Hydrocyanic Acid 10% [formonitrile]	A		A	A		A	A	A	B	B	A	D	A		A	C
Hydrofluoric Acid 10%	A	A	A	A		A	A	A	A	B	A					
Hydrofluoric Acid 20%	A		A			A	A	A	C	D	C	D		D	B	
Hydrofluoric Acid 30%	A	D	A	A		A	A	A	A	C	A	C	B		A	C
Hydrofluoric Acid 40%	B		A	A		A	A	A	C	C	A	C	B		A	C
Hydrofluoric Acid 50%	D	C	A	B		A	A	A	B	C	A	D	B	D	A	C
Hydrofluoric Acid 65%	A		A	A	D	A	A	B	C	D	A	D			A	D
Hydrofluoric Acid 75%	D		A	A		A	A	D	D	D	A	D			A	D
Hydrofluosilicic Acid	D	B	A	A		A	A	A	C	A	A	D	A	A	C	D
Hydrofluosilicic Acid 20%	A		A			A	A	A	B	B		D		D	B	
Hydrogen	A	A	A	A		A	A	A	A	A	A	A	A		A	A
Hydrogen Chloride Gas Dry	A		A	A				A								
Hydrogen Cyanide [Hydrocyanic Acid]	A	A	A	A		A	A	A	B	B	A	A	A			C
Hydrogen Fluoride	D	D	A	A		A	A	A		C		A	A		A	A
Hydrogen Peroxide	A	A	A	A		A	A	B	C	C	B	B		B	A	D
Hydrogen Peroxide 05%	A		A	A		A	A	A				B				D
Hydrogen Peroxide 10%	A		A	A		A			D	A		C		C	A	
Hydrogen Peroxide 30%	A		C			A	A	B	D	D	C	B		B	A	
Hydrogen Peroxide 50%	B	A	A	A		A	A	C	D	D	A	A	A			B
Hydrogen Peroxide 90%	D		B	A	A	A	B	C	D	D	A	A	A	B	B	D
Hydrogen Phosphide (See Phosphine)	D		A	A		A				C						
Hydrogen Sulfide	A	A	A	A		A	A	A	A			A			B	
Hydrogen Sulfide (Aq. Sol.)	A	A	A	A		A	C	A	C	C	A	A		A	A	D

CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Hydrogen Sulfide (Dry)	A	A	A	A		A	A	A	A	A	A	A	A	A	A	B
Hydroquinone	A	A	A	A		A	A	A	D	D	A	A	A		A	A
Hydroxyacetic Acid (Glycolic Acid)	D			A		A	A		A	A		C		A		C
Hydroxyacetic Acid 70%	A						A	A	A	A				B		
Hydroxylamine Sulfate	A		A	A				A	A							
Hypochlorous Acid	A	A	A	A		A	B	B	D	D	D	D		B	B	D
Ink			A	A		A	A	A	A	A		A	A			D
Iodine Solution	D	A	A	A		A	A	A	C	C	A	D	B	A	A	D
Isobutyl Alcohol (See Alcohol, Isobutyl)	A		A	A	C	A	A	A	A	C		A	A	A	B	
Isooctane [trimethylpentane]	A		A	A		A	A	D	A	A	A	A	A		A	A
Isophorone	D					A	D	D	D	D		C				C
Isopropyl Acetate	D		B			A	D	B	D	D		B	A			A
Isopropyl Alcohol (See Alcohol, Isopropanol)	A	A	A	A	A	A	A	A	A	A	A	A	A	A		B
Isopropyl Ether	D	D	B	A		A	D	D	D	B	C	A	A		A	A
Jet Fuel JP-3	A	A	A	A		A	A	D	C	A	C	A	A		A	A
Jet Fuel JP-4	A		C	A		A	A	D	D	A	C	A	A		A	A
Jet Fuel JP-5	A		C	A		A	A	D	C	A	C	A	A		A	A
Kerosene	A	A	A	A	D	A	A	D	D	A	C	A	A	A	A	A
Ketones	D	D	A	A		A	D	C	D	D	C	A	A	A	A	A
Kraft Liquor	A	A	A	A								A	A			C
Lacquer	D		A	D		A	D	D	D	D	D	A			A	D
Lacquer Thinner	C		B			A		A	D	D		A		A	A	
Lactic Acid (Milk Acid)	A	A	A	A	C	A	B	A	A	B	A	A	A	B	A	D
Lard	A	A	A	A		A	A	C	C	A	C	A				B
Lard Oil	A		A	A		A	A	A	C	A	C	A	A			A
Latex			A	A		A	A	B	A	A	C	A	A			
Lauric Acid	A	A	A	A		A						A	A			
Lauryl Chloride	A	A	A	A		A		A		A		A	A			
Lead Acetate (Sugar of Lead)	A	A	A	A		A	C	A	C	B	C	B	A	A	A	D
Lead Chloride	A	A	A	A		A	A	A	A	A	A	C				
Lead Nitrate	A	A	A			A	A	A	A	A	B	A	A			A
Lead Sulfate	A	A	A	A		A	A	A	B	A	A	B	B		B	C
Lemon Oil	A	D	D	A		D	A		D			A	A			
Levulinic Acid																
Ligroin (Benzene)	D		C	A		A	A	C	B	A	C	A				A
Lime (Calcium Oxide)	A		A	A		A	A	C	A	A	A	A		A		D
Lime Sulfur Solution	A		A	A		A	A	A	A	D	A	A		A		A
Linoleic Acid (Linolic Acid)	B	A	A	A		A	B	D	D	B	C	A	A		A	C
Linseed Oil (Flaxseed Oil)	A	D	A	A		A	A	B	A	A	A	A	A		A	A
Lithium Bromide	A			A		A	A		D	A						A
Lithium Chloride	A	A	A			A	D	A	A	A		A	A			C
LPG	D		A	A		A						B				B
Lubricants	A		A			A	A		D	A		A		A	A	
Lubricating Oil	A	A	A	A		A	A	D	C	A	C	A	A		A	A
Lye Solution (See Sodium Hydroxide & Potassium Hydroxide)	A	A	A	A												
Machine Oil	A	A	A	A		A	A		A							
Magnesium Acetate						A	D			D	A					
Magnesium Carbonate	A	A	A	A		A	A	B	A	A	A	A	A		B	B
Magnesium Chloride	A	A	A	A		A	A	A	A	A	A	B	B	A	A	C
Magnesium Citrate	A	A	A	A		A	A	A		A					B	
Magnesium Hydroxide [Milk of Magnesia]	A	A	A	A		A	A	A	A	A		A				A
Magnesium Nitrate	A	A	A	A		A	A	B	A	A	A	A		A	A	C
Magnesium Oxide		A				A	A	A	A	A		A				A
Magnesium Sulfate (Epsom Salts)	A	A	A	A		A	A	A	A	A	A	A	A	A	A	A

CHEMICAL	THERMOPLASTIC					ELASTOMER					METAL					
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Maleic Acid	A	A	A	A		A	A	C	D	D	C	A	A	A	A	B
Maleic Anhydride						A	A	D	D	D		A			A	
Malic Acid (Apple Acid)	A	A	A	A		A	A	D	C	A	B	A		A	B	D
Manganese Sulfate	A	A	A			A	A	A	A	A	A	A	A			B
Mash						A			A	A		A				
Mayonnaise			A			A	A	D	D	A		A				D
Melamine (Triazane)						A				C		D				
Mercuric Chloride	A	A	A	A		A	A	A	A	A	A	D	B	A	A	D
Mercuric Cyanide	A	A	A	A		A	A	B	A	A	A	A	A	A		C
Mercuric Nitrate		A				A	A	A	A		A	A				
Mercuric Sulfate	A	A	A	A		A	A	A		A						
Mercurous Chloride																
Mercurous Nitrate	A	A	A	A		A	A	A	C	A		A	A		C	C
Mercury (Quicksilver)	A	A	A	A		A	A	A	A	A	A	A	A	B	A	A
Methacrylic Acid Glacial	D						D	C	C	D						
Methane (Methyl Hydride)	A	A	A	A		A	A	C	B	A	A	A	A		A	A
Methane Sulfonic Acid		A		A		A										
Methanol (See Alcohol, Methyl)	A	C	A	A	C	A	D	A	A	A	A	A	A	A	A	A
Methoxyethyl Oleate	A															
Methyl Acetate	D		B	A		A	D	B	C	C	C	A	A		A	B
Methyl Acetone						A	D	A	C	D	C	A	A			A
Methyl Acrylate				A		A	D	B	C	D	C	A	A			A
Methyl Alcohol	A	A	A	A	C	A	C	A	A	A	A	A				A
Methyl Benzene (See Toluene)	D	D	C	A	C	A	A	D	D	D	D					
Methyl Bromide [Bromomethane]	D	D	D	A		A	A	C	D	D	C	B	B			BA
Methyl Butanol (See Alcohol, Amyl)						A	A		A	A	A					
Methyl Butyl Ketone	A			D		A	D	B	D	D	D	A				
Methyl Cellosolve	D	D	A	A		A	D	B	C	D	A	A				B
Methyl Chloride (Chloromethane)	D	D	D	A		A	C	C	D	C	D	A	A	A	A	A
Methyl Chloroform (Trichloroethane)	D	D	C	A		A	B	D	C	C	C	A	A			
Methyl Ether (See Dimethyl Ether)						A	C	C	C	B	C	C				C
Methyl Ethyl Ketone (MEK)	D	D	C	D	D	A	D	A	D	D	C	A	A	A	A	A
Methyl Formate		D				A	D	A	B	D	C	A	A		A	C
Methyl Isobutyl Alcohol									D	D						
Methyl Isobutyl Carbinol						A	A	A	A	A	A					
Methyl Isobutyl Ketone	D	D	C	A	D	A	D	B	D	D	C	A	A	A	A	C
Methyl Isopropyl Ketone	D		D	A	D	A	D	C	D	D	C	A				C
Methyl Methacrylate	A			D		A	D	D	C	D	A	C				C
Methyl Propanol						A	A	B	A	A	A					
Methyl Salicylate (Wintergreen Oil)	A	A	A	A				C	D	D						A
Methylamine	D	D	D	C		A	D	A	A	B		A				
Methylene Bromide	D			D		A	C	D	D	D	C	A				A
Methylene Chloride	D	D	D	C	D	A	B	D	D	D	D	A	A	A	A	B
Methylene Iodine	D			C		A	A	A								
Methylhexane						A	A	D	B	A	D					
Methylisobutyl Carbinol	A		A	A			A	A								
Methylmethacrylate		D		A		A	D	D								
Methylsulfuric Acid	A		A	A		A										
Milk	A	A	A	A		A	A	A	A	A	A	A	A			D
Mineral Oil	B	A	A	A	C	A	A	D	C	A	B	A	A		A	A
Molasses	A		A	A		A	A	A	A	A	A	A	A		A	A
Monochloroacetic Acid (See Chloroacetic Acid)	A		B	A		A	B	C		D						D
Monochlorobenzene (See Chlorobenzene)			B	A		A	A	D	C	D	C	A	A			A
Monoethanolamine	D			D		A	A	A	D	A		A	A			A
Morpholine			B	B		A		A	C	C	C	A	B			B

CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Motor Oil	A	A	C	A		A	A	D		A		A	A			A
Mustard	A		A			A	A	A	A	B		A			A	B
Naphtha	A	A	A	A		A	A	D	D	B	C	A	A	A	A	A
Naphthalene (Tar Camphor)	D	D	B	A		A	B	D	D	D	C	A	A	A	A	A
Natural Gas	A		A	A		A	A	D	A	A	A	A	A		A	A
Neon						A	A	A	A	A	A	A				A
Nickel	A		A			A	A	A	A	A						
Nickel Acetate	A	A	A	A		A	D	A	B	B	C	C				
Nickel Chloride	A	A	A	A		A	A	A	A	A	A	B	A	A	A	D
Nickel Cyanide	A															
Nickel Nitrate	A	A	A	A		A	A	B	B	A	A	B	A			C
Nickel Sulfate	A	A	A	A		A	A	A	A	A	A	A			A	D
Nicotine	A		D	C		A			C	C	A	A	A			C
Nicotine Acid	A		A	A		A		A	A			B	B			C
Nitric Acid 10%	A	A	A	A	C	A	A	B	C	D	A	A	A	A	A	D
Nitric Acid 20%	A	A	A			A	A	D	D	D		A				D
Nitric Acid 30%	A	A	A	B		A	A	B	C	D	A	A				D
Nitric Acid 40%	A		C	B		A	A	D	C	D	A					C
Nitric Acid 50%	A	A	A	B		A	A	D	D	D	C	A	A			C
Nitric Acid 70%	D	B	D	D		A	C	D	D	D	C	A	A			C
Nitric Acid Concentrate	D	D	D	D		A	C	D	D	D	C	A				D
Nitric Acid Fuming	D		D	D		A	C	D	D	D	C	A	A			D
Nitrobenzene (Oil of Mirbane) [ligroin]	D	D	A	A	D	A	C	C	D	C	C	B	A	A	A	A
Nitroethane				A		A	D	A	C	D		A				A
Nitrogen						A	A	A	A	A	A	A	A			A
Nitrogen Dioxide				A		A										
Nitrogen Solutions									A		A					
Nitroglycerine	D					A		A				A	A			B
Nitromethane				A		A	D	B	D	D		A				A
Nitrous Oxide	A	A	A	A		A	A	A	C	A	B	A	A		A	B
Ocenol	A	A	D	A												
Octane				A		A	A	D								
Octyl Acid (Caprylic Acid)				A		A				C	B					
Octylamine						A	D			C	C					
Oils	A	D	A	A												
Oils, Aniline	D		A			A	A	B	D	D		A		A	A	
Oils, Anise									D			A				
Oils, Bay							A		D			A				
Oils, Bone							A		D	A		A				
Oils, Castor	A						A	B	A	A		A				
Oils, Cinnamon	A						A		D			A				
Oils, Citric			A				A		D	A		A				
Oils, Clove			B							A		A				
Oils, Coconut			A				A	A	A	A		A				
Oils, Cod Liver			A				A	A	A	A		A				
Oils, Corn			A				A	C	D	A		A				
Oils, Cotton Seed	A		A			A	A	C	D	A		A				C
Oils, Creosote			D				A	D	C	B		A				
Oils, Crude Sour		D														
Oils, Diesel Fuel			A				A	D	D	A		A				
Oils, Fuel	A					A	A	D	D	B		A		A	A	
Oils, Linseed	A		A				A	D	D	A		A				
Oils, Mineral	A		A				A	D	A	A		A				
Oils, Olive	A		A			A	A	B	D	A	B	A	A		A	A
Oils, Pine	A					A	A		D	C		A				



CHEMICAL	THERMOPLASTIC					ELASTOMER					METAL					
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Oils, Silicone			A				A		A	A		A				
Oils, Vegetable	A	A	A	A			A			A		A		A		
Oleic Acid (Red Oil)	A		A	A		A	B	C	B	B	A	A	A	A	A	C
Oleum	D	D	D	D		A	D	D	D	D	D	A		A		B
Orange Extract			A	A		A										
Oxalic Acid	A	A	A	A		A	A	A	B	B	A	A	A	C	A	D
Oxygen Gas	A	A	A	A		A	A	A	A	C	A	A	A	A	A	A
Ozone	A		C	A		A	A	A	B	D	A	A	A		A	A
Palmitic Acid 10%	A	A	A	A		A	A	B	B	A	C	A	A		B	A
Palmitic Acid 70%	D		A			A	A	B	C	A	C	A	A			A
Paraffin	A	A	A	A		A	B	D	A	A	D	A	A		A	A
Pentane (Amyl Hydride)	C					A	A	D	B	A	B	C		A	B	B
Peracetic Acid 40%	D		D	A		A	A	B								
Perchloric Acid 10%	A	A	A	A	D	A	A	B	A	D	A	B	A			D
Perchloric Acid 70%	D		A	A		A	A	A	A	D	A	B	B			
Perchloroethylene	D		D	A	D	A	A	D	D	D	C	A	A		A	B
Perphosphate	A		A			A	A	A		A						
Petrolatum (Petroleum Jelly)	A		A	A		A	A	C	B	A	B	A				C
Petroleum (Sour)	A						A	D		A						
Petroleum Oils	A		B	A		A	A	D	C	A	C	A				A
Phenols 100% (Carbolic Acid)	D	A	A	A	C	A	B	C	D	D	C	A	A	A	A	D
Phenylacetate						A	D	B	D	D	C					
Phenylhydrazine	D	D	D	A		A	C	C	D	D	C					
Phenylhydrazine Hydrochloride	D		D	A												
Phosgene Gas	D		C	A			D	A	C	D						
Phosgene Liquid	D		D	C			D	A	C	D						
Phosphoric Acid 10%	A	A	A	A	C	A	A	A	C	C	A	A	A	B	A	D
Phosphoric Acid 100%	A	A	A	A		A	A	B	D	D	C	B		B	A	
Phosphoric Acid 20%	A	A	A	A		A	A	A	B	C	A					
Phosphoric Acid 40%	A	A	A			A	A	B	D	D		A		A	A	
Phosphoric Acid 50%	A	A	A	A	C	A	A	A	C	C	A	B	A	B	A	D
Phosphoric Acid 80%	A	A	A	A		A	A	A								
Phosphoric Acid 85%	A	A	A	B	C	A	A	A	C	C	B	B	A	C	A	D
Phosphoric Acid Crude						A	A	B	D	C	A	C		C	A	
Phosphorus Oxychloride						A			D		D	D			B	D
Phosphorus Red	A		A	A		A						A	A			
Phosphorus Trichloride	D	D	D	A		A	C	C	D	D	C	A	A			B
Phosphorus Yellow	A		A	A		A			C							
Photographic Developer	A	A	A	A		A	A		A	A		A		A	A	C
Photographic Solutions	A	A	A	A		A	A			A		A	A			
Phthalic Acid (Terephthalic Acid)	D	D	D	A		A	A	A	C	C	A	A	A		A	C
Phthalic Anhydride	D		D	A		A	A	A	A	C		B			A	A
Pickle Brine	A		A	A					A		A					
Pickling Solutions	A		A	A		A	B	C	D	D	D					
Picric Acid	D	D	A	A		A	A	C	A	C	A	A	A		A	C
Pine Oil	D	D	C		C	A	A	D	C	B	D	A	A			B
Plating Solution, Arsenic	A	A	A			A			A	A		A		A	A	
Plating Solutions, Antimony	A	A	A			A	A		A	A		A		A	A	
Plating Solutions, Brass	A	A	A	A		A	A	A	A	A		A		A	A	
Plating Solutions, Bronze	A	A	A			A	A		A	A		A		A	A	
Plating Solutions, Cadmium	A	A	A	A		A	A	A	A	A		A		A	A	
Plating Solutions, Chrome	A	A	A	A		A	C	B	C	D	D	C	A	A	A	
Plating Solutions, Copper	A	A	A	A		A	A	A	A	A		D		A	A	
Plating Solutions, Gold	A	A	A	A		A	A	A	A	A		C		A	A	
Plating Solutions, Indium	A	A	A			A	A		A	A		C		A	A	

CHEMICAL	THERMOPLASTIC					ELASTOMER					METAL					
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Plating Solutions, Iron	D	A	C			A	A		C	A		C		A	D	
Plating Solutions, Lead	A	A	A	A		A	A	A	A	B		C		D	A	
Plating Solutions, Nickel	A	A	A	A		A	A	A	A	A		C	A	A	A	
Plating Solutions, Rhodium	A	A	A	A		A	A	A	B	A		D		D	D	
Plating Solutions, Silver	A	A	A	A		A	A	A	A	A		A	A	A	A	
Plating Solutions, Tin	A	A	A	A		A	A	A	C	B		C	A	D	A	
Plating Solutions, Zinc	A	A	A	A		A	A	A	A	A		D		A	D	B
Polyethylene Glycol	A	D	A	A		A	A	A		A	A					
Polyvinyl Acetate Emulsion				A		A	A	A	B		B					C
Polyvinyl Alcohol	A		A	A		A	A	A								
Potash (Potassium Carbonate)	A	A	A	A		A	A	A	A	A	A	A	A	A	A	C
Potassium Acetate	A	A	A	A		A	D	A	B	B	B	C				C
Potassium Alum (Aluminum Potassium Sulfate)	A	A	A	A		A	A	A	A	A	A					
Potassium Bicarbonate	A	A	A	A		A	A	A	A	A	A	B	A	A	B	A
Potassium Bichromate	A	A	A	A		A	A	A	B	A	A	A	A			B
Potassium Bisulfate	A	A	A	A		A	A	A	A	A	A	A	A			C
Potassium Bromate	A	A	A	A		A	A	A	A	A	A	A	A			A
Potassium Bromide	A	A	A	A		A	A	A	A	A	A	B	A	A	B	D
Potassium Carbonate (Potash)	A	A	A	A		A	A	A	A	A	A	A	A	A	B	C
Potassium Chlorate Aqueous	A	A	A	A		A	A	A	A	A	A	A	A	A	B	B
Potassium Chloride	A	A	A	A		A	A	A	A	A	A	A	A	A	A	C
Potassium Chromate	A	A	A	A		A	A	A	A	A	A	B	A		B	B
Potassium Coppercyanide	A		A	A		A	A	A	A	A						
Potassium Cyanide	A	A	A	A		A	B	A	A	A	A	B	A	A	A	B
Potassium Dichromate	A	A	A	A		A	A	A	A	A	A	A	A	A	B	C
Potassium Ferricyanide	A	A	A	A		A	A	A	A	A	A	A	A			C
Potassium Ferrocyanide	A	A	A	A		A	A	A	A	C	A	A	A		B	C
Potassium Fluoride	A	A	A	A		A	A	A	A	A	A	A	A			
Potassium Hydroxide (Caustic Potash)	A	A	A	A	C	A	C	B	B	C	A	A		C	B	A
Potassium Hydroxide 25%		A				A		A	A	B	A	A	A			B
Potassium Hydroxide 50%	A	A	A	B												
Potassium Hypochlorite	A	A	A	A		A	A	A	D	D	A	B	A			B
Potassium Iodide	A	A	A	A		A	A	A	A	A	A	A	A			B
Potassium Nitrate (Salt Peter)	A	A	A	A		A	B	A	A	A	A	D	A	A	A	B
Potassium Perborate	A	A	A	A		A			A	A						
Potassium Perchlorate	A	A	A			A		A	C	C	A					
Potassium Permanganate	A	A	A	A		A	B	A	A	C	A	B	A	B	A	A
Potassium Persulfate	A	A	A	A		A		A	C	C	A	A				
Potassium Phosphate		A				A	A	A	A	A		C				D
Potassium Salts			A	A		A	A	A	A	A						
Potassium Sulfate	A	A	A	A		A	A	A	A	A	A	B	A	A	A	A
Potassium Sulfide	A	A	A	A		A	A	A	A	A	A	B	B		B	C
Potassium Thiosulfate						A	A		A	A	A	C				
Propane (Dimethylmethane)	A	A	B	A	D	A	A	D	B	A	B	A	A		A	A
Propanol (See Alcohol, Propyl)	A	A	A	A		A	A	A	A	A	A	A	A		A	A
Propargyl Alcohol	A		A	A				A	A	A	C					
Propyl Acetate				A		A	D	B	D	D	C	A	A			A
Propyl Alcohol	A	A	A	A		A	A	A	A	A	A	A	A		A	A
Propylene						A	A	D	D	D	D	A				A
Propylene Dichloride	D	D	C	A		A	B	D	D	D	D	A				A
Propylene Glycol	C	A	A		C	A	A	A	A	A	A	A			B	B
Pyridine	D	D	A	C		B	D	C	D	D	C	C	A		A	A
Pyrogallic Acid (Pyrogallol)	B		A	D		A	A	C	A	A		A	A		A	B
Quaternary Ammonium Salts						A	A		A	A		A				D
Rayon Coagulating Bath	A		A	A												

CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Rhodan Salts	A		A	A		A	A	A								
Rosins	C		A			A	A	D	A	A	A	A	A		B	C
Rum	A		A			A	B	A	A	A	A					
Rust Inhibitors			A				A		C	A		A				D
Salad Dressing	A		A				A			A		A				D
Salicylaldehyde	D		A	C		A	A	A		A						
Salicylic Acid	A		A	A	C	A	A	A	C	C	A	A	A			C
Saline Solutions	A		A	A					A							
Salt Brine	A	A	A	A		A	A	A	A	A	A	A			B	
Sea Water	A	A	A	A		A	A	A	B	A		A		A	A	D
Selenic Acid	A		A	A					A	A	A				A	
Sewage	A		A	A		A	A	A	B	A	A					D
Shellac Bleached			A			A	A	D	C	A		A				A
Shellac Orange			A			A	A	D	C	A		A				A
Silicic Acid	A	A	A	A		A	A	A	A	A	A					
Silicone Oil	A	A	A	A		A	A	A	A	A	A	A			A	A
Silver Bromide						A						C			A	D
Silver Cyanide	A	A	A	A		A	A	A	A			A	A			D
Silver Nitrate	A	A	A	A	A	A	A	A	A	C	A	A	A	A	A	D
Silver Salts	A		A	A		A	A	A	A			A				
Silver Sulfate	A	A	A	A		A	A	A	A	A				A		
Soap Solutions	A	A	A	A		A	A	A	A	A	A	A	A	A	A	A
Soda Ash (Sodium Carbonate)						A	A	A	A	A	A	C				C
Sodium	A		A	A		A	A	A								
Sodium Acetate	A	A	A	A	C	A	C	A	B	C	A	B	A	A	A	C
Sodium Alum	A	A	A	A		A	A	A	A	A	A					C
Sodium Aluminate		A				A	A	A	A	A	A	A	A	B	A	A
Sodium Benzoate	A	A	A	A		A		A		A						
Sodium Bicarbonate	A	A	A	A		A	A	A	A	A	A	A	A	A	A	C
Sodium Bichromate	A	A	A	A		A	A	A	A	A	A	A	A			C
Sodium Bisulfate	A	A	A	A		A	A	A	A	A	A	A	A	A	B	D
Sodium Bisulfite	A	A	A	A		A	A	A	A	A	A	A	A	A	A	D
Sodium Borate (Borax)	C	A	A	A		A	A	A	A	A	A	A	A	A	A	C
Sodium Bromate																
Sodium Bromide	A	A	A	A		A	A	A	A	A		A	A	A		C
Sodium Carbonate (Soda Ash)	A	A	A	A		A	A	A	A	A		A	A	A	A	B
Sodium Chlorate	A	A	A	A		A	A	A	A	C	A	B	A	A	B	C
Sodium Chloride (Salt)	A	A	A	A		A	A	A	A	A	A	C	B	A	A	C
Sodium Chlorite	D	A	A			B	D	D		B	A					
Sodium Chromate		A	A			A	B	A	A	A	C	A	A	A	B	B
Sodium Cyanide	A	A	A	A		A	A	A	A	A	A	A	A	A		A
Sodium Dichromate	A	A	A	A		A	A	A	B	A	A	A	A			B
Sodium Ferricyanide	A	A	A	A		A	A	A		A		A	A			C
Sodium Ferrocyanide	A	A	A	A		A	A	A		A		A	A			
Sodium Fluoride	A	A	A	A		A	B	A	B	A	A	B	A	A	A	C
Sodium Hydrosulfide						A	A	A	A	D						
Sodium Hydrosulfite	C					A	A		A						A	
Sodium Hydroxide 15%	A	A	A	A		A	C	A	A	A	A	A		A		
Sodium Hydroxide 20%	A	A	A	A	D	A	C	A	A	A		A		A	A	A
Sodium Hydroxide 30%	A	A	A	A		A	C	A	A	A	A	A		A		B
Sodium Hydroxide 50%	A	A	A	A	D	A	C	A	A	A	A	A	A	A	A	B
Sodium Hydroxide 70%	A	A	A	B	D	A	D	A	B	C	A	B	A	A	B	C
Sodium Hydroxide Conc. (Caustic Soda)	A	A	A	A	C	A	B	A	B	D	B					C
Sodium Hypochlorite 20% (Bleach)	A	A	A	A	C	A	A	B	C	C		C		A	A	D
Sodium Hypochlorite Conc.	A	A	B	A	D	A	D	D	C	D	A	A	A		A	D

CHEMICAL	THERMOPLASTIC					ELASTOMER					METAL					
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Sodium Hyposulfate						A			C			A				D
Sodium Metaphosphate	A	A	A	A		A	A	A	B	A	A	A	A			C
Sodium Metasilicate	A		A	A		A	A	A	A	A		A				B
Sodium Nitrate	A	A	A	A		A	B	A	B	C	A	B	A	A	A	A
Sodium Nitrite	A	A	A	A		A	A	A	A	C	A	A	A			B
Sodium Palmitrate	A		A	A		A										
Sodium Perborate	A	A	A	A		A	A	A	C	C	B	C	A		A	B
Sodium Perchlorate	A	A	A	A		A				B						
Sodium Peroxide	A		A	A		A	A	A	C	B	A	A	A		B	C
Sodium Phosphate Acid (Di Basic)	A	A	A	A		A	A	A	B	A	A	A	A		A	B
Sodium Phosphate Alkaline (Mono Basic)	A		A	A		A	A	A	A	A	A	A	A		A	B
Sodium Phosphate Neutral (Tri Basic)	A		A	A		A	A	A	A	A	A	A	A		A	B
Sodium Polyphosphate	A			A		A	A	A	D	B	B	A		A	A	D
Sodium Silicate	A	A	A	A		A	A	A	A	A	A	A	A	A	A	A
Sodium Sulfate	A	A	A	A		A	A	A	A	A	A	A	A	A	A	A
Sodium Sulfide	A	A	A	A		A	A	A	A	C		B	A	A	A	B
Sodium Sulfite	A	A	A	A		A	A	A	A	A	A	A	A	A	A	
Sodium Tetraborate	A		A	A		A	A			A		A				
Sodium Thiocyanate	A	A	A	A		A	A	A								
Sodium Thiosulfate	A		A	A		A	A	A	A	B	A	A	A			D
Sorghum						A	A		A	A		A				A
Soy Sauce						A	A		A	A		A				D
Soybean Oil	A	D	A	A		A	A	C	A	A	A	A	A		A	A
Stannic Chloride	A	A	A	A		A	A	A	C	A	A	D	A	A		D
Stannic Salts	A		A	A		A	A	A	A			D				
Stannous Chloride (Tin Salts)	A	A	A	A		A	B	B	A	B	A	C	A	A	A	D
Starch (Amylum)	A	A	A			A	A	A	A	A	A	A	A			D
Stearic Acid	A	A	A	A		A	A	C	C	B	A	A	A	A	A	C
Stoddard Solvent	D	D	C	A		A	A	D	C	A	C	A	A	A	A	A
Strontium Carbonate																
Styrene	D	D		A		A	C	D	D	D	C	A	A		A	A
Succinic Acid (Butanedioic Acid)	A		A	A		A	A	A		A		A	A		A	A
Sugar Solutions		A	A			A	A	A	A	A	A	A			A	B
Sulfamic Acid	D	A	D	D				C	A	C	A	A	A			C
Sulfate Liquors	A	A	A	A		A	A	A	A	A	A	C	A		A	C
Sulfated Detergents	A		A	A											A	
Sulfer 10%	A		A			A	A	D	D	C		C		A	A	
Sulfer Dioxide	D		D			A	C	A	B	D		A		A	B	
Sulfite Liquor	A		A	A		A	A	A	C	B						
Sulfur	A	A	A	A		A	A	C	A	C	A	A	A	A	A	C
Sulfur Chloride	A	A	C	A		A	A	D	D	D	A	D	B			D
Sulfur Dioxide Dry	A	A	A	A	C	A	A	A	D	D	A	A	A		B	A
Sulfur Dioxide Wet	D	A	A	A	C	A	A	A	C	D	A	A	A		A	
Sulfur Slurries	A		A	A												
Sulfur Trioxide Dry	C	A	D	D		B	C	C	D	C	C	A				A
Sulfuric Acid 10%	A	A	A	A	A	A	A	A	C	C	B	C		A	A	D
Sulfuric Acid 100%	D	A	D	C		B	C	D	D	D	D	C		D	B	B
Sulfuric Acid 30%	A	A	A	A		A	A	A	A	C	A	D	A	C	A	C
Sulfuric Acid 50%	A	A	A	A		A	A	B	C	C	A	D	A	C	A	D
Sulfuric Acid 60%	A	A	A	B		A	A	B	C	D	A	D	A	C	A	C
Sulfuric Acid 70%	A	A	C	A		A	A	A	D	C	A	D	A	C	B	C
Sulfuric Acid 80%	A	A	A	A	D	A	A	A	D	C	A	B	A	D	A	D
Sulfuric Acid 90%	B	A	C	A		A	A	A	D	C	A	A	A	D	A	C
Sulfuric Acid 95%	D	A	D	A		A	A	D	D	D	C	D	B	D	A	C
Sulfuric Acid 98%	D	A	D	A		B	D	D	D	C	C	D	B	D	B	C

CHEMICAL	THERMOPLASTIC					ELASTOMER					METAL					
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Sulfurous Acid	A	A	A	A		A	A	C	C	D	A	B	A	A	B	D
Sulfuryl Chloride	A					A									B	
Syrup	A		A			A	A	A	B	A		A				
Tall Oil	A	C	A	A		A	A	D	B	A	C	B	A		A	B
Tallow			A	A		A	A	A	B	A	B	A				
Tannic Acid	A	A	A	A		A	A	B	A	C	A	C	A	A	A	C
Tanning Liquors	A	A	A	A		A	A	B	A	C	A	A	A	A	A	
Tar	D		B	A		A	A	D	C	C	A	A	A		A	A
Tartaric Acid (Dihydrxy-succinic Acid)	A	A	A	A	C	A	A	B	A	A	A	B	A	A	A	D
Tertiary Butyl Alcohol	A		A	A		A	A	B	C	D						
Tetrachlorethane	D		A			A	A	D		D		A		A	A	
Tetrachloroethane	D		D	A		A	A	D	D	D	C	A	A			A
Tetraethyl Lead	B	A	A	A		A	B	D	C	C	C	B	A			B
Tetrahydrofuran	D	D	C	B		A	D	D	D	D	C	A				
Tetralin	D		D	A		A	A	D	D	D	D	A				A
Thionyl Chloride	D	D	D	D	D	A	A		D	D		D				D
Thread Cutting Oils	A		A	A		A		D		A		A	A		A	A
Titanium Tetrachloride	D	D	D	A		A	A	D	D	C	C	C	B	A	C	C
Titanous Sulfate	A		A	A		A										
Toluene	D	D	C	A	C	A	B	D	D	D	D	A	A	A	A	A
Toluene Toluol	D	D	C	B	C	A	C	D	D	D	D	A		A	A	A
Tomato Juice	A	A	A	A		A		A	A	A	C	A	A		B	D
Toxaphene-Xylene	D		D	A												
Transformer Oil	A		A	A		A	A	D	C	A	D	A	A		A	A
Tributyl Phosphate	D	D	B	A		A	D	A	C	D	C	A	A	A		A
Trichloroacetic Acid	A	A	A	A		A	D	D	D	D	A	D	B	B		D
Trichloroethane	D		D	A		A	A	D	D	D		A		A	A	C
Trichloroethylene	D	D	C	A		A	A	D	D	C	C	A	A	B	A	B
Trichloropropane						A	A		C	A		A		A	A	A
Tricresyl Phosphate	D		A	D		A	B	A	D	D		A		B	A	C
Triethanolamine	B	D	D	C		A	D	A	A	B	A	A	A	A		A
Triethyl Phosphate	A		A	A		A	A	A				A				
Triethylamine	A	A	D	C			A		A	A						
Trimethylpropane	A		A	A		A		A	A	A	A					
Trisodium Phosphate	A	A	A	A		A	A	A	A	A	A	A	A			
Turbine Oil	A		B			A	A	D	D	B	D	A				A
Turpentine	D	D	B	A	D	A	A	C	D	A	C	A	A		A	A
Urea	A	A	A	A	D	A	A	A	A	C	A	A	A			C
Urine	A	A	A	A		A	A	A	D	A	A	A	A			CA
Vanilla Extract			A			A	D		D	A		A				
Varnish	D		A	A		A	A	D	D	B	D	A	A		A	C
Vaseline	D		A	A		A	A	D	B	A	B	A	A		A	A
Vegetable Oil	A	D	A	A		A	A	A	D	A	A	A	A		B	A
Vinegar	A	A	A	A		A	A	A	A	C	A	A	A	A	A	D
Vinyl Acetate	D	D	B	A		A	D	B	C	D	C	A	B			C
Vinyl Chloride	D			A		A	A	C	D	D	D	A				C
Vinyl Ether						A	D			B	B					
Water Acid Mine	A	A	A	A		A	A	A	C	A	A	A	A		A	D
Water Deionized	A	A	A	A		A	A	A	A	A	A	A	A		A	C
Water Demineralized	A	A	A	A			A	A		A					A	
Water Distilled	A	A	A	A		A	A	A	A	A	A	A	A		A	D
Water Potable	A		A	A		A	A	A	A	A	A	A	A		A	B
Water Salt	A	A	A	A		A	A	A	A	A	A	A	A		A	D
Water Sewage	A		A	A		A	A	A		A					A	
Weed Killers							A		C	B		A				

