

# CHEMICAL RESISTANCE GUIDE

## INDUSTRIAL CHEMICALS

The following pages are offered as a general guide and indication of the suitability of various elastomers and plastics in use today with a wide range of industrial chemicals. The ratings are based, for the most part, on published literature of various polymer suppliers and rubber manufacturers but, in some cases, they are considered the opinion of experienced compounders. We cannot guarantee their accuracy nor assume responsibility for use thereof. Several factors must always be considered in using a rubber or plastic part in service. The most important as we see them are:

- 1. The Temperature of Service:** Higher temperatures increase the effect of chemicals on polymers. The increase varies with the polymer and the chemical. A compound quite stable at room temperature might fail miserably at elevated temperature.
- 2. Conditions of Service:** A compound that swells badly might still function well as a static seal yet fail in any dynamic application.
- 3. The Grade of Polymer:** Many types of polymers are available in different grades that vary greatly in chemical resistance.
- 4. The Compound Itself:** Compounds designed with certain outstanding properties may be poorer in performance with a chemical than one designed especially for fluid resistance.
- 5. Caution:** It is not recommended that PULSAtron®, CHEM-TECH or Mec-O-Matic pumps be used to handle flammable liquids.

In light of the above factors, it is always best to test.



27101 Airport Road  
Punta Gorda, FL 3392  
Phone: 941-575-3800  
Fax: 941-575-4085

## CHEMICAL RESISTANCE GUIDE INDUSTRIAL CHEMICALS

A	EXCELLENT
B	GOOD
C	80F - NOT RECOMMENDED
D	NOT RECOMMENDED
E	SEVERE EFFECT
X	UNKNOWN

\*\*CONSULT FACTORY FOR FLAMMABLES

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
ACETALDEHYDE	A	D	D	A	C	X	A	C	B	A	A	A	A	C	D		A	B	E	E
ACETAMIDE	A	D	C	A	X	X	A	E	B	X	B	A	X	B	B		X	B	E	B
ACETATE SOLVENT	A	D	A	B	X	X	A	X	C	A	A	A	X	C	D		X	C	E	B
ACETIC ACID, 5%	X	B	A	A	A	A	A	X	X	X	A	A	A	A	E		B	X	E	A
ACETIC ACID 20%	A	D	A	X	X	X	A	B	A	A	B	A	A	A	B		A	B	X	X
ACETIC ACID, 80%	A	E	A	C	B	E	A	C	A	A	E	A	A	E	E		A	X	E	B
ACETIC ACID, GLACIAL	B	E	A	C	B	E	A	C	B	A	C	A	A	E	E		A	B	E	B
ACETIC ANHYDRIDE	B	E	E	A	A	E	A	E	C	A	B	D	A	A	E		X	C	E	A
ACETONE-***FLAMMABLE***	A	D	D	A	A	D	A	E	A	A	A	A	A	C	D		A	B	E	E
ACETONITRILE	X	E	X	A	X	X	A	X	X	X	X	A	X	X	B		X	X	X	E
ACETOPHENONE	X	E	X	A	X	X	A	X	X	X	X	B	A	X	C		X	X	X	X
ACETYLENE	A	A	A	A	X	X	A	E	B	X	A	A	X	C	D		X	C	A	x
ACETYL BROMIDE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	D
ACETYL CHLORIDE	D	C	A	D	A	X	A	E	E	A	A	A	X	B	A		X	C	E	D
ACETYLENE GAS	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
ACETYLNITRILE	X	C	X	B	X	X	X	X	X	X	X	A	X	X	C		X	X	X	X
ACIDMINE WATER	X	X	X	A	X	X	A	X	X	X	X	A	X	X	X		X	X	X	X
ACRIFLAUINE	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ACRYLIC ACID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ACRYLIC EMULSIONS	X	X	X	A	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ACRYLONITRILE	D	B	A	A	X	X	A	E	B	B	B	A	A	C	D		X	X	B	E
ADIPIC ACID	B	B	X	B	B	X	A	X	C	X	B	A	A	X	X		X	E	E	B
AIR	X	B	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
ALCOHOLS IN GENERAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
ALCOHOL, ALLYL	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	D
ALCOHOL, AMYL	A	A	X	A	A	X	A	C	C	A	A	A	X	A	A		X	X	X	X
ALCOHOL, BENZYL	B	X	X	X	A	X	X	X	A	A	B	A	X	X	A		X	X	X	X
ALCOHOL, BUYTL	B	A	A	A	A	X	A	B	A	A	A	A	X	A	A		X	X	X	E
ALCOHOL, COTYL	X	X	X	X	X	X	X	X	X	X	X	A	X	X	A		X	X	X	X
ALCOHOL, DIACETONE	A	X	X	A	X	X	X	X	C	A	A	A	X	A	C		X	X	X	X
ALCOHOL, ETHYL	A	A	X	A	X	X	X	C	A	A	A	A	X	A	C		X	X	X	A
ALCOHOL, HEXYL	C	A	X	X	X	X	X	X	X	A	A	A	X	X	A		X	X	X	X
ALCOHOL, ISOBUTYL - ALCOHOLS ARE FLAMMABLE	A	X	X	X	X	X	X	X	B	A	A	A	X	X	X		X	X	X	D
ALCOHOL, ISOPROPYL	A	A	X	A	X	X	X	X	B	A	B	A	X	X	A		X	X	X	D
ALCOHOL, MEYTHAL	A	A	X	A	X	X	X	C	B	A	A	A	X	A	C		X	X	X	X
ALCOHOL, POLYVINYL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ALCOHOL, PROPARGYL	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ALCOHOL, PROPYL	A	A	X	A	X	X	X	X	A	A	A	A	X	A	A		X	X	X	X
ALIPHATIC HYDROCARBONS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	E
ALLYL CHLORIDE	X	C	A	X	X	X	A	X	X	X	X	B	X	X	X		X	A	X	X
ALUM, AMMONIUM	X	A	X	A	X	X	X	X	X	X	X	X	X	A	A		X	X	X	X
ALUM, CHROME	X	A	X	A	X	X	X	X	X	X	X	X	X	A	A		X	X	X	X
ALUM, POTASSIUM	X	A	X	A	X	X	X	X	X	X	X	X	X	A	A		X	X	X	X
ALUMINUM CHLORIDE	A	A	A	A	A	A	A	B	A	A	B	D	A	A	A		X	C	A	A
ALUMINUM CHLOROHYDRATE	A	A	A	A	A	A	A	A	A	B	B	D	A	A	A		X	X	A	A
ALUMINUM CHLOROXYDRIDE	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
ALUMINUM CITRATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ALUMINUM FLUORIDE	A	A	A	A	X	A	A	X	X	X	X	C	X	A	A		X	C	A	A
ALUMINUM HYDROXIDE	A	A	A	A	A	A	A	C	A	B	B	C	A	A	A		X	B	A	A
ALUMINUM NITRATE	B	B	A	A	X	A	A	B	B	X	A	A	A	A	A		X	B	A	A
ALUMINUM OXYCHLORIDE	X	A	A	A	B	X	A	X	X	X	X	B	A	A	C		X	X	X	X

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INDUSTRIAL CHEMICALS**

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
ALUMINUM POTASSIUM SULFATE 10%	A	A	B	A	A	X	A	B	A	C	A	A	A	A	A		X	X	X	X
ALUMINUM POTASSIUM SULFATE 100%	A	A	X	A	A	X	A	B	A	C	E	B	A	A	A		X	X	X	X
ALUMINUM SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
ALUMINUM SULFATE	A	A	A	A	A	A	A	A	A	B	B	D	A	A	A		X	X	A	A
ALUMS	B	A	X	A	X	X	A	X	A	B	X	A	X	A	A		X	X	X	A
AMINES	B	D	X	B	D	X	A	E	E	B	A	A	A	D	D		X	C	E	D
AMMONIA, 10%	A	A	A	A	B	A	A	E	B	A	A	A	A	A	A		A	X	E	A
AMMONIA ANHYDROUS	A	A	A	A	B	A	A	E	A	B	A	A	A	D	D		A	X	E	B
AMMONIA AQUA 10%	X	A	X	A	X	X	X	X	X	X	X	A	X	X	C		A	X	X	X
AMMONIA AQUEUS 25%	X	A	A	X	A	X	A	X	X	X	X	A	X	X	X		A	X	X	X
AMMONIA CONCENTRATED	X	C	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
AMMONIA DRY GAS	X	X	X	A	X	X	X	X	X	X	X	A	X	X	X		X	X	X	X
AMMONIA GAS	X	A	X	A	X	X	X	X	X	X	X	A	A	X	C		X	B	X	A
AMMONIA LIQUID	A	A	A	A	D	X	A	E	B	B	C	A	A	D	D		A	X	E	X
AMMONIA NITRATE	A	B	A	A	X	X	A	X	A	X	A	A	X	D	D		X	C	E	X
AMMONIUM ACETATE	A	A	X	A	X	X	A	X	A	X	B	A	X	X	A		X	X	E	A
AMMONIUM BICARBONATE	X	A	X	A	A	X	A	X	X	X	X	A	A	A	B		X	C	X	A
AMMONIUM BIFLUORIDE	B	A	A	A	X	X	A	X	A	B	E	B	X	C	A		X	X	A	X
AMMONIUM BISULFIDE	X	A	B	X	X	X	A	X	X	X	X	B	A	X	A		X	X	X	A
AMMONIUM CARBONATE	A	A	A	A	A	A	A	X	A	B	B	B	A	X	A		X	C	A	A
AMMONIUM CASEINATE	X	A	A	A	X	X	A	X	X	X	X	B	A	X	A		X	X	X	X
AMMONIUM CHLORIDE	A	A	A	A	B	A	A	B	A	E	C	D	A	B	A		X	C	A	A
AMMONIUM DICHROMATE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	C	X	X
AMMONIUM FLUORIDE 10%	X	A	A	A	A	X	A	X	X	X	X	C	X	X	X		X	X	X	X
AMMONIUM FLUORIDE 25%	X	A	A	A	A	X	A	X	X	X	X	C	X	X	X		X	X	X	X
AMMONIUM HYDROXIDE	A	A	A	A	B	A	A	E	A	B	B	C	A	A	A		X	A	E	A
AMMONIUM METAPHOSPHATE	A	A	X	A	A	X	A	X	X	X	X	X	X	X	A		X	X	X	X
AMMONIUM NITRATE	A	A	A	A	B	A	A	X	A	B	B	A	A	A	A		X	C	A	A
AMMONIUM OXALATE	A	A	X	A	X	X	A	B	A	A	A	A	X	X	X		X	X	X	X
AMMONIUM PERSULFATE	B	A	A	A	X	A	A	X	A	B	A	C	A	A	A		X	D	A	A
AMMONIUM PHOSPHATE	X	A	A	A	B	A	A	X	X	X	X	A	A	A	A		X	A	A	A
AMMONIUM PHOSPHATE DIBASIC	A	C	A	A	X	X	C	B	A	B	B	B	X	X	A		X	C	X	X
AMMONIUM PHOSPHATE MONOBASIC	A	C	X	A	X	X	C	X	A	B	B	X	X	X	A		X	C	X	X
AMMONIUM PHOSPHATE TRIBASIC	A	X	X	A	X	X	A	X	A	B	B	X	X	X	A		X	C	X	X
AMMONIUM SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
AMMONIUM SULFATE	A	A	A	A	A	A	A	B	A	B	B	B	A	B	B		X	A	A	A
AMMONIUM SULFITE	B	A	A	A	B	X	A	X	B	X	B	B	A	A	D		X	B	X	X
AMMONIUM THIOCYANATE	X	A	X	B	A	X	A	X	X	X	X	A	B	X	B		X	X	X	X
AMMONIUM THIOSULFATE	B	X	X	X	X	X	X	X	X	X	X	A	X	X	X		X	X	X	X
AMYL ACETATE	A	D	A	B	D	C	A	E	C	A	B	A	A	D	D		A	D	X	B
AMYL ALCOHOL	A	B	A	A	B	E	A	X	C	A	A	A	A	B	B		X	D	A	D
AMYL CHLORIDE	D	D	A	D	D	X	A	X	E	B	B	A	A	D	B		X	D	X	D
ANILINE	B	E	A	C	D	E	A	E	B	B	A	A	A	B	A		A	D	X	C
ANILINE CHLOROHYDRATE	X	C	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ANILINE HYDROCHLORIDE	B	B	A	D	X	X	A	E	E	E	E	D	A	X	A		X	D	X	D
ANISOLE	X	X	X	B	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ANTHRAQUINONE	X	A	X	X	X	X	X	X	X	X	X	X	X	A	X		X	X	X	X
ANTHRAQUINONE SULFONIC ACID	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ANTIFREEZE	A	A	X	D	B	X	C	X	E	X	X	A	X	X	A		X	C	X	X
ANTIMONY SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
ANTIMONY CHLORIDE	X	X	X	A	X	X	C	X	X	X	X	X	X	X	X		X	X	X	X
ANTIMONY PENTACHLORIDE	X	X	X	X	X	X	C	X	X	X	X	X	X	X	X		X	X	X	X
ANTIMONY TRICHLORIDE	C	A	A	A	A	X	A	B	A	X	E	D	B	X	A		X	X	X	B
AQUA REGIA	C	E	A	B	D	E	A	E	C	C	E	E	A	B	A		X	D	E	E
AROCHLOR 1248	B	X	X	D	X	X	A	X	E	A	B	B	X	D	A		X	B	X	X
AROMATIC HYDROCARBONS	D	D	X	D	C	X	D	X	E	X	X	A	X	D	A		X	D	E	E
ARSENIC SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A

Material Code: PVC= Polyvinyl Chloride, GFPPL= Glass-filled Polypropylene, PFTE= Polytetrafluorethylene, PVDF= Polyvinylidene Fluoride, CSPE = Generic formulation of Hypalon, a registered trademark of E.I. Dupont Company.