CHEMICAL	THERMOPLASTIC						ELASTOMER					METAL				
	PVC	CPVC - CORZAN	PP	PVDF - KYNAR	Polycarbonate	Teflon	Viton	EPDM	Neoprene	Nitrile	Hypalon	316 S/S	Alloy 20	Titanium	Hastelloy C	Carbon Steel
Whey						A	A			A		A				
Whiskey	A	A	A	A		A	A	A	A	A	A	A	A		A	D
White Acid				A		A										
White Liquor	A	A	A	A		A	A	A	A	B	A	A	A		A	C
Wines	A	A	A	A		A	A	A	A	A	A	A	A			D
Xenon						A	A	A	A	A	A	A				
Xylene	D	D	D	A	D	A	B	D	D	D	C	A	A		A	A
Xylol	D		C	A	D	A	A	D	D	C	D	C				C
Yeast			A	A		A	A	A	A							
Zeolite						A	A	A	C	B	A					
Zinc Acetate	A	A	A	A		A	C	A	A	B	A	A	A			C
Zinc Carbonate		A				A	A	A		A	A	B	A			C
Zinc Chloride	A	A	A	A		A	A	A	A	A	A	B	A	A	C	D
Zinc Chromate						A					C					
Zinc Nitrate	A	A	A	A		A	A	A		A	A	A	A			
Zinc Phosphate																
Zinc Salts			A	A		A	A	A	A	A	A					
Zinc Sulfate	A	A	A	A		A	A	A	A	A	A	A	A	A	A	D
Zirlite						A	C	A	A	B	B					

FORMULA	CHEMICAL
$\text{CH}_3(\text{CH}_2)_2\text{NO}_2$	1-Nitropropane
$(-\text{CH}_2-\text{O}-)_n$	Acetal Resin Slurry
$\text{CH}_3\text{CHO}$	Acetaldehyde [Ethanal]
$\text{CH}_3\text{CONH}_2$	Acetamide [Acetic Acid Amide]
$\text{CH}_3\text{COOR}$	Acetate Solvents
$\text{CH}_3\text{COOH}$	Acetic Acid
$(\text{CH}_3\text{CO})_2\text{O}$	Acetic Anhydride [Acetic Oxide]
$\text{CH}_3\text{COCH}_3$	Acetone [Dimethylketone]
$(\text{CH}_3)_2\text{C}(\text{OH})\text{CN}$	Acetone Cyanohydrin
$\text{CH}_3\text{CN}$	Acetonitrile [Methyl Cyanide]
$\text{C}_6\text{H}_5\text{COCH}_3$	Acetophenone [Phenyl Methyl Ketone]
$\text{CH}_3\text{COCH}_2\text{COCH}_3$	Acetyl Acetone (2,4-Pentanedione)
$\text{CH}_3\text{COCl}$	Acetyl Chloride
$(\text{CH}_3\text{OCO}) \text{C}_6\text{H}_4\text{COOH}$	Acetyl Salicylic Acid [Aspirin]
$\text{C}_2\text{H}_2$	Acetylene
$(\text{CHBr}_2)_2$	Acetylene Tetrabromide [Tetra Bromoethane]
$\text{H}_2\text{C}=\text{CHCHO}$	Acrolein [Acrylaldehyde]
$\text{H}_2\text{C}:\text{CHCOOH}$	Acrylic Acid
$\text{CH}_2\text{CHCN}$	Acrylonitrile [Vinyl Cyanide]
$\text{HOOC}(\text{CH}_2)_4\text{COOH}$	Adipic Acid [1,4-Butanedicarboxylic Acid]
$(\text{C}_n\text{H}_{2n+1}\text{OH})$	Alcohol General Formula
$\text{R-OH}$	Alcohols
$\text{CH}_2\text{CHCH}_2\text{OH}$	Allyl Alcohol [2-Propen-1-ol]
$\text{H}_2\text{C}=\text{CHCH}_2\text{Br}$	Allyl Bromide [3-Bromopropene]
$\text{CH}_2=\text{CHCH}_2\text{Cl}$	Allyl Chloride [3-Chloropropene]
$\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$	Alum [Aluminum Potassium Sulfate Dodecahydrate]
$\text{Al}(\text{OH})_3$	Alumina Trihydrate
$\text{AlCl}_3$	Aluminum Chloride
$\text{Al}_2(\text{SO}_4)_3$	Aluminum Sulfate
$\text{NH}_3$	Ammonia
$\text{AlNH}_4(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$	Ammonium Alum
$\text{NH}_4\text{HCO}_3$	Ammonium Bicarbonate
$\text{NH}_4\text{HF}_2$	Ammonium Bifluoride
$(\text{NH}_4)_2\text{CO}_3$	Ammonium Carbonate
$\text{NH}_4\text{Cl}$	Ammonium Chloride [Sal Ammoniac]
$(\text{NH}_4)_2\text{Cr}_2\text{O}_7$	Ammonium Dichromate
$\text{NH}_4\text{F}$	Ammonium Fluoride
$\text{NH}_4\text{OH}$	Ammonium Hydroxide
$\text{NH}_4\text{NO}_3$	Ammonium Nitrate
$\text{NH}_4\text{NO}_2$	Ammonium Nitrite
$(\text{NH}_4\text{OOC})_2$	Ammonium Oxalate
$(\text{NH}_4)_2\text{S}_2\text{O}_8$	Ammonium Persulfate
$(\text{NH}_4)\text{HPO}_4$	Ammonium Phosphate, [Di-basic]
$(\text{NH}_4)\text{H}_2\text{PO}_4$	Ammonium Phosphate, [Monobasic]
$(\text{NH}_4)_3\text{PO}_4 \cdot 3\text{H}_2\text{O}$	Ammonium Phosphate, [Tri-basic]
$(\text{NH}_4)_2\text{SO}_4$	Ammonium Sulfate
$(\text{NH}_4)_2\text{S}$	Ammonium Sulfide
$(\text{NH}_4)_2\text{SO}_3 \cdot \text{H}_2\text{O}$	Ammonium Sulfite
$\text{NH}_4\text{SCN}$	Ammonium Thiocyanate

FORMULA	CHEMICAL
$(\text{NH}_4)_2\text{S}_2\text{O}_3$	Ammonium Thiosulfate
$\text{C}_4\text{H}_9\text{CH}_2\text{OH}$	Amyl [1-Pentanol]
$\text{CH}_3\text{COOC}_5\text{H}_{11}$	Amyl Acetate [Banana Oil]
$\text{CH}_3(\text{CH}_2)_4\text{OH}$	Amyl Alcohol [Pentyl Alcohol]
$\text{CH}_3(\text{CH}_2)_4\text{Cl}$	Amyl Chloride [Chloropentane]
$\text{C}_{15}\text{H}_{18}$	Amyl Naphthalene
$\text{C}_6\text{H}_4(\text{OH})\text{C}_5\text{H}_{11}$	Amyl Phenol
$\text{C}_5\text{H}_{11}\text{BO}_3$	Amyll Borate
$\text{C}_6\text{H}_5\text{NH}_2$	Aniline [Aniline Oil] [Amino Benzene]
$\text{C}_6\text{H}_5\text{NH}_2 \cdot \text{HCl}$	Aniline Hydrochloride
$\text{C}_6\text{H}_5\text{OCH}_3$	Anisole [Methylphenyl Ether]
$\text{C}_{14}\text{H}_8\text{O}_2$	Anthraquinone
$\text{SbCl}_5$	Antimony Pentachloride
$\text{SbCl}_3$	Antimony Trichloride
$\text{HCl} + \text{HNO}_3$	Aqua Regia [Nitric & Hydrochloric Acid]
$\text{C}_6\text{H}_5\text{R}$	Aromatic Hydrocarbons
$\text{H}_3\text{AsO}_4 \cdot 1/2\text{H}_2\text{O}$	Arsenic Acid
$\text{AsCl}_3$	Arsenic Trichloride [Arsenic Butter]
$\text{C}_6\text{H}_8\text{O}_6$	Ascorbic Acid
$\text{C}_4\text{H}_5\text{N}$	Azole [Pyrrole]
$\text{NaHCO}_3$	Baking Soda [Sodium Bicarbonate]
$\text{BaCO}_3$	Barium Carbonate
$\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$	Barium Chloride Dihydrate
$\text{Ba}(\text{CN})_2$	Barium Cyanide
$\text{Ba}(\text{OH})_2$	Barium Hydroxide [Barium Hydrate]
$\text{Ba}(\text{NO}_3)_2$	Barium Nitrate
$\text{BaSO}_4$	Barium Sulfate [Blanc Fixe]
$\text{BaS}$	Barium Sulfide
$\text{C}_6\text{H}_5\text{CHO}$	Benzaldehyde
$\text{C}_6\text{H}_6$	Benzene [Benzol]
$\text{C}_6\text{H}_5\text{SO}_3\text{H}$	Benzene Sulfonic Acid
$\text{C}_6\text{H}_5\text{COOH}$	Benzoic Acid
$\text{C}_6\text{H}_5\text{COCl}$	Benzoyl Chloride
$\text{CH}_3\text{CO}_2\text{CH}_2\text{C}_6\text{H}_5$	Benzyl Acetate
$\text{C}_6\text{H}_5\text{CH}_2\text{OH}$	Benzyl Alcohol [Phenylcarbinol]
$\text{C}_6\text{H}_5\text{CO}_2\text{CH}_2\text{C}_6\text{H}_5$	Benzyl Benzoate
$\text{C}_6\text{H}_5(\text{CH}_2)_2\text{OH}$	Benzyl Carbinol [Phenethyl Alcohol]
$\text{C}_6\text{H}_5\text{CH}_2\text{Cl}$	Benzyl Chloride [Chlorotoluene]
$\text{C}_6\text{H}_5\text{CHCl}_2$	Benzyl Dichloride [Benzal Chloride]
$\text{HOC}_6\text{H}_4\text{COOCH}_3$	Betula Oil [Methyl Salicylate]
$\text{C}_6\text{H}_5\text{C}_6\text{H}_5$	Biphenyl [Diphenyl]
$(\text{BiO})_2\text{CO}_3$	Bismuth Subcarbonate [Bismuth Carbonate]
$\text{CO}_1\text{H}_2\text{CH}_4\text{CO}_2\text{N}_2$	Blast Furnace Gas
$\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$	Borax [Sodium Borate]
$\text{H}_3\text{BO}_3$	Boric Acid
$\text{HBrO}_3$	Bromic Acid
$\text{Br}_2$	Bromine - Anhydrous
$\text{BrF}_3$	Bromine Trifluoride
$\text{Br} + \text{H}_2\text{O}$	Bromine Water
$\text{C}_6\text{H}_5\text{Br}$	Bromobenzene



FORMULA	CHEMICAL
BrCH <sub>2</sub> Cl	Bromochloromethane
C <sub>6</sub> H <sub>4</sub> BrCH <sub>3</sub>	Bromotoluene
C <sub>4</sub> H <sub>6</sub>	Butadiene
C <sub>4</sub> H <sub>10</sub>	Butane [LPG] [Butyl Hydride]
C <sub>3</sub> H <sub>7</sub> CH <sub>2</sub> OH	Butyl [Butanol]
CH <sub>3</sub> COOC <sub>4</sub> H <sub>9</sub>	Butyl Acetate
C <sub>24</sub> H <sub>44</sub> O <sub>5</sub>	Butyl Acetyl Ricinoleate
CH <sub>2</sub> CHCO <sub>2</sub> C <sub>4</sub> H <sub>9</sub>	Butyl Acrylate
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> OH	Butyl Alcohol
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> NH <sub>2</sub>	Butyl Amine [Aminobutane]
C <sub>6</sub> H <sub>5</sub> COO(CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub>	Butyl Benzoate
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> Br	Butyl Bromide
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> CO <sub>2</sub> C <sub>4</sub> H <sub>9</sub>	Butyl Butyrate
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> OCH <sub>2</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>2</sub> OH	Butyl Carbitol®
HOCH <sub>2</sub> CH <sub>2</sub> OC <sub>4</sub> H <sub>9</sub>	Butyl Cellosolve®
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> Cl	Butyl Chloride (Chlorobutane)
(CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> ) <sub>2</sub> O	Butyl Ether [Dibutyl Ether]
C <sub>22</sub> H <sub>42</sub> O <sub>2</sub>	Butyl Oleate
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CO <sub>2</sub> (CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub>	Butyl Stearate
C <sub>4</sub> H <sub>8</sub>	Butylene [Butene]
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CHO	Butyraldehyde
CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> COOH	Butyric Acid
(CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CO) <sub>2</sub> O	Butyric Anhydride
CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CN	Butyronitrile
Ca(CH <sub>3</sub> COO) <sub>2</sub> ·H <sub>2</sub> O	Calcium Acetate Hydrate
Ca(HSO <sub>3</sub> ) <sub>2</sub>	Calcium Bisulfite
CaCO <sub>3</sub>	Calcium Carbonate
Ca(ClO <sub>3</sub> ) <sub>2</sub>	Calcium Chlorate
CaCl <sub>2</sub>	Calcium Chloride
Ca(HS) <sub>2</sub> ·6H <sub>2</sub> O	Calcium Hydrosulfide [Calcium Sulfhydrate]
Ca(OH) <sub>2</sub>	Calcium Hydroxide [Slaked Lime]
Ca(OCl) <sub>2</sub>	Calcium Hypochlorite 20% [Calcium Oxichloride]
Ca(NO <sub>3</sub> ) <sub>2</sub>	Calcium Nitrate
CaO	Calcium Oxide [Unslaked Lime]
Ca <sub>2</sub> SiO <sub>4</sub>	Calcium Silicate
CaSO <sub>4</sub>	Calcium Sulfate [Gypsum]
CaS	Calcium Sulfide
CaSO <sub>3</sub> ·2H <sub>2</sub> O	Calcium Sulfite
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>6</sub> CH <sub>2</sub> OH	Capryl Alcohol [Octanol]
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>6</sub> COOH	Caprylic Acid [Octanoic Acid]
H <sub>2</sub> NCO <sub>2</sub> R	Carbamate
(NO <sub>2</sub> ) <sub>3</sub> C <sub>6</sub> H <sub>2</sub> OH	Carbazotic Acid [Picric Acid]
C <sub>6</sub> H <sub>5</sub> OH	Carbolic Acid [Phenol]
CS <sub>2</sub>	Carbon Bi or Disulfide
CO <sub>2</sub>	Carbon Dioxide
CO	Carbon Monoxide
CCl <sub>4</sub>	Carbon Tetrachloride
CH <sub>2</sub> + H <sub>2</sub> O	Carbonic Acid
H <sub>2</sub> CO <sub>3</sub>	Carbonic Acid [Liquid]
C <sub>8</sub> H <sub>12</sub> O <sub>5</sub>	Cellulose Acetate

FORMULA	CHEMICAL
NaNO <sub>3</sub>	Chile Saltpeter [Sodium Nitrate]
Ca(ClO) <sub>2</sub>	Chlorinated Lime - 35% Bleach
Cl <sub>2</sub>	Chlorine [Anhydrous Liquid]
Cl <sub>2</sub>	Chlorine [Dry]
Cl <sub>2</sub> /H <sub>2</sub> O	Chlorine [Wet]
ClO <sub>2</sub>	Chlorine Dioxide
ClF <sub>3</sub>	Chlorine Trifluoride
CH <sub>2</sub> ClCOOH	Chloroacetic Acid [Mono-]
ClCH <sub>2</sub> COCH <sub>3</sub>	Chloroacetone [Monochloroacetone]
C <sub>6</sub> H <sub>5</sub> Cl	Chlorobenzene [Monochlorobenzene]
ClCH <sub>2</sub> Br	Chlorobromomethane
C <sub>4</sub> H <sub>5</sub> Cl	Chlorobutadiene [Chloroprene]
CHCl <sub>3</sub>	Chloroform
ClSO <sub>2</sub> OH	Chlorosulfonic Acid
C <sub>2</sub> H <sub>2</sub> ClF <sub>3</sub>	Chlorotrifluoroethylene
H <sub>2</sub> CrO <sub>4</sub>	Chromic Acid
CrCl <sub>3</sub>	Chromic Chloride
Cr <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>	Chromium Sulfate
HOC(COOH)(CH <sub>2</sub> COOH) <sub>2</sub>	Citric Acid
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	Clove Oil
CoCl <sub>2</sub> ·6H <sub>2</sub> O	Cobalt Chloride
CuCl <sub>2</sub>	Copper Chloride
CuCN	Copper Cyanide
Cu(NO <sub>3</sub> ) <sub>2</sub>	Copper Nitrate
CUSO <sub>4</sub> ·5H <sub>2</sub> O	Copper Sulfate [Blue Copperas]
CuS	Copper Sulfide
NaHSO <sub>3</sub>	Cream of Tartar [Sodium Bisulfite]
C <sub>8</sub> H <sub>10</sub> O <sub>2</sub>	Cresylic Acid [Cresol]
CH <sub>3</sub> CHCHCHO	Crotonaldehyde
C <sub>6</sub> H <sub>5</sub> CH(CH <sub>3</sub> ) <sub>2</sub>	Cumene [Isopropylbenzene]
C <sub>6</sub> H <sub>12</sub>	Cyclohexane
C <sub>6</sub> H <sub>11</sub> OH	Cyclohexanol
C <sub>6</sub> H <sub>10</sub> O	Cyclohexanone
C <sub>5</sub> H <sub>10</sub>	Cyclopentane
C <sub>10</sub> H <sub>14</sub>	Cymene [Isopropyltoluene]
(ClC <sub>6</sub> H <sub>4</sub> ) <sub>2</sub> CHCCl	DDT
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>8</sub> CHO	Decanal
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>8</sub> CH <sub>3</sub>	Decane
C <sub>10</sub> H <sub>21</sub> OH	Decyl Alcohol [Decanol]
C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	Dextrose
(CH <sub>3</sub> ) <sub>2</sub> C(OH)CH <sub>2</sub> COCH <sub>3</sub>	Diacetone [Tyranon]
(CH <sub>3</sub> ) <sub>2</sub> COHCH <sub>2</sub> COCH <sub>3</sub>	Diacetone Alcohol [Diacetone]
(C <sub>6</sub> H <sub>5</sub> CH <sub>2</sub> ) <sub>2</sub> O	Dibenzyl Ether
C <sub>24</sub> H <sub>30</sub> O <sub>4</sub>	Dibenzyl Sebecate
C <sub>18</sub> H <sub>34</sub> O <sub>4</sub>	Dibenzyl Sebecate [DBS]
(C <sub>4</sub> H <sub>9</sub> ) <sub>2</sub> NH	Dibutyl Amine
(C <sub>4</sub> H <sub>9</sub> ) <sub>2</sub> S	Dibutyl Mercaptan
C <sub>6</sub> H <sub>4</sub> [COO(CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub> ] <sub>2</sub>	Dibutyl Phthalate [DBP]
C <sub>6</sub> H <sub>12</sub> OCl <sub>2</sub>	Dichloro Isopropyl Ether
Cl <sub>2</sub> CHCOOH	Dichloroacetic Acid

FORMULA	CHEMICAL
$C_4H_8Cl_2$	Dichlorobutane
$(ClCH_2CH_2)_2O$	Dichloroethyl Ether
$(C_6H_{11})_2NH$	Dicyclohexylamine
$(HOCH_2CH_2)_2NH$	Diethanol Amine
$(CH_3CH_2)_2NH$	Diethyl Amine
$C_6H_4(C_2H_5)_2$	Diethyl Benzene
$(C_2H_5O)_2CO$	Diethyl Carbonate
$(CH_3CH_2)_2O$	Diethyl Ether [Ether]
$C_6H_4(CO_2C_2H_5)_2$	Diethyl Phthalate [DEP]
$C_{14}H_{26}O_4$	Diethyl Sebecate
$C_4H_8O_2$	Diethylene Ether [Dioxane]
$HOCH_2CH_2OCH_2CH_2OH$	Diethylene Glycol [DEG]
$(NH_2C_2H_4)_2NH$	Diethylene Triamine
$C_4H_9COC_4H_9$	Diisobutyl Ketone
$[HC=C(CH_3)_2]_2$	Diisobutylene
$C_{26}H_{50}O_4$	Diisodecyl Adipate [DIDA]
$C_{28}H_{47}O_4$	Diisodecyl Phthalate [DIDP]
$C_{22}H_{42}O_4$	Diisooctyl Adipate [DIOA]
$C_{24}H_{39}O_4$	Diisooctyl Phthalate [DIOP]
$C_{26}H_{46}O_4$	Diisooctyl Sebecate [DIOS]
$[(CH_3)_2CH]_2NH$	Diisopropyl Amine
$C_6H_4 \cdot [CH(CH_3)_2]_2$	Diisopropyl Benzene
$[(CH_3)_2CH]_2CO$	Diisopropyl Ketone
$CH_3OCH_3$	Dimethyl Ether
$(CH_3)_2NNH_2$	Dimethyl Hydrazine
$C_6H_4(CO_2CH_3)_2$	Dimethyl Phthalate
$(CH_3)_2SO_4$	Dimethyl Sulfate
$(CH_3)_2S$	Dimethyl Sulfide
$CH_3C_6H_3(NO_2)_2$	Dinitrotoluene [DNT]
$C_{24}H_{38}O_4$	Diocetyl Phthalate [DOP]
$C_{26}H_{50}O_4$	Diocetyl Sebecate
$C_{10}H_{16}$	Dipentene [Limonene]
$C_6H_5OC_6H_5$	Diphenyl Oxides [Phenyl Ether]
$(C_3H_7)_2CO$	Dipropyl Ketone [Butyrene]
$(CH_3CH_2CH_2)_2NH$	Dipropylamine
$(C_3H_6OH)_2O$	Dipropylene Glycol
$C_6H_4(CH=CH_2)_2$	Divinyl Benzene [DVB]
$C_6H_5(CH_2)_{11}CH_3$	Dodecyl Benzene [Alkane]
$CH_2OCHCH_2Cl$	Epichlorhydrin
$C_3H_5ClO$	Epichlorohydrin
$MgSO_4 \cdot 7H_2O$	Epsom Salts [Magnesium Sulfate]
$C_2H_6$	Ethane
$H_2NCH_2CH_2OH$	Ethanolamine
$(C_2H_5)_2O$	Ether
$CH_3CH_2OH$	Ethyl [Ethanol]
$CH_3COOC_2H_5$	Ethyl Acetate
$CH_3COCH_2COOCH_2CH_3$	Ethyl Acetoacetate [Acetoacetic Ester]
$CH_2CHCO_2CH_2CH_3$	Ethyl Acrylate
$CH_3CH_2OH$	Ethyl Alcohol [Ethanol]
$CH_3CH_2AlCl_2$	Ethyl Aluminum Dichloride