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	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
**CONSULT FACTORY FOR FLAMMABLES																				
ARSENIC ACID	B	A	A	A	B	A	A	B	A	B	B	A	A	A	A		X	A	A	D
ARSENOUS ACID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ARYL SONFONIC ACID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A		X	X	X	X
ASPHALT	D	B	A	X	X	X	A	E	C	X	B	A	X	C	A		X	E	X	X
AVIATION FUEL (115 - 145 oct)	X	X	X	X	B	X	X	X	X	X	X	X	X	X	X		X	E	X	X
AVIATION TURBINE FUEL	X	X	X	X	B	X	X	X	X	X	X	X	X	X	X		X	E	X	X
BARIUM ACETATE	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
BARIUM CARBONATE	A	A	A	A	B	A	A	B	A	B	C	B	A	X	A		X	X	A	A
BARIUM CHLORIDE	A	A	A	A	B	A	A	A	A	B	B	C	A	B	B		X	A	A	A
BARIUM CYANIDE	A	A	A	A	B	X	A	X	E	A	B	A	A	A	A		X	X	X	X
BARIUM HYDROXIDE	A	A	A	B	B	A	A	E	B	B	C	B	A	A	A		X	A	A	A
BARIUM NITRATE	A	A	X	A	X	X	A	E	A	X	C	A	X	X	A		X	B	X	X
BARIUM SULFATE	A	A	A	A	B	A	A	E	C	A	C	B	A	A	A		X	A	A	A
BARIUM SULFITE	X	A	A	B	X	X	A	X	B	X	C	B	A	A	A		X	A	X	X
BEER	A	A	A	A	B	A	A	B	B	B	A	A	A	A	A		X	A	A	A
BEET SUGAR LIQUIDS	A	A	A	A	X	X	A	X	B	X	A	A	X	A	A		X	A	X	X
BENZALDEHYDE	A	E	A	C	D	E	A	E	E	A	X	A	A	E	E		X	D	E	E
BENZALKONIUM CHLORIDE	X	A	X	X	X	X	X	X	X	X	X	A	X	X	X		X	X	X	X
BENZENE	D	C	A	D	D	C	A	E	E	B	B	A	D	A	A		A	D	E	E
BENZENE SULFONIC ACID	D	A	A	D	B	X	A	E	E	B	B	B	A	A	A		X	D	E	E
BENZOIC ACID	D	A	A	A	A	C	A	C	C	C	B	B	A	E	A		X	B	E	D
BENZOL	D	E	A	B	A	X	A	E	B	B	B	A	A	D	A		X	D	X	X
BENZONITRILE	X	X	X	X	X	X	A	B	X	C	E	D	X	X	X		X	A	X	X
BENZYL CHLORIDE	D	X	X	C	X	X	A	X	D	C	D	B	A	D	A		X	D	X	X
BISMUTH CARBONATE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
BLACK LIQUOR	X	A	X	A	B	X	A	X	X	X	X	X	X	A	A		X	A	X	A
BLEACH 12.5% ACTIVE CL2 ( Also see sodium Hypochlorite)	X	A	A	X	B	X	A	X	X	X	X	X	A	X	A		X	C	X	X
BLEACH 5.5% ACTIVE CL2 ( Also see sodium Hypochlorite)	X	A	A	C	B	X	A	X	X	X	X	X	A	X	A		X	C	X	X
BLEACHING LIQUORS	A	A	X	A	B	X	A	X	B	X	X	X	X	A	A		X	B	A	X
BORAX (SODIUM BORATE)	A	A	A	A	D	X	A	X	B	B	A	A	A	B	B		X	B	A	A
BORIC ACID	A	A	A	A	A	A	A	A	A	A	C	A	A	B	B		X	B	A	A
BREWERY SLOP	X	X	X	X	X	X	X	X	X	X	X	A	X	A	X		X	X	X	X
BRINE ACID	X	A	X	X	A	X	B	X	X	X	X	X	X	X	A		X	X	X	X
BROMIC ACID	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
BROMINE GAS	X	A	A	X	C	X	A	X	X	X	X	E	X	X	A		X	X	X	A
BROMINE LIQUID	D	C	X	C	D	X	A	D	E	A	E	X	X	E	A		A	X	X	X
BROMINE WATER	X	C	A	E	D	X	A	X	X	X	X	E	A	E	A		A	D	E	X
BROMOBENZENE	X	C	X	X	X	X	X	X	X	X	X	X	X	X	A		X	X	X	X
BROMOTOLUENE	X	C	X	X	C	X	A	X	X	X	X	A	A	B	A		X	X	X	X
BUTADIENE	C	C	A	C	C	X	A	E	C	C	A	A	A	B	B		X	D	A	A
BUTANE	D	C	A	A	C	X	A	E	A	A	B	A	A	B	A		X	D	A	A
BUTANEDIOL	X	B	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
BUTANOL, PRIMARY	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	B	X	X
BUTANOL, SECONDARY	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	B	X	X
BUTANOL (BUTYL ALCOHOL)	A	C	A	A	X	X	A	C	B	B	A	A	X	A	A		X	B	X	X
BUTTER	A	A	X	X	X	X	A	X	X	X	C	A	X	B	A		X	B	X	X
BUTTERMILK	B	A	B	A	X	X	A	B	B	A	A	A	X	X	A		X	A	X	X
BUTYLENE	X	A	B	X	X	X	A	X	X	X	X	A	X	X	C		X	X	X	X
BUTYL ACETATE	B	A	C	A	C	X	A	E	C	A	B	A	X	C	C		A	E	X	D
BUTYL AMINE	X	D	B	A	X	X	A	E	C	C	X	A	X	X	D		X	B	X	X
BUYYL CELLOSOLVE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	C		X	E	X	X
BUTYL ETHER	D	A	A	D	X	X	A	X	E	X	X	A	X	X	D		X	D	X	X
BUTYL PHENOL	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
BUTYL PHTHALATE	C	X	B	B	X	X	A	E	C	C	C	B	X	D	C		X	A	X	X
BUTYL SEARATE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	A		X	X	X	X
BUTYLACEATE	X	D	B	B	C	C	A	X	X	X	X	A	X	D	D		X	D	E	X
BUTYLENE	D	A	A	X	X	X	A	E	X	X	A	A	X	D	A		X	D	X	X

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**CHEMICAL RESISTANCE GUIDE  
INDUSTRIAL CHEMICALS**

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
BUTYRIC ACID	B	D	A	A	X	D	A	E	C	B	C	B	B	A	D		X	C	E	B
BUTYRALDEHYDE	X	X	X	X	X	X	A	X	X	X	X	A	X	D	D		X	E	X	X
BUYTRIC ACID	X	A	A	A	B	X	A	X	X	X	B	A	C	C		X	E	X	D	
CADIMUM CYANIDE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
CADIMUM SALT	X	X	X	A	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
CAFFEINE CITRATE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
CALCIUM BISULFATE	A	A	A	A	B	X	A	E	X	X	X	A	A	A	A		X	C	X	X
CALCIUM BISULFIDE	C	A	A	A	B	X	A	X	A	A	B	B	X	X	A		X	C	X	X
CALCIUM BISULFITE	D	A	A	A	A	A	A	E	A	B	B	B	A	A	A		X	A	A	A
CALCIUM CARBONATE	A	A	A	A	B	A	A	D	A	B	B	B	A	A	A		X	A	A	A
CALCIUM CHLORATE	A	B	A	A	A	A	A	X	X	X	X	A	A	B	A		X	X	A	A
CALCIUM CHLORIDE	A	A	A	A	A	A	A	X	B	A	D	C	A	A	A		X	A	A	A
CALCIUM HYDROXIDE	A	B	A	A	B	A	A	E	B	A	C	B	A	A	A		X	A	A	A
CALCIUM HYPOCHLORITE	C	A	A	C	A	A	A	X	A	B	D	D	A	A	D		X	B	A	A
CALCIUM NITRATE	B	A	A	A	A	X	A	B	B	C	D	B	A	A	A		X	B	A	A
CALCIUM OXIDE	A	B	A	A	X	X	A	X	A	A	A	B	X	A	B		X	A	A	A
CALICUM PHOSPHATE	X	X	X	X	A	X	A	X	X	X	X	X	X	X	X		X	A	X	X
CALCIUM SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
CALCIUM SULFATE	A	A	A	A	A	A	A	B	A	B	B	B	A	A	A		X	X	A	A
CALCIUM SULFITE	X	A	A	A	X	X	A	X	X	X	X	A	A	A	A		X	A	X	X
CALGON	A	B	X	X	X	X	A	X	A	X	A	A	X	X	X		X	A	X	X
CAMPHOR CRYSTALS	X	A	X	X	X	X	A	X	X	X	X	A	A	X	X		X	X	X	X
CAMPHOR OIL	X	X	X	B	C	X	X	X	X	X	X	X	X	X	X		X	X	X	X
CANE SUGAR LIQUORS	X	A	X	A	X	X	X	X	X	X	X	X	X	A	A		X	B	X	X
CAPRYLIC ACID	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
CARBITOL	X	A	X	X	X	X	A	X	X	X	X	X	X	X	A		X	A	X	X
CARBOLIC ACID (PHENOL)	B	D	A	B	C	A	A	E	B	A	B	B	A	D	A		X	D	X	X
CARBON BISULFIDE	D	D	C	D	C	X	A	X	E	X	A	A	A	D	A		A	D	X	X
CARBON DIOXIDE	B	A	A	D	D	X	A	B	E	A	A	B	A	B	B		X	B	A	A
CARBON DISULFIDE	D	D	D	B	C	A	A	E	E	B	B	B	A	D	A		A	E	B	E
CARBON MONOXIDE	A	A	X	A	X	X	A	X	A	B	A	A	X	X	A		X	A	X	A
CARBON TETRACHLORIDE	D	C	A	C	E	X	A	E	E	B	B	B	A	E	A		A	D	E	E
CARBONATED WATER	X	X	X	X	X	X	X	X	B	X	A	X	X	X	A		X	X	X	X
CARBONIC ACID	B	A	A	A	X	A	A	B	A	B	B	B	A	B	B		X	A	A	A
CASTOR OIL	X	A	X	A	A	X	A	X	A	X	A	X	X	A	X		X	A	X	D
CATSUP	X	A	X	X	A	X	X	X	A	X	A	A	X	X	A		X	X	X	X
CAUSTIC POTASH	X	A	A	X	X	X	A	X	X	X	X	X	X	X	C		X	B	X	X
CAUSTIC SODA (SODIUM HYDROXIDE)	X	A	B	C	B	X	A	X	X	X	X	A	B	A	B		X	A	X	X
CELLOSOLVE	X	A	A	X	X	X	A	X	X	X	X	A	X	X	C		X	E	X	D
CELLOSOLVE ACETATE	X	A	X	X	X	X	A	X	X	X	X	A	X	X	C		X	E	X	D
CETYL ALCOHOL	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X		X	X	X	X
CHLORAL HYDRATE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	C		X	X	X	X
CHLORAMINE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
CHLORIC ACID	X	A	X	X	X	X	X	X	X	B	E	E	X	X	X		X	X	X	X
CHLORINATED GLUE	B	X	X	X	X	X	X	X	X	X	X	A	X	X	X		X	X	X	X
CHLORINE DIOXIDE	X	B	A	C	X	X	A	X	X	A	X	X	A	C	A		X	X	X	X
CHLORINE GAS	X	X	C	C	X	X	X	X	X	X	X	X	X	X	A		X	X	X	D
CHLORINE LIQUID ( Also see sodium Hypochlorite)	X	C	A	C	C	X	X	X	X	X	X	C	X	X	A		A	E	X	X
CHLORINE WATER ( Also see sodium Hypochlorite)	C	A	A	A	A	X	A	X	E	B	C	C	A	A	A		A	E	X	X
CHLOROACETIC ACID	B	A	A	D	X	E	A	E	C	B	C	E	A	A	A		A	D	E	B
CHLOROACETIC CETYL CHLORINE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
CHLOROACETIC BENZENE	X	C	A	C	C	X	A	X	X	X	X	A	A	C	A		X	X	X	X
CHLOROACETIC BENZYL CHLORINE	X	C	X	X	X	X	X	X	X	X	X	X	X	X	A		X	X	X	X
CHLOROACETIC FORM	X	C	A	B	C	X	A	X	X	X	X	A	X	D	A		X	X	X	X
CHLOROACETIC PICRIN	X	C	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
CHLOROACETIC SULFONIC ACID	X	A	C	C	C	X	A	X	X	X	X	C	X	X	C		X	X	X	X
CHLOROENZENE (MONO)	D	D	A	C	D	D	B	E	C	A	A	B	A	D	A		X	D	E	E

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CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
CHLOROBROMOMETHANE	B	D	X	A	D	X	A	X	A	X	X	X	A	D	A		X	D	X	X
CHLOROFORM	D	E	A	E	X	E	A	E	D	B	A	A	A	E	D		A	D	E	D
CHLOROSULFONIC ACID	D	C	E	E	E	E	A	D	E	B	E	D	A	E	E		X	D	E	E
CLOROX BLEACH ( Also see sodium Hypochlorite)	B	A	X	X	C	X	A	X	E	A	E	A	X	X	A		X	X	X	A
CHOCOLATE SYRUP	A	A	X	A	X	X	A	A	B	X	A	B	X	X	A		X	X	X	X
CHROME ALUM	X	A	X	A	A	X	A	X	X	X	X	X	X	X	A		X	X	X	X
CHROMIC ACID 5%	A	X	X	X	X	X	X	B	E	B	B	X	X	X	X		A	X	X	X
CHROMIC ACID, 10%	C	A	A	A	A	A	A	B	E	A	B	B	A	A	A		A	C	A	A
CHROMIC ACID, 20%	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		A	X	X	A
CHROMIC ACID, 30%	B	A	A	A	A	A	A	C	E	E	C	B	A	A	A		A	C	A	D
CHROMIC ACID, 50%	B	E	A	A	B	D	A	E	E	B	C	C	A	A	A		A	C	A	D
CHROMIUM SALTS	B	A	X	B	X	X	A	X	X	X	X	X	X	X	A		X	X	X	X
CIDER	A	A	X	A	B	X	A	A	A	X	A	A	X	X	A		X	B	X	X
CITRIC ACID	A	A	A	A	A	A	A	B	A	A	C	B	A	A	A		X	A	E	A
CITRIC OILS	B	X	X	A	X	X	A	X	A	X	A	A	D	X	X		X	D	X	X
COCONUT OIL	D	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	D
COTTON OIL	D	A	A	A	A	X	X	X	X	X	X	X	X	X	A		X	X	X	X
COD LIVER OIL	A	X	X	X	X	X	A	X	B	A	A	X	X	X	X		X	B	X	X
COFFEE	A	A	X	A	X	X	X	X	A	A	A	A	X	A	X		X	A	X	X
COKE OVEN GAS	X	A	X	X	A	X	A	X	X	X	X	X	X	X	A		X	B	X	X
COLA CONCENTRATES	X	X	X	A	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
COPPER ACETATE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	E	X	X
COPPER CARBONATE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
COPPER CHLORIDE	A	A	A	A	B	A	A	X	A	X	E	B	A	B	B		X	A	X	X
COPPER CYANIDE	A	A	A	A	X	A	A	E	A	B	B	A	A	X	B		X	A	X	A
COPPER FLUOBORATE	X	A	X	X	A	X	A	X	X	B	E	D	X	X	A		X	X	X	X
COPPER FLORIDE	X	A	A	C	A	X	A	X	X	X	X	B	C	X	A		X	X	X	X
COPPER NITRATE	X	A	A	A	A	A	A	E	A	C	A	A	A	B	B		X	X	X	A
COPPER SALTS	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	A	X	X
COPPER SULFATE	A	A	A	A	A	A	A	B	A	X	B	B	A	B	B		X	A	X	D
CORN OIL	C	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	A	X	X
CORN SYRUP	X	A	X	X	A	X	A	X	X	X	X	X	X	X	A		X	A	X	A
COTTON SEED OIL	D	A	A	A	A	X	A	X	A	A	A	A	A	A	A		X	A	X	D
CREAM	X	X	X	A	X	X	A	X	A	X	A	A	X	X	A		X	X	X	X
CREOSOTE	X	E	X	X	X	X	A	X	C	B	B	A	X	X	X		X	D	X	X
CRESOLS	D	D	A	D	D	B	A	E	E	C	B	A	A	D	A		X	D	A	E
CRESYLIC ACID	D	B	A	X	X	X	A	E	B	C	B	A	A	X	A		X	D	E	D
CROTON ALDEHYDE	X	E	X	X	X	X	A	X	X	X	X	X	X	X	X		X	D	X	X
CRUDE OIL	X	A	A	X	A	X	A	X	X	X	X	A	X	X	A		X	D	X	X
CUPRIC ACID	B	A	A	A	X	X	A	B	B	B	E	B	X	X	A		X	A	A	X
CUPRIC CHLORIDE	X	X	A	A	A	X	A	X	X	X	X	B	X	X	X		X	A	X	A
CUPRIC CYANIDE	X	X	X	A	A	X	A	X	X	X	X	X	X	X	X		X	A	X	A
CUPRIC FLOURIDE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
CUPRIC NITRATE	X	X	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	A
CUPRIC SULFATE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	A	X	A
CUPROUS CHLORIDE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
CYANIC ACID	X	X	X	X	C	X	A	X	X	X	A	A	X	X	A		X	A	X	X
CYANIDE	X	X	A	B	X	X	A	X	X	X	X	X	X	X	A		X	X	X	X
CYCLOHEXANE	D	A	A	D	C	X	A	B	E	B	B	A	A	D	A		X	D	E	E
CYCLOHEXANOL	X	D	A	X	A	X	A	X	X	X	X	A	X	X	C		X	D	X	X
CYCLOHEXANONE	X	D	D	D	A	X	A	E	E	B	B	A	A	D	D		X	D	A	E
DECALAN	X	D	X	D	X	X	X	X	X	X	X	X	X	X	A		X	X	X	X
DESOCYEPHEDRINE HYDROCHLORIDE	X	B	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DETERGENTS	A	A	A	A	B	X	A	B	A	B	B	A	A	B	A		X	A	E	D
DETERGENTS HEAVY DUTY	X	A	A	A	X	X	A	X	X	X	X	A	X	X	A		X	X	X	X
DETERGENTS SYNTHETIC	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DEVELOPERS	X	A	X	A	A	X	A	X	X	X	X	A	X	X	A		X	A	X	X