FORMULA	CHEMICAL
$\text{CH}_3\text{CH}_2\text{NH}_2$	Ethyl Amine [Monoethylamine]
$\text{CH}_3\text{CH}_2\text{C}_6\text{H}_5$	Ethyl Benzene
$\text{C}_6\text{H}_5\text{CO}_2\text{CH}_2\text{CH}_3$	Ethyl Benzoate
$\text{C}_2\text{H}_5\text{Br}$	Ethyl Bromide
$\text{CH}_3\text{CO}_2\text{CH}_2\text{CH}(\text{C}_2\text{H}_5)_2$	Ethyl Butyl Acetate
$\text{CH}_3\text{CH}(\text{C}_2\text{H}_5)(\text{CH}_2)_2\text{OH}$	Ethyl Butyl Alcohol
$\text{CH}_3\text{CH}_2\text{COC}_4\text{H}_9$	Ethyl Butyl Ketone
$\text{C}_6\text{H}_{12}\text{O}$	Ethyl Butyraldehyde
$\text{CH}_3\text{CH}_2\text{CH}_2\text{CO}_2\text{C}_2\text{H}_5$	Ethyl Butyrate
$\text{CH}_3(\text{CH}_2)_6\text{CO}_2\text{C}_2\text{H}_5$	Ethyl Caprylate
$\text{C}_2\text{H}_5\text{Cl}$	Ethyl Chloride [Chloroethane]
$\text{ClCO}_2\text{C}_2\text{H}_5$	Ethyl Chlorocarbonate [Ethyl Chloroformate]
$\text{C}_2\text{H}_5\text{CN}$	Ethyl Cyanide [Propionitrile]
$\text{HCOOCH}_2\text{CH}_3$	Ethyl Formate
$\text{CH}_3\text{CH}_2\text{I}$	Ethyl Iodide
$(\text{CH}_3)_2\text{CHCOOCH}_2\text{CH}_3$	Ethyl Isobutyrate
$\text{CH}_3\text{CH}_2\text{SH}$	Ethyl Mercaptan [Ethanethiol]
$\text{C}_2\text{H}_5\text{O}_2\text{CCO}_2\text{C}_2\text{H}_5$	Ethyl Oxalate
$\text{C}_2\text{H}_5\text{C}_6\text{Cl}_5$	Ethyl Pentachlorobenzene
$\text{CH}_3\text{CH}_2\text{COOCH}_2\text{CH}_3$	Ethyl Propionate
$\text{CH}_3\text{CH}_2\text{NH}_2$	Ethylamine
$\text{CH}_2\text{OHCH}_2\text{OH}$	Ethylene Alcohol (Glycol)
$(\text{CH}_2)_2\text{O}$	Ethylene Dichloride [Dutch Oil]
$(\text{CH}_2\text{OH})_2$	Ethylene Glycol [Ethylene Alcohol] [ Glycol]
$\text{CH}_2\text{C}(\text{CH}_3)\text{COOCH}_3$	Ethylene Oxide
$\text{ClCHCCl}_2$	Ethylene Trichloride [Trichloroethene]
$\text{C}_2\text{H}_4(\text{NH}_2)_2$	Ethylenediamine
$\text{C}_{10}\text{H}_{20}\text{O}_2$	Ethylhexyl Acetate
$\text{C}_8\text{H}_{17}\text{OH}$	Ethylhexyl Alcohol [Ethylhexanol]
$\text{CH}_3\text{CHCl}_2$	Ethylidene Chloride
$\text{FeCl}_3$	Ferric Chloride
$\text{FeHO}_2$	Ferric Hydroxide
$\text{Fe}(\text{NO}_3)_3$	Ferric Nitrate
$\text{Fe}_2(\text{SO}_4)_3$	Ferric Sulfate
$\text{FeCl}_2$	Ferrous Chloride
$\text{FeSO}_4$	Ferrous Sulfate
$\text{HBF}_4$	Fluoboric Acid [Boro & Hydro] [Fluoroboric Acid]
$\text{FC}_6\text{H}_5$	Fluorobenzene
$\text{F}_x\text{C}_y\text{H}_z$	Fluorolube [Fluorocarbon Oils]
$\text{H}_2\text{SiF}_6$	Fluosilicic Acid [Hydro]
$\text{H}_2\text{SiF}_6$	Fluosilicic Acid [Sand Acid]
$\text{F}_2$	Fluorine
$\text{CH}_2\text{O}$	Formaldehyde [Formalin]
$\text{HCONH}_2$	Formamide
$\text{HCOOH}$	Formic Acid
$\text{HOOCCH} = \text{CHCOOH}$	Fumaric Acid [Boletic Acid]
$\text{C}_4\text{H}_4\text{O}$	Furan [Furfuran]
$\text{C}_5\text{H}_4\text{O}_2$	Furfural [Ant Oil]
$\text{C}_5\text{H}_6\text{O}_2$	Furfuryl Alcohol
$(\text{CH}_3)_2\text{CHCH}_2\text{CH}_2\text{OH}$	Fusel Oil [Grain Oil]

FORMULA	CHEMICAL
$C_6H_2(OH)_3COOH$	Gallic Acid
$C_nJ_{2n+1}COOH$	General Formula for Fatty Acids
$C_{17}H_{26}O_4$	Ginger Oil
$Na_2SO_4 \cdot 10H_2O$	Glauber's Salt [Sodium Sulfate Decahydrate]
$C_6H_{12}O_7$	Gluconic Acid
$C_6H_{12}O_6$	Glucose [Corn Syrup]
$COOH(CH_2)_2CH(NH_2)COOH$	Glutamic Acid
$C_3H_8O_3$	Glycerine, Glycerol
$HOCH_2COOH$	Glycolic Acid
$CaSO_4 \cdot 2H_2O$	Gypsum
$D_2O$	Heavy water, Deuterium Oxide
He	Helium
$CH_3(CH_2)_5CHO$	Heptanal
$C_7H_{16}$	Heptane
$CH_3(CH_2)_4CHO$	Hexanal
$C_6H_{14}$	Hexane
$(CH_3)_2CHCH_2COCH_3$	Hexone [Methyl Isobutyl Ketone]
$CH_3(CH_2)_4CH_2OH$	Hexyl [1-Hexanol]
$C_6H_{12}(OH)_2$	Hexylene Glycol [Brake Fluid]
$H_2NNH_2$	Hydrazine
HBr	Hydrobromic Acid
HCl	Hydrochloric Acid
HCN	Hydrocyanic Acid [Prussic]
HF	Hydrofluoric Acid [Hydrogen Fluoride]
$H_2$	Hydrogen
$H_2O_2$	Hydrogen Peroxide
$H_2S$	Hydrogen Sulfide [Wet]
$C_6H_4(OH)_2$	Hydroquinone
$HOCH_2COOH$	Hydroxyacetic Acid - 105
HOCl	Hypochlorous Acid
$I_2$	Iodine
$CHI_3$	Iodoform
$Fe_2O_3$	Iron Oxide
$CH_3CO_2CH_2CH_2CH(CH_3)_2$	Isoamyl Acetate
$(CH_3)_2CHCH_2CH_2OH$	Isoamyl Alcohol
$C_9H_{18}O_2$	Isoamyl Butyrate
$(CH_3)_2CHCH_2CH_2Cl$	Isoamyl Chloride
$C_3H_7CH_2OH$	Isobutyl [2-Methyl-1-Propanol]
$CH_3CO_2CH_2CH(CH_3)_2$	Isobutyl Acetate
$(CH_3)_2CHCH_2OH$	Isobutyl Alcohol [Isobutanol]
$(CH_3)_2CHCH_2NH_2$	Isobutyl Amine
$(CH_3)_2CHCH_2Cl$	Isobutyl Chloride
$(CH_3)_2CHCOOH$	Isobutyric Acid
$(CH_3)_2CH(CH_2)_8CH_3$	Isododecane
$C_8H_{18}$	Isooctane [Trimethylpentane]
$(CH_3)_2CHCH_2CH_3$	Isopentane
$C_9H_{14}O$	Isophorone
$H_3CCH(OH)CH_3$	Isopropyl [2-Propanol]
$CH_3COOCH(CH_3)_2$	Isopropyl Acetate
$CH_3CH(OH)CH_3$	Isopropyl Alcohol [Isopropanol]

FORMULA	CHEMICAL
$C_3H_7NH_2$	Isopropyl Amine
$(CH_3)_2CHCl$	Isopropyl Chloride
$(CH_3)_2CHOCH(CH_3)_2$	Isopropyl Ether
$CH_3CHOH COOH$	Lactic Acid
$CH_3CHOHCO_2C_{10}H_7$	Lactol [Aliphatic Naptha Solvent]
$CH_3(CH_2)_{10}CH_2OH$	Lauryl Alcohol [n-Dodecanol]
$Pb(C_2H_3O_2)_2 \cdot 3H_2O$	Lead Acetate [Sugar of Lead]
$Pb_3(AsO_4)_2$	Lead Arsenate
$PbCl_2$	Lead Chloride
$Pb(NO_3)_2$	Lead Nitrate
$Pb_3O_4$ (Also $PbO$ )	Lead Oxide Litharge
$Pb(C_2H_5)_4$	Lead Tetraethyl
$CaS+CaSO_4$	Lime Sulfur
$CaO$	Lime, Soda [Slaked Lime & Soda Ash]
$C_{10}H_{16}$	Limonene
$(CH_3C_6H_4O)_3PO$	Lindol [Tricresyl Phosphate] [TCP]
$C_{21}H_{21}O_4P$	Lindol [Tritolyl Phosphate]
$C_{18}H_{32}O_2$	Linoleic Acid
$LiBr$	Lithium Bromide
$KOH$	Lye [Potassium Hydroxide]
$MgCO_3$	Magnesium Carbonate
$MgCl_2 \cdot 6H_2O$	Magnesium Chloride
$Mg(OH)_2$	Magnesium Hydroxide [Milk of Magnesia]
$Mg(NO_3)_2 \cdot 6H_2O$	Magnesium Nitrate
$MgO$	Magnesium Oxide
$MgSO_4$	Magnesium Sulfate [Epsom Salts]
$(CHCOOH)_2$	Maleic Acid
$C_4H_6O_5$	Maleic Acid [Apple Acid]
$C_4H_2O_3$	Maleic Anhydride
$HgCl_2$	Mercuric Chloride
$Hg(CN)_2$	Mercuric Cyanide
$Hg_2(NO_3)_2 \cdot 2H_2O$	Mercurous Nitrate
$Hg$	Mercury
$(CH_3)_2C=CHCOCH_3$	Merityl Oxide
$CH_4$	Methane
$CH_3OH$	Methanol [Methyl Alcohol]
$CH_3CO_2CH_3$	Methyl Acetate
$CH_3COCH_2COOCH_3$	Methyl Acetoacetate
$CH_2CHCO_2CH_3$	Methyl Acrylate
$CH_3(CH)_2COOH$	Methyl Acrylic Acid [Crotonic Acid]
$CH_3OH$	Methyl Alcohol [Methanol]
$CH_3NH_2$	Methyl Amine [Monomethylamine]
$C_8H_{16}O_2$	Methyl Amyl Acetate
$C_6H_{13}OH$	Methyl Amyl Alcohol
$C_6H_5NH(CH_3)$	Methyl Aniline
$CH_3Br$	Methyl Bromide [Bromo Methane]
$CH_3COC_4H_9$	Methyl Butyl Ketone [2-hexanone]
$CH_3(CH_2)_2CO_2CH_3$	Methyl Butyrate
$CH_3Cl$	Methyl Chloride
$C_6H_{12}$	Methyl Cyclopentane