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DEXTRIN	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
DEXTROSE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	A		X	A	X	X
DIACETONE ALCOHOL	A	D	D	A	X	X	A	E	B	X	C	B	X	A	D		X	D	A	E
DIALLYL PHTHALATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DIAMMONIUM PHOSPHATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DIAZO SALTS	X	A	X	A	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DIBENZYL	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
DIBUTOXY ETHYL PHTHALATE	X	D	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DIBUTYL ETHER	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	D	X	X
DIBUTYL PHTHALATE	X	D	D	B	X	X	A	X	X	X	X	B	X	X	X		X	B	X	A
DIBUTYL SEBACATE	X	B	X	X	X	X	A	X	X	X	X	X	X	X	X		X	B	X	X
DICALCIUM PHOSPHATE	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
DICHLOROBENZENE	D	D	A	C	X	X	A	E	D	B	X	B	X	D	C		X	D	E	E
DICHLOROETHANE	X	D	A	D	D	X	A	E	E	A	B	B	A	C	C		X	E	X	X
DICHLOROMETHANE	X	C	B	C	C	X	A	X	X	X	X	A	A	C	C		X	X	X	X
DICHLOROPHENOXYACETIC ACID	X	X	X	X			X					X		E	A					
DIEMETHYL PHTHALATE	X	B	A	X	X	X	A	X	X	X	X	A	X	X	A		X	X	X	X
DIESEL FUEL	D	B	A	X	X	X	A	B	B	B	B	A	X	X	A		X	E	X	E
DIETHYL CELLOSOLVE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DIETHYL ETHER	D	D	B	C	X	X	A	E	A	C	C	A	A	C	D		X	E	X	D
DIETHYL KEYSTONE	X	D	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
DIETHYL SEBSCATE	X	X	X	X	X	X	A	X	X	X	X	X	X	X	D		X	B	X	X
DIETHYLAMINE	B	D	D	A	X	X	D	E	B	A	A	A	X	C	A		X	B	E	X
DIETHYLAMINE 2.5% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
DIETHYLENE GYCOL	B	X	X	A	B	X	A	C	B	C	B	A	A	A	A		X	A	X	A
DIETHYLENE TRIAMINE	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	E	X	X
DIETHYL OXIDE	X	D	B	D	X	X	A	X	X	X	X	A	X	D	A		X	C	X	X
DIGLYCOLIC ACID	X	A	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DIISOBUTYLENE	X	A	A	X	X	A	A	X	X	X	X	A	X	X	X		X	E	X	X
DIISOCTYL PHTHALATE	X	X	X	A	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
DIEMETHYL ANILINE	C	X	X	X	X	X	X	E	E	C	C	X	X	X	X		X	X	X	X
DIMETHYL FORMAMIDE	B	D	D	A	X	X	A	E	A	X	A	A	X	X	D		X	C	X	D
DIMETHYL HYDRAZONE	X	D	X	X	X	X	X	X	X	X	X	X	X	X	D		X	X	X	X
DIMETHYL PHTHALATE	X	D	D	X	X	X	A	X	X	X	X	A	A	C	C		X	X	X	X
DIMETHYL SULFOXIDE	X	D	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	E
DIMETHYLAMINE	X	A	X	B	X	X	A	X	X	X	X	X	X	X	D		X	X	X	X
DIMETHYLAQUEOUS	X	D	X	B	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DIOCTYL PHTHALATE	X	D	C	D	B	X	A	X	X	X	X	A	X	C	C		X	X	X	A
DIOXANE	X	E	D	D	E	X	A	X	X	X	X	C	X	D	D		X	D	X	E
DIOXANE 1 & 4	X	E	D	D	E	X	A	X	X	X	X	C	X	D	D		X	D	X	X
DIPHENYL	D	X	X	X	X	X	X	X	E	B	B	X	X	X	X		X	X	X	X
DIPHENOL ETHER	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X		X	X	X	X
DIPHENYL ETHER	X	A	X	X	X	X	A	X	X	X	X	A	A	X	A		X	A	X	X
DIPENYL OXIDE	D	X	X	X	X	X	A	X	E	C	C	A	A	X	A		X	C	X	X
DIPROPYLENE GLYCOL	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
DISODIUM METHYL ARSENATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DISODIUM PHOSPHATE	X	A	A	A	A	X	A	X	X	X	X	A	A	A	B		X	X	X	X
DISTILLED WATER	X	A	X	X	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
DIVINYLBENZENED	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	E	X	X
DOWTHERM	X	E	X	X	X	X	A	X	X	X	X	A	X	X	X		X	A	X	X
DYES	X	C	B	X	X	X	X	X	X	X	A	A	X	X	A		X	C	X	X
EMULSIONS PHOTOGRAPHIC	X	X	X	A	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
EPICHLOROHYDRIN	X	E	D	A	X	X	A	X	X	X	X	A	X	X	C		X	D	X	X
EPSOM SALTS	A	A	A	A	A	X	A	B	A	B	A	A	A	A	A		X	X	X	X
ETHANE	D	A	A	D	X	X	A	X	E	X	A	A	X	X	X		X	B	X	X
ETHANOL-***FLAMMABLE***	A	A	A	A	A	X	A	C	A	A	A	A	A	A	B		X	A	X	X
ETHANOLAMINE	B	D	C	X	X	X	A	X	E	B	A	A	A	X	D		X	C	X	X

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**CHEMICAL RESISTANCE GUIDE  
INDUSTRIAL CHEMICALS**

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
ETHER	C	X	X	X	X	X	X	X	E	C	A	X	X	X	X		A	X	X	D
ESTERS	X	D	C	C	X	X	A	X	X	X	X	A	X	X	C		X	B	X	X
ETHYL ACETATE	B	D	C	A	B	X	A	E	B	A	B	A	X	X	D		A	B	X	D
ETHYL ACETOACETATE	X	D	X	X	X	X	A	X	X	X	X	A	X	X	X		X	B	X	X
ETHYL ACRYLATE	X	D	X	X	X	X	A	X	X	X	X	X	X	X	D		X	B	X	X
ETHYL BENZENE	X	E	A	C	C	X	A	X	X	X	X	A	A	C	A		X	D	X	X
ETHYL BENZOATE	X	X	X	X	X	X	X	E	C	X	X	X	X	X	X		X	X	X	E
ETHYL BROMIDE	X	E	B	D	D	X	A	X	X	X	X	A	A	X	X		X	D	X	X
ETHYL BUTYRATE	X	E	X	D	D	X	A	X	X	X	X	A	X	X	X		X	X	X	X
ETHYL CHLORIDE	A	E	A	E	E	E	A	E	E	C	A	A	A	D	A		X	D	E	D
ETHYL CHLORIDE (WET)	X	E	A	X	E	X	A	X	X	X	X	D	X	X	X		X	D	X	X
ETHYL CELLOSOLVE	X	E	X	X	X	X	A	X	X	X	X	X	X	X	X		X	D	X	X
ETHYL CELLULOSE	X	E	X	X	B	X	A	X	X	X	X	X	X	A	X		X	C	X	X
ETHYL ETHER	D	D	B	D	D	X	A	X	E	C	B	A	A	C	C		X	D	X	D
ETHYL CHLORDACETATE	X	D	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ETHYL SULFATE	X	X	X	X	X	X	A	X	X	X	E	D	X	X	A		X	A	X	X
ETHYLENE BROMIDE	C	D	A	D	X	X	A	E	E	B	A	A	A	C	A		X	D	E	E
ETHYLENE CHLORIDE	D	D	A	C	D	X	A	E	D	X	B	B	X	D	B		X	D	X	X
ETHYLENE CHLOROHYDRIN	B	D	A	D	X	X	A	E	E	B	B	B	X	C	A		X	C	E	A
ETHYLENE DIAMINE	A	D	B	X	A	X	A	B	X	C	C	B	A	B	B		X	A	E	D
ETHYLENE DICHLORIDE	C	D	A	D	D	A	A	E	E	B	B	B	A	D	A		X	D	E	D
ETHYLENE GLYCOL	A	A	A	A	A	A	A	C	A	C	B	B	A	B	B		X	A	A	A
ETHYLENE OXIDE	C	A	A	A	E	D	A	D	E	A	B	A	A	C	B		X	D	A	A
ETHYLENE TRICHLORIDE	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	D	X	X
EUCALYPTUS OIL	X	B	X	X			A		X	X	X	X	X	X	X		X	X	X	X
FATTY ACIDS	D	A	A	A	E	D	A	C	A	A	B	A	A	B	A		X	C	A	D
FERRIC ACETATE	X	C	X	X	D	X	X	X	X	X	X	A	X	X	X		X	D	X	X
FERRIC CHLORIDE	A	A	A	A	A	A	A	B	A	C	E	E	A	B	B		X	B	A	A
FERRIC HYDROXIDE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
FERRIC NITRATE	A	A	A	A	E	A	A	B	A	C	B	B	A	B	B		X	C	A	A
FERRIC SULFATE	A	A	A	A	E	A	A	B	A	B	C	A	A	B	B		E	B	A	A
FERROUS CHLORIDE	X	A	A	A	A	A	A	E	A	C	E	E	A	B	B		X	B	A	A
FERROUS CHLORITE	X	A	A	A	A	X	A	X	X	X	X	D	X	X	A		X	X	X	X
FERROUS HYDROXIDE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
FERROUS NITRATE	X	A	X	A	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
FERROUS SULFATE	A	A	A	A	B	A	A	B	A	B	B	D	A	B	B		A	C	A	A
FISH SOLUBLES	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	A	X	X
FLUORIDE - SEE HYDROFLUOSILICIC ACID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
FLUORIDE SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X		E	X	X	X
FLUORIDE GAS (WET)	X	A	X	C	X	X	X	X	X	X	X	X	X	D	D		E	X	X	X
FLUORIDE GAS (DRY)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		E	X	X	X
FLUOBORIC ACID	B	A	A	A	E	B	A	X	A	B	B	B	E	B	X		E	X	A	E
FLUORINE	B	D	A	D	C	X	B	C	E	C	C	A	C	X	C		E	D	B	X
FLUORINE, GAS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		E	X	X	E
FLUOROSILICIC ACID	B	A	A	A	A	B	A	B	A	B	C	B	E	X	B		X	E	A	D
FORMALDEHYDE, 40%	A	B	A	A	B	A	A	B	A	B	B	A	A	B	E		A	B	E	E
FORMALDEHYDE, 100%	A	A	A	C	B	X	A	B	C	A	C	A	A	A	C		A	B	E	E
FORMIC ACID	A	C	A	A	B	E	A	B	B	A	C	B	A	B	E		A	B	A	B
FORMIC ACID, 25% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
FORMIC ACID, 40-50% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	D
FORMIC ACID, 98% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	D
FREON 11	D	A	A	A	C	X	A	X	A	A	A	A	A	B	B		A	D	B	A
FREON 12 (WET)	B	C	B	A	C	X	A	X	B	A	C	E	A	E	A		A	D	B	A
FREON 21	X	D	A	A	C	X	A	X	X	X	X	A	A	A	D		X	D	X	X
FREON 22	A	A	A	B	C	X	A	X	B	A	A	A	A	B	D		A	D	B	A
FREON 113	D	B	B	D	E	X	A	C	E	A	X	X	A	A	B		X	D	B	A
FREON 114	X	D	A	X	X	X	A	X	X	X	X	A	X	X	A		X	D	X	X

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**CHEMICAL RESISTANCE GUIDE  
INDUSTRIAL CHEMICALS**

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
FREON TF	D	B	B	D	E	X	A	X	D	A	A	A	A	A	B		X	D	X	X
FREON E-3	X	X	A	X	X	X	A	X	X	X	X	A	X	X	X		X	D	X	X
FRUCTOSE	X	A	X	A	A	X	A	X	X	X	A	X	X	A		X	X	X	X	
FRUIT JUICE	X	A	A	B	B	X	A	X	B	A	A	A	A	B	A		X	A	A	A
FRUIT PULP	X	A	X	A	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
FUEL OILS	D	A	B	A	D	X	A	C	A	B	A	A	A	C	A		X	D	A	E
FUMARIC ACID	X	X	D	X	X	X	A	X	X	X	X	A	X	X	X		X	B	X	X
FURAN RESIN	C	A	D	D	X	X	A	X	D	B	B	A	X	D	D		X	D	X	X
FURFURAL	D	E	B	E	D	X	A	E	E	B	A	B	A	B	E		X	D	E	E
GALLIC ACID	B	B	A	A	C	X	B	X	A	C	A	B	A	D	A		X	D	E	X
GALLIC ACID, 17% IN ACETONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	D
GAS MANUFACTURED	X	A	A	C	C	X	A	X	X	X	X	A	X	X	A		X	D	X	X
GAS NATURAL	X	A	A	A	X	X	X	X	X	X	X	A	X	X	A		X	X	X	X
GASOLINE (BENZENE)	X	X	X	D	D	X	X	X	X	X	X	X	X	X	X		A	X	X	X
GASOLINE (HIGH-AROMATIC)	D	A	A	A	D	A	B	A	A	A	A	A	A	B	A		A	D	A	X
GASOLINE (LEADED)	D	B	A	B	D	A	A	B	B	A	B	D	A	B	A		A	D	A	X
GASOLINE (UNLEADED)	D	C	A	C	D	A	A	B	D	A	B	A	A	A	A		A	D	A	E
GASOLINE (REFINED)	X	A	A	D	A	X	A	X	X	X	X	A	X	D	X		A	D	X	X
GASOLINE (SOUR)	X	A	X	D	A	X	A	X	X	X	X	X	X	X	A		A	D	X	X
GELATIN	A	B	A	A	A	X	A	X	A	A	B	A	X	B	A		A	A	A	A
GIN	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
GLAUBERS SALTS	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	A	X	X
GLUCONIC ACID	X	X	X	X	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
GLUCOSE	A	A	A	A	B	A	A	B	A	A	B	A	A	B	A		X	A	A	X
GLUCOSE, 50% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
GLUE, PVA	A	C	X	X	A	X	A	X	X	A	B	A	X	A	B		X	A	X	X
GLUTARALDEHYDE	A	A	A	A	A	X	A	X	A	X	X	X	X	X	A		X	X	X	X
GLYCERINE (GLYCEROL)	A	A	A	A	A	A	A	B	A	A	B	A	A	B	B		A	A	A	A
GLYCEROL	X	A	A	A	A	X	A	X	X	X	X	A	A	A	A		A	A	X	A
GLYCOLIC ACID	A	B	B	A	B	X	A	X	A	A	A	A	X	A	A		X	A	E	X
GLYCOLIC ACID, 70% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	D
GLYCOLS	X	A	A	A	A	X	X	X	X	X	X	A	X	X	A		X	A	X	X
GLYOXAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
GOLD MONOCYANIDE	X	X	A	X	X	X	D	X	X	X	A	A	X	X	A		X	X	X	X
GRAPE JUICE	A	A	A	X	B	X	A	X	X	X	A	A	X	X	A		X	A	X	X
GRAPE SUGAR	X	A	X	A	A	X	A	X	X	X	X	X	X	X	A		X	X	X	X
GREASE	D	A	A	X	A	X	A	X	X	A	X	A	X	X	A		X	D	X	X
GREEN LIQUOR	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	A	X	X
HEPTANE	D	C	A	C	D	X	A	B	D	A	A	A	A	B	A		X	D	X	X
HEXANE	D	B	A	B	C	X	A	E	C	A	A	A	A	B	A		X	D	B	E
HEXANOL	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	B	X	X
HONEY	A	A	A	A	A	X	A	B	A	A	A	A	X	X	A		X	A	X	X
HYDRAULIC FLUID	X	C	X	X	E	X	A	X	X	X	X	A	X	X	X		X	C	X	X
HYDRAULIC OIL (PETRO)	D	A	A	D	E	X	A	X	E	A	A	A	X	A	A		X	B	X	X
HYDRAULIC OIL (SYNTHETIC)	A	A	A	D	E	X	A	X	E	A	A	A	X	A	A		X	B	X	X
HYDRAZINE	A	A	A	C	B	A	C	E	C	X	A	A	A	B	A		X	B	E	D
HYDROBROMIC ACID, 20%	A	A	A	A	B	X	A	X	D	A	E	E	C	A	A		X	D	A	E
HYDROBROMIC ACID, 50%	X	A	A	A	B	X	A	X	X	X	X	E	C	C	A		X	D	X	E
HYDROBROMIC ACID, 100%	A	A	A	C	A	X	A	X	D	C	E	D	X	A	A		X	E	A	E
HYDROBROMIC ACID, DILUTE	X	A	X	A	A	X	A	X	X	X	X	E	C	C	A		X	D	X	E
HYDROCHLORIC ACID, 0-25%	X	A	A	A	B	A	A	C	C	B	E	E	A	B	A		A	D	A	A
HYDROCHLORIC ACID, 25-37%	C	A	A	A	B	B	A	E	C	B	E	E	A	D	A		A	B	B	B
HYDROCHLORIC ACID, 37-100%	D	D	A	B	A	A	A	E	C	A	E	D	C	D	A		A	D	X	X
HYDROCHLORIC ACID, DILUTE	X	A	X	A	C	X	A	X	X	X	X	A	B	C	C		A	D	X	X
HYDROCHLORIC ACID, DRY GAS	X	B	A	A	A	X	A	X	B	A	E	D	X	A	A		X	C	X	X
HYDROCYANIC ACID	B	B	A	A	B	X	A	X	A	A	C	A	A	A	A		X	C	X	A
HYDROCYANIC ACID, GAS 10%	A	A	A	A	A	X	A	C	A	X	X	X	X	X	A		X	D	E	X