FORMULA	CHEMICAL
CH <sub>2</sub> Cl <sub>2</sub>	Methyl Dichloride
CH <sub>3</sub> COC <sub>2</sub> H <sub>5</sub>	Methyl Ethyl Ketone (MEK)]
HCOOCH <sub>3</sub>	Methyl Formate
C <sub>7</sub> H <sub>16</sub>	Methyl Hexane
CH <sub>3</sub> I	Methyl Iodide
(CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>2</sub> COCH <sub>3</sub>	Methyl Isobutyl Ketone [Hexone]
CH <sub>3</sub> COCH(CH <sub>3</sub> ) <sub>2</sub>	Methyl Isopropyl Ketone
CH <sub>2</sub> C(CH <sub>3</sub> )CO <sub>2</sub> CH <sub>3</sub>	Methyl Methacrylate
C <sub>2</sub> H <sub>6</sub> O <sub>2</sub>	Methyl Methacrylate Slurry
C <sub>19</sub> H <sub>36</sub> O <sub>2</sub>	Methyl Oleate
CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> COCH <sub>3</sub>	Methyl Propyl Ketone
HOC <sub>6</sub> H <sub>4</sub> COOCH <sub>3</sub>	Methyl Salicylate [Betula Oil]
CH <sub>3</sub> CH <sub>2</sub> COOH	Methylacetic Acid [Propionic Acid]
CH <sub>3</sub> CHCHCO <sub>2</sub> H	Methylacrylic Acid
CH <sub>3</sub> NH <sub>2</sub>	Methylamine
CH <sub>2</sub> Br <sub>2</sub>	Methylene Bromide
CH <sub>2</sub> Cl <sub>2</sub>	Methylene Chloride
H <sub>2</sub> SO <sub>4</sub> +HNO <sub>3</sub>	Mixed Acids [Sulfuric & Nitric]
C <sub>6</sub> H <sub>5</sub> Cl	Monochlorobenzene
NH <sub>2</sub> C <sub>2</sub> H <sub>4</sub> OH	Monoethanolamine
HCON(CH <sub>3</sub> ) <sub>2</sub>	N,N-Dimethyl Formamide [DMF]
C <sub>6</sub> H <sub>5</sub> N(CH <sub>3</sub> ) <sub>2</sub>	N,N-Dimethylaniline
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> NH <sub>2</sub>	n-Amyl Amine [1-Aminopentane]
C <sub>10</sub> H <sub>8</sub>	Naphthalene [Tar Camphor]
C <sub>11</sub> H <sub>8</sub> O <sub>2</sub>	Naphthoic Acid
C <sub>6</sub> H <sub>14</sub>	Neohexane [2,2-Dimethylbutane]
Ni(CH <sub>3</sub> CO <sub>2</sub> ) <sub>2</sub>	Nickel Acetate
NiCl <sub>2</sub>	Nickel Chloride
Ni(NO <sub>3</sub> ) <sub>2</sub> ·6H <sub>2</sub> O	Nickel Nitrate
NiSO <sub>4</sub>	Nickel Sulfate
HNO <sub>3</sub>	Nitric Acid
C <sub>6</sub> H <sub>5</sub> NO <sub>2</sub>	Nitrobenzene
C <sub>6</sub> H <sub>7</sub> O <sub>5</sub> (NO <sub>2</sub> ) <sub>3</sub>	Nitrocellulose
C <sub>2</sub> H <sub>5</sub> NO <sub>2</sub>	Nitroethane
N <sub>2</sub>	Nitrogen
N <sub>2</sub> O <sub>4</sub>	Nitrogen Tetroxide
CH <sub>2</sub> NO <sub>3</sub> CHNO <sub>3</sub> CH <sub>2</sub> NO <sub>3</sub>	Nitroglycerine or Trinitro
CH <sub>3</sub> NO <sub>2</sub>	Nitromethane
C <sub>6</sub> H <sub>5</sub> NH(CH <sub>3</sub> ) <sub>3</sub>	N-Methyl Aniline
C <sub>8</sub> H <sub>18</sub>	n-Octane
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> NO <sub>3</sub>	NPN [n-Propyl Nitrate]
CH <sub>3</sub> COO(CH <sub>2</sub> ) <sub>2</sub> CH <sub>3</sub>	n-Propyl Acetate
C <sub>7</sub> Cl <sub>8</sub>	Octachlorotoluene
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CH <sub>3</sub>	Octadecane
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> OH	Octyl [Caprylic Alcohol]
CH <sub>3</sub> COO(CH <sub>2</sub> ) <sub>7</sub> CH <sub>3</sub>	Octyl Acetate
C <sub>6</sub> H <sub>4</sub> Cl <sub>2</sub>	o-Dichlorobenzene
C <sub>18</sub> H <sub>34</sub> O <sub>2</sub>	Oleic Acid [Red Oil]
C <sub>57</sub> H <sub>104</sub> O <sub>6</sub>	Olein[Triolene]
H <sub>2</sub> SO <sub>4</sub> /SO <sub>3</sub>	Oleum [Fuming Sulfuric Acid]

FORMULA	CHEMICAL
HOOC <sup>•</sup> COOH• <sub>2</sub> H <sub>2</sub> O	Oxalic Acid
O <sub>2</sub>	Oxygen
O <sub>3</sub>	Ozone
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>14</sub> COOH	Palmitic Acid
(CH <sub>2</sub> O) <sub>n</sub>	Paraformaldehyde
C <sub>6</sub> H <sub>12</sub> O <sub>3</sub>	Paraldehyde
C <sub>6</sub> Cl <sub>5</sub> OH	PCP [Pentachlorophenol]
Cl <sub>2</sub> CHCCl <sub>3</sub>	Pentachloroethane [Pentalin]
NaS	Pentahydrate [Sodium Sulfide]
C <sub>5</sub> H <sub>12</sub>	Pentane [Amyl Hydride]
C <sub>2</sub> Cl <sub>4</sub>	Perchlorethylene
HClO <sub>4</sub>	Perchloric Acid
C <sub>6</sub> H <sub>5</sub> (CH <sub>2</sub> ) <sub>2</sub> OH	Phenethyl Alcohol [Benzyl Carbinol]
C <sub>6</sub> H <sub>5</sub> OC <sub>2</sub> H <sub>5</sub>	Phenetole [Phenyl Ethyl Ether]
C <sub>6</sub> H <sub>5</sub> OH	Phenol [Carbolic Acid]
C <sub>6</sub> H <sub>4</sub> (OH)SO <sub>3</sub> H	Phenol Sulfonic Acid
CH <sub>3</sub> COOC <sub>6</sub> H <sub>5</sub>	Phenyl Acetate
C <sub>6</sub> H <sub>5</sub> OC <sub>2</sub> H <sub>5</sub>	Phenyl Ethyl Ether [Phenetole]
C <sub>6</sub> H <sub>5</sub> NHNH <sub>2</sub>	Phenyl Hydrazine
C <sub>6</sub> H <sub>5</sub>	Phenylbenzene
C <sub>9</sub> H <sub>14</sub> O	Phorone [Diisopropylidene Acetone]
H <sub>3</sub> PO <sub>4</sub>	Phosphoric Acid
POC <sub>1</sub>	Phosphorous Oxychloride
PCl <sub>3</sub>	Phosphorous Trichloride
POCl <sub>3</sub>	Phosphorus Oxychloride
C <sub>6</sub> H <sub>4</sub> (CO) <sub>2</sub> O	Phthalic Anhydride
(NO <sub>2</sub> ) <sub>3</sub> C <sub>6</sub> H <sub>2</sub> OH	Picric Acid [Carbazotic Acid]
C <sub>10</sub> H <sub>16</sub>	Pinene
C <sub>5</sub> H <sub>11</sub> N	Piperidine
CH <sub>3</sub> CO <sub>2</sub> K	Potassium acetate
AlK(SO <sub>4</sub> ) <sub>2</sub> 12H <sub>2</sub> O	Potassium Alum
KHCO <sub>3</sub>	Potassium Bicarbonate
KHSO <sub>4</sub>	Potassium Bisulfate
KHSO <sub>3</sub>	Potassium Bisulfite
KBr	Potassium Bromide
K <sub>2</sub> CO <sub>3</sub>	Potassium Carbonate [Potash]
KClO <sub>3</sub>	Potassium Chlorate
KCl	Potassium Chloride
K <sub>2</sub> CrO <sub>4</sub>	Potassium Chromate
K <sub>3</sub> [Cu(CN) <sub>4</sub> ]	Potassium Copper Cyanide
KCN	Potassium Cyanide
K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	Potassium Dichromate
KOH	Potassium Hydroxide [Caustic Potash] [Lye]
KOCl	Potassium Hypochlorite
KI	Potassium Iodide
KNO <sub>3</sub>	Potassium Nitrate
KNO <sub>2</sub>	Potassium Nitrite
KClO <sub>4</sub>	Potassium Perchlorate
KMnO <sub>4</sub>	Potassium Permanganate [Purple Salt]
KH <sub>2</sub> PO <sub>4</sub>	Potassium Phosphate [Mono]



FORMULA	CHEMICAL
$K_2Si_2O_5$	Potassium Silicate
$K_2SO_4$	Potassium Sulfate
$K_2S$	Potassium Sulfide
$K_2SO_3 \cdot 2H_2O$	Potassium Sulfite
$C_3H_8$	Propane
$C_2H_5CHO$	Propionaldehyde [Propanal]
$CH_3CH_2COOH$	Propionic Acid
$CH_3CH_2CO_2H$	Propionioic Acid [Methylacetic Acid]
$CH_3CH_2CH_2OH$	Propyl [Propanol]
$C_3H_6$	Propylene
$CH_3CH(Cl)CH_2Cl$	Propylene Dichloride
$C_3H_6(OH)_2$	Propylene Glycol [Methyl Glycol]
$C_3H_6O$	Propylene Oxide
$(-CH_2CHCl-)_n$	PVC
$C_5H_5N$	Pyridine
$C_4H_5N$	Pyrrole [Azole]
$NH_4(X)$	Quaternary Ammonium Salts
$C_{18}H_{34}O_2$	Red Oil [Oleic Acid]
$C_{20}H_{30}O_2$	Rosin
$C_{23}H_{22}O_6$	Rotenone
$(C_5H_8)_n/H_2O$	Rubber Latex Emulsions
$NH_4Cl$	Sal Ammoniac [Ammonium Chloride]
$NaCO_3$	Sal Soda [Sodium Carbonate]
$HOC_6H_4COOH$	Salicylic Acid
$NaCl/H_2O$	Salt Water [Brine]
$SiO_2$	Silica
$Si(OR)_4$	Silicate Esters
$SiCl_4$	Silicon Tetrachloride
$[(CH_3)_2SiO_2]_n$	Silicone Oils
$AgCl$	Silver Chloride
$AgCN$	Silver Cyanide
$AgI$	Silver Iodide
$AgNO_3$	Silver Nitrate
$CH_3COONa$	Sodium Acetate
$Na_2Al_2O_4$	Sodium Aluminate
$C_6H_5SO_3Na$	Sodium Benzene Sulfonate
$NaHCO_3$	Sodium Bicarbonate [Baking Soda]
$Na_2Cr_2O_7 \cdot 2H_2O$	Sodium Bichromate [Sodium Dichromate]
$NaHSO_3$	Sodium Bisulfite [Cream of Tartar]
$NaHSO_4$	Sodium Bisulfite [Niter Cake]
$Na_2B_4O_7$	Sodium Borate
$NaBr$	Sodium Bromide
$NaCO_3$	Sodium Carbonate [Sal Soda]
$Na_2CO_3$	Sodium Carbonate [Soda Ash]
$NaClO_3$	Sodium Chlorate
$NaCl$	Sodium Chloride
$CrH_2O_{4.2}Na$	Sodium Chromate
$NaCN$	Sodium Cyanide
$Na_2Cr_2O_7 \cdot 2H_2O$	Sodium Dichromate [Sodium Bichromate]
$Na_2O_2$	Sodium Dioxide [Sodium Peroxide]