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CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
**CONSULT FACTORY FOR FLAMMABLES																				
HYDOFLUORIC ACID, 10%	D	C	A	A	A	B	A	X	X	X	X	C	E	A	A		D	D	A	E
HYDOFLUORIC ACID, 20%	D	B	A	A	C	D	A	E	B	B	E	D	X	B	A		D	D	A	E
HYDOFLUORIC ACID, 30%	X	C	A	B	D	E	A	X	X	X	C	E	A	A		D	D	A	E	
HYDOFLUORIC ACID, 50%	X	D	A	B	D	E	A	E	B	B	E	C	E	B	A		D	D	A	E
HYDOFLUORIC ACID, 60%	X	D	A	B	E	E	A	X	X	X	X	C	E	D	A		D	D	X	X
HYDOFLUORIC ACID, 75%	C	D	A	C	E	E	A	E	D	B	E	D	E	B	B		D	D	X	X
HYDOFLUORIC ACID, 100%	D	D	A	C	E	E	A	E	D	B	C	B	E	B	B		D	D	X	X
HYDOFLUORIC ACID, DILUTE	X	A	A	C	E	X	A	X	X	X	X	C	C	A	B		D	D	X	X
HYDOFLUOSILICIC ACID, 20% - FLUORIDE	A	A	A	A	A	D	A	X	A	B	D	B	E	B	A	A	X	D	X	B
HYDOFLUOSILICIC ACID, 100% - FLUORIDE	A	B	A	A	B	X	A	X	A	B	E	D	X	B	A	B 20-50%	X	D	X	X
HYDROGEN GAS	A	A	A	A	A	X	A	B	A	A	A	A	X	A	A		X	C	A	A
HYDROGEN CHLORIDE	X	X	A	A	A	X	A	X	X	X	X	A	A	C	X		X	E	X	X
HYDROGEN CYANIDE	X	A	A	B	A	X	A	X	X	X	X	A	A	C	A		X	B	X	X
HYDROGEN FLOURIDE	X	D	X	X	B	X	X	X	X	X	X	X	X	X	D		X	E	X	X
HYDROGEN PEROXIDE, 10%	A	A	A	A	A	X	A	B	A	A	C	B	A	A	A		A	A	A	A
HYDROGEN PEROXIDE, 30%	B	A	A	A	B	B	A	B	C	A	C	B	A	A	A		A	B	A	A
HYDROGEN PEROXIDE, 50%	D	B	A	A	B	X	A	B	C	A	C	B	A	A	A		A	B	A	A
HYDROGEN PEROXIDE, 90%	D	E	A	B	D	E	A	A	C	A	C	B	A	D	A		A	B	A	B
HYDROGEN PHOSPHIDEA	X	X	A	A	X	X	X	X	X	X	X	X	X	X	X		A	X	X	X
HYDROGEN SULFIDE (DRY)	B	A	A	A	A	X	A	X	B	A	D	A	A	B	A		X	C	A	X
HYDROGEN SULFIDE, AQ SOL.	B	C	A	A	X	B	A	A	B	A	C	B	A	B	B		X	C	X	A
HYDROGEN SULFIDE, (WET)	X	A	A	A	A	X	A	X	X	X	X	A	A	A	X		X	B	X	A
HYDROQUINONE	D	B	X	A	A	X	A	X	A	B	B	B	A	D	B		X	X	A	X
HYDROQUINONE, 7% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	D
HYDROXYACETIC ACID 70%	A	D	A	X	A	X	A	X	X	X	X	X	X	X	A		X	B	A	X
HYPO SOLUTIONS	X	B	C	X	X	X	A	X	X	X	X	X	X	A	X		X	A	X	X
HYPOCHLOROUS ACID	X	A	A	A	A	X	X	X	X	X	X	X	X	X	A		X	E	X	A
HYDROXYLAMINE SULFATE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
HYPO. SODIUM THIOSULFATE	X	A	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
INK	X	C	A	X	B	X	A	X	X	X	C	C	A	X	A		X	X	X	X
IODINE	B	A	A	C	D	B	A	X	C	A	E	D	A	D	A		X	C	A	A
IODINE (IN ALCOHOL)	A	A	A	X	X	X	X	X	X	B	X	X	X	X	X		X	X	X	X
IODOFORM	A	A	A	X	X	X	A	X	X	E	A	X	X	X	X		X	X	X	X
ISOOCTANE	D	A	A	A	C	X	A	C	B	X	B	A	A	A	A		X	B	A	E
ISODODECANE	X	X	X	X	X	X	A	X	X	X	X	X	X	A	X		X	E	X	X
ISOPROPYL ACETATE	B	D	D	B	C	X	A	E	C	B	C	A	X	D	D		X	D	E	D
ISOPROPYL ETHER	D	D	B	D	D	X	A	E	C	A	A	A	X	C	D		X	D	E	D
ISOTANE	X	A	A	D	X	X	X	X	E	X	X	X	X	X	A		X	X	X	X
JET FUEL (JP3, JP4, JP5)	D	A	A	B	E	X	A	B	B	A	A	A	X	D	A		X	D	A	X
JET FUEL JP8	D	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	E
KEROSENE	D	A	A	A	D	A	B	E	B	B	A	A	A	D	A		A	D	A	E
KETONES	A	E	A	E	C	E	A	E	C	A	A	A	A	E	E		X	D	E	E
KRAFT LIQUOR	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
LACQUER THINNERS	D	D	X	D	C	X	A	B	E	A	B	A	X	D	D		X	D	X	D
LACQUER	D	D	D	D	C	X	A	E	E	A	B	A	X	D	D		X	D	X	X
LACTIC ACID	A	B	A	A	A	E	A	B	B	C	C	B	A	B	B		X	A	E	A
LACTIC ACID, 3-5 %	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
LACTIC ACID, 85% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	D
LARD	D	A	A	B	B	X	A	B	C	A	A	A	A	B	A		X	B	A	D
LATEX	A	A	A	A	B	X	A	X	B	A	B	A	X	A	X		X	A	X	X
LPG	X	X	A	X	X	X	X	X	X	X	X	A	X	X	X		X	X	X	X
LAURIC ACID	X	A	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
LAURYL CHLORIDE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
LEAD ACETATE	A	A	A	A	A	A	A	X	B	C	B	A	A	E	A		X	A	A	A
LEAD ACETATE, 35% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
LEAD CHLORIDE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
LEAD NITRATE	B	A	A	A	X	X	A	X	B	C	C	B	X	X	A		X	B	A	X