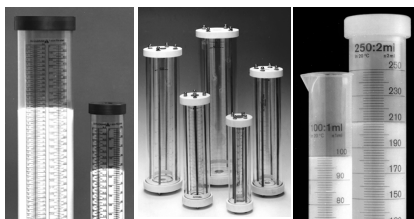
FORMULA	CHEMICAL
NaF	Sodium Fluoride
C <sub>5</sub> H <sub>8</sub> NO <sub>4</sub> Na.	Sodium Glutamate (MSG)
(NaPO <sub>3</sub> ) <sub>6</sub>	Sodium Hexametaphosphate [Calgon]
NaOH	Sodium Hydroxide [Caustic]
Na(OCl)	Sodium Hypochlorite
Na(PO <sub>3</sub> )H	Sodium Metaphosphate [Kurrol's Salt]
Na <sub>2</sub> SiO <sub>3</sub>	Sodium Metasilicate
NaNO <sub>3</sub>	Sodium Nitrate [Chile Saltpeter]
NaNO <sub>2</sub>	Sodium Nitrite
NaBO <sub>3</sub> · H <sub>2</sub> O	Sodium Perborate (Mono)
NaBO <sub>3</sub> · 4H <sub>2</sub> O	Sodium Perborate (Tetrahydrate)
Na <sub>2</sub> O <sub>2</sub>	Sodium Peroxide [Sodium Dioxide]
Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>	Sodium Persulfate
NaH <sub>2</sub> PO <sub>4</sub>	Sodium Phosphate (Mono)
Na <sub>2</sub> O·SiO <sub>2</sub>	Sodium Silicates [Water Glass]
Na <sub>2</sub> SiF <sub>6</sub>	Sodium Silicofluoride
C <sub>17</sub> H <sub>35</sub> COONa	Sodium Stearate
Na <sub>2</sub> SO <sub>4</sub>	Sodium Sulfate [Salt Cake] [Thenardite]
Na <sub>2</sub> S	Sodium Sulfide [Pentahydrate]
Na <sub>2</sub> SO <sub>3</sub>	Sodium Sulfite
Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> 10H <sub>2</sub> O	Sodium Tetraborate
Na <sub>2</sub> O <sub>3</sub> S <sub>2</sub>	Sodium Thiosulfate [Hypo] [Antichlor]
CH <sub>3</sub> (CH) <sub>4</sub> COOH	Sorbic Acid
SnCl <sub>4</sub>	Stannic Chloride [Tin Chloride]
SnF <sub>2</sub>	Stannous Fluoride [Tin Salt]
(C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> ) <sub>x</sub>	Starch
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> COOH	Stearic Acid
C <sub>6</sub> H <sub>5</sub> CHCH <sub>2</sub>	Styrene [Vinylbenzene]
H <sub>2</sub> NSO <sub>3</sub> H	Sulfamic Acid
S <sub>2</sub> Cl <sub>2</sub>	Sulfur Chloride
SF <sub>6</sub>	Sulfur Hexafluoride
SO <sub>3</sub>	Sulfur Trioxide
H <sub>2</sub> SO <sub>4</sub>	Sulfuric Acid
H <sub>2</sub> SO <sub>3</sub>	Sulfurous Acid
S	Sulphur
SO <sub>2</sub>	Sulphur Dioxide
Mg <sub>3</sub> S <sub>14</sub> O <sub>10</sub> (OH) <sub>2</sub>	Talc Slurry
C <sub>76</sub> H <sub>52</sub> O <sub>46</sub>	Tannic Acid
HOOCCH(OH)CH(OH)COOH	Tartaric Acid
(CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> O) <sub>3</sub> PO	TCP [Lindol] [Tricresyl Phosphate]
C <sub>10</sub> H <sub>18</sub> O	Terpineol [Terpilenol]
C <sub>4</sub> H <sub>10</sub> S	Tertiary Butyl Mercaptan
(CH <sub>3</sub> ) <sub>3</sub> COH	Tertiary Butyl Alcohol
C <sub>9</sub> H <sub>14</sub> O <sub>2</sub>	Tertiary Butyl Catechol
CBr <sub>4</sub>	Tetra Bromomethane
Ti(C <sub>4</sub> H <sub>9</sub> )	Tetrabutyl Titanate
(Cl <sub>2</sub> FC) <sub>2</sub>	Tetrachlorodifluoroethane
(Cl <sub>2</sub> HC) <sub>2</sub>	Tetrachloroethane [Acetylene Tetrachloride]
Cl <sub>2</sub> C=CCl <sub>2</sub>	Tetrachloroethylene
Pb(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub>	Tetraethyl Lead

FORMULA	CHEMICAL
HOCH <sub>2</sub> (CH <sub>2</sub> OCH <sub>2</sub> ) <sub>3</sub> CH <sub>2</sub> OH	Tetraethylene Glycol [TEG]
C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	Tetrahydrofuran [THF]
C <sub>10</sub> H <sub>12</sub>	Tetrahydronaphthalene [Tetralin]
CH <sub>2</sub> SH COOH	Thioglycolic Acid
SOCl <sub>2</sub>	Thionyl Chloride
C <sub>4</sub> H <sub>4</sub> S	Thiophene
TiO <sub>2</sub>	Titanium Dioxide
TiCl <sub>4</sub>	Titanium Tetrachloride
C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>	Toluene
C <sub>7</sub> H <sub>8</sub>	Toluene [Toluol]
CH <sub>3</sub> C <sub>6</sub> H <sub>3</sub> (NCO) <sub>2</sub>	Toluene Diisocyanate
CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> NH <sub>2</sub>	Toluidine
C <sub>3</sub> H <sub>5</sub> (OCOCH <sub>3</sub> ) <sub>3</sub>	Triacetin
P(OC <sub>3</sub> H <sub>5</sub> ) <sub>3</sub>	Triallyl Phosphate
(C <sub>4</sub> H <sub>9</sub> O) <sub>3</sub> P(C <sub>2</sub> H <sub>5</sub> )	Tributoxyl Ethyl Phosphate
(C <sub>4</sub> H <sub>9</sub> ) <sub>3</sub> PO <sub>4</sub>	Tributyl Phosphate [TBP]
CCl <sub>3</sub> COOH	Trichloroacetic Acid [TCA]
C <sub>6</sub> H <sub>3</sub> Cl <sub>3</sub>	Trichlorobenzenes
C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub>	Trichloroethane
C <sub>2</sub> HCl <sub>3</sub>	Trichloroethylene
CH <sub>2</sub> ClCHClCH <sub>2</sub> Cl	Trichloropropane
(CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> O) <sub>3</sub> PO	Tricresyl Phosphate [Lindol] [TCP]
C <sub>12</sub> H <sub>25</sub> CH <sub>2</sub> OH	Tridecyl Alcohol [Tridecanol]
N(C <sub>2</sub> H <sub>4</sub> OH) <sub>3</sub>	Triethanol Amine [TEA]
(CH <sub>2</sub> OHCH <sub>2</sub> ) <sub>3</sub> N	Triethanolamine
Al(C <sub>2</sub> H <sub>5</sub> ) <sub>3</sub>	Triethyl Aluminum [ATE]
(CH <sub>3</sub> CH <sub>2</sub> ) <sub>3</sub> N	Triethyl Amine
(C <sub>2</sub> H <sub>5</sub> ) <sub>3</sub> B	Triethyl Borane
HOCH <sub>2</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>2</sub> OH	Triethylene Glycol [TEG]
HO(CH <sub>2</sub> ) <sub>3</sub> OH	Trimethylene Glycol
CH <sub>3</sub> C <sub>6</sub> H <sub>2</sub> (NO <sub>2</sub> ) <sub>3</sub>	Trinitrotoluene [TNT]
(C <sub>8</sub> H <sub>17</sub> O) <sub>3</sub> PO	Trioctyl Phosphate
C <sub>10</sub> H <sub>16</sub>	Turpentine
CO(NH <sub>2</sub> ) <sub>2</sub>	Urea
CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> COOH	Valeric Acid
C <sub>6</sub> H <sub>3</sub> (CHO)(OCH <sub>3</sub> )(OH)	Vanilla Extract (Vanillin)
CH <sub>3</sub> COOCHCH <sub>2</sub>	Vinyl Acetate
CH <sub>2</sub> CHCl	Vinyl Chloride [Chloroethylene]
CH <sub>2</sub> CHCl	Vinyl Chloride Monomer
C <sub>6</sub> H <sub>5</sub> CHCH <sub>2</sub>	Vinylbenzene [Styrene]
H <sub>2</sub> O	Water
C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>2</sub>	Xylene
(CH <sub>3</sub> ) <sub>2</sub> C <sub>6</sub> H <sub>3</sub> NH <sub>2</sub>	Xylidines [Zylidin]
Zn(CH <sub>3</sub> COO) <sub>2</sub> ·2H <sub>2</sub> O	Zinc Acetate
ZnCO <sub>3</sub>	Zinc Carbonate
ZnCl <sub>2</sub>	Zinc Chloride
ZnHSO <sub>3</sub>	Zinc Hydrosulfite
ZnO	Zinc Oxide
ZnSO <sub>4</sub> 7H <sub>2</sub> O	Zinc Sulfate
ZnS	Zinc Sulfide

# Metering Pump Accessories Save \$\$\$\$

## Prevent unsafe and inefficient systems by design.

### ACCUDRAW Calibration Cylinders



**PVC Glass Poly**

- PVC, glass, polypropylene
- translucent, chemical resistant
- coloured graduations and lettering
- threaded or socket connections
- standard sizes 100 ml to 20,000 ml

Custom built in other sizes and materials.

### TOP VALVE Back Pressure/Pressure Relief



- long life diaphragm
- range of 0 – 150 PSIG
- air release, optional gauge port
- PVC, CPVC, PVDF, Teflon, polypropylene, stainless, Alloy 20 and Hastelloy C
- 7 sizes 1/4" – 2" NPT
- colour coded handles indicate size

Designed to enhance the accuracy and safety of your metering pumps.

### ACCU-PULSE

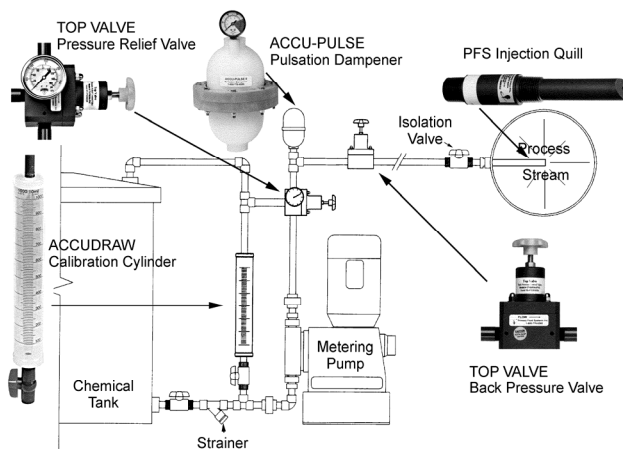
Pulsation Dampeners



Designed to remove pulsating flows from positive displacement pumps.

- increase system efficiency and pump life
- decrease maintenance and costs
- protect pipes, meters, valves and instrumentation from pulsation and vibration
- ensure meter accuracy, longevity and repeatability
- prevent foaming and splashing
- extensive range of materials and sizes
- lightweight, compact design

### Typical Metering Pump System



AutoCad drawings available from our web site.

Visit [www.primaryfluid.com](http://www.primaryfluid.com)

### PFS Injection Quills

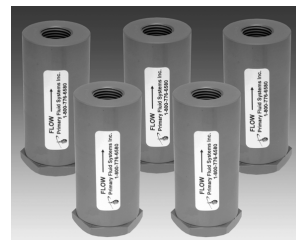


Designed to inject chemical into the center stream of process.

- provides for a more homogenous mix in the pipeline
- built-in checks to prevent back siphoning
- 2 sizes 6" and 8" length
- PVC, CPVC, PVDF, polypropylene, stainless and Hastelloy C
- pressure to 3000 PSIG
- temperature to 260°C (500°F)

Custom built in other sizes and materials.

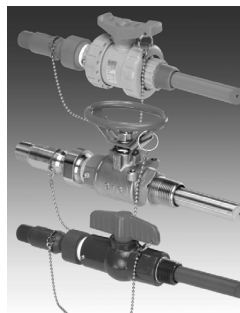
### Accu-Vent



Designed to automatically vent gases and vapours.

- vents gases and vapors released from Sodium Hypochlorite, Sulfuric Acid & Hydrogen Peroxide
- CPVC (Corzan) and Viton corrosion resistant wetted materials of construction
- specially designed float material automatically vents built up gases on system start up and under working pressure
- standard 1/2" or 3/4" NPT threaded connections or optional socket weld
- available in other materials

### PFS Corporation Stops



Designed to inject chemical into the center stream of process.

- isolation valve allows for ease of maintenance
- available in 6 materials of construction
- wetted components have comparable or greater chemical resistance than quill construction material
- standard and custom lengths available
- connection in NPT, metric or flanged

Custom built in other sizes & materials.



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