**CHEMICAL RESISTANCE GUIDE  
INDUSTRIAL CHEMICALS**

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
LEAD NITRATE, 27% IN WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
LEAD SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
LEAD SULFAMATE	A	B	A	A	X	X	B	B	B	X	C	C	X	A	A		X	B	X	X
LEAD SULFATE	X	A	X	X	B	X	A	X	X	X	X	X	X	X	X		X	X	X	X
LEMON OIL	X	A	X	D	B	X	E	X	X	X	X	X	X	X	X		X	X	X	E
LEVULINIC ACID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
LIGRION	D	C	A	A	E	X	A	X	B	X	X	A	X	C	A		X	D	X	X
LIME	D	B	A	X	B	X	A	X	X	X	A	A	X	X	A		X	A	X	X
LIME BLEACH	X	X	X	X	X	X	A	X	X	X	X	X	X	A	X		X	C	X	X
LIME SLURRY	X	A	A	C	A	X	A	X	X	X	X	A	C	A	A		X	X	X	X
LIME SULFUR	X	A	A	A	A	X	A	X	X	X	X	C	X	X	A		X	B	X	X
LIMONENE-D	X	C	A	E	X	X	A	X	X	X	X	X	X	X	A		X	X	X	E
LINOLEIC ACID	D	A	A	B	X	X	A	X	C	X	B	A	X	D	A		X	B	A	D
LINOLEIC OIL	X	A	X	X	X	X	X	X	X	X	X	X	X	X	C		X	X	X	X
LINSEED OIL	X	A	A	A	C	X	A	X	X	X	X	A	A	A	A		X	A	X	D
LIQUERS	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
LITHIUM BROMIDE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	A	X	X
LITHIUM CHLORIDE	B	D	A	A	A	X	A	C	B	X	B	A	X	X	A		X	A	X	X
LITHIUM HYDROXIDE	X	X	X	X	X	X	A	E	X	B	B	B	X	X	X		X	E	X	X
LUBRICATING OIL	D	C	B	C	D	A	A	B	B	A	B	A	A	D	A		X	D	A	E
LYE KOH POTASSIUM HYDROXIDE	B	B	A	A	A	X	A	E	A	C	B	A	D	A	B		X	C	X	X
LYE NaOH SODIUM HYDROXIDE	C	A	D	A	A	X	A	E	A	C	B	B	A	A	B		X	A	X	X
LYE Ca(OH)2 CALCIUM HYDROXIDE	A	B	A	A	A	X	A	E	B	B	C	B	A	A	B		X	A	X	X
MACHINE OIL	X	A	X	B	C	X	A	X	X	X	X	X	X	X	X		X	X	X	X
MAGNESIUM BISULFATE	X	A	X	A	X	X	A	B	B	X	B	A	X	B	X		X	X	X	X
MAGNESIUM CARBONATE	A	B	A	A	B	X	A	B	A	B	B	B	A	A	A		X	X	A	A
MAGNESIUM CHLORIDE	A	A	A	A	A	A	A	B	B	B	E	B	A	A	A		X	A	A	A
MAGNESIUM CITRATE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
MAGNESIUM HYDROXIDE	A	A	A	A	A	X	A	B	A	A	B	X	A	X	X		X	X	X	A
MAGNESIUM SALTS	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	A	X	X
MAGNESIUM NITRATE	A	A	A	A	A	A	A	B	A	A	B	A	A	A	A		X	A	A	A
MAGNESIUM OXIDE	X	X	X	X	X	X	A	X	X	X	A	A	X	X	C		X	X	X	X
MAGNESIUM SULFATE	A	A	A	A	A	A	A	B	A	B	A	A	A	A	A		X	A	A	A
MALEIC ACID	D	A	A	A	A	E	A	X	A	B	A	B	A	A	A		X	B	A	D
MALEIC ANHYDRIDE	D	B	A	D	D	X	A	X	E	X	A	A	X	D	A		X	X	X	X
MALIC ACID	D	A	A	A	D	X	A	X	B	B	A	B	X	D	A		X	B	E	X
MAGANESE SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
MANGANESE SULFATE	B	C	A	X	B	A	A	B	X	B	B	B	A	X	A		X	C	A	A
MASH	A	A	X	X	A	X	X	X	X	X	A	A	X	X	A		X	X	X	X
MAYONNAISE	X	D	A	A	A	X	A	X	X	A	C	A	X	X	A		X	X	X	X
MELAMINE	A	D	X	A	X	X	A	X	A	X	X	D	X	X	A		X	C	X	X
MERCURIC CHLORIDE (DILUTE)	B	A	A	B	B	X	B	X	B	A	C	C	A	X	A		X	A	A	A
MERCURIC CYANIDE	B	A	A	B	B	X	B	X	B	A	C	C	A	X	A		X	A	A	A
MERCURIC NITRATE	B	A	A	A	A	X	A	B	A	B	B	A	A	X	A		X	X	A	X
MERCURIC SULFATE	X	A	X	X	X	X	A	X	X	X	X	X	X	X	A		X	A	X	X
MERCUROUS CHLORIDE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
MERCUROUS NITRATE	X	A	A	A	A	X	A	X	X	X	X	B	X	X	X		X	X	X	A
MERCURY	A	A	A	B	B	X	A	E	B	B	A	A	A	A	A		X	A	A	A
MERCURY, SALTS	X	X	X	X	X	X	X	X	A	A	A	X	X	X	X		X	X	X	A
METHANE	D	B	A	A	X	X	A	X	X	X	X	A	X	B	A		X	D	A	X
METHACRYLIC ACID GLACIAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
METHOXYETHYL OLEATE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
METHYLAMINE	X	X	X	X	X	X	X	X	X	X	X	A	X	X	D		X	X	X	X
METHANOL (METHOL ALCOHOL)	A	A	A	A	X	X	A	C	B	A	A	A	A	A	C		X	A	E	B
METHYL ACETATE	B	D	B	D	D	X	A	E	E	A	A	B	X	D	D		X	D	E	B
METHYL ACETONE	B	D	D	X	D	X	A	X	X	X	A	A	X	X	D		X	X	X	X
METHYL ACRYLATE	B	D	B	D	X	X	A	X	E	X	A	A	A	D	D		X	D	X	X

Material Code: PVC= Polyvinyl Chloride, GFPPL= Glass-filled Polypropylene, PFTE= Polytetrafluorethylene, PVDF= Polyvinylidene Flouride, CSPE = Generic formualtion of Hypalon, a registered trademark of E.I. Dupont Company.

**CHEMICAL RESISTANCE GUIDE  
INDUSTRIAL CHEMICALS**

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
METHYL ALCOHOL 10%	A	A	A	A	A	X	A	C	B	A	A	A	A	A	C		A	A	X	X
METHYL BROMIDE	D	D	A	C	D	X	A	X	C	X	A	A	X	D	A		X	X	E	D
METHYL BUTYL KETONE	B	A	D	D	X	X	A	E	E	X	A	A	X	D	D		X	D	X	X
METHYL CELLOSOLVE	C	D	A	B	X	X	A	E	B	X	B	B	A	D	D		X	D	X	X
METHYL CHLORIDE	D	D	A	D	D	X	A	E	E	B	A	A	X	D	A		X	D	E	D
METHYL CHLOROFORM	X	D	X	X	D	X	A	X	X	X	X	X	X	X	X		X	D	X	X
METHYL DICHLORIDE	D	A	D	D	X	X	X	X	E	X	X	X	X	X	A		X	X	X	X
METHYL ETHYL KEYTONE	B	D	D	B	D	X	A	E	B	A	A	A	A	D	D		A	D	E	E
METHYL ETHYL KEYTONE PEROXIDE	D	X	X	X	X	X	X	X	X	X	X	X	X	D	D		X	B	X	X
METHYL ISOBUTYL CARBITOL	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
METHYL ISOBUTYL KETONE	C	D	D	A	C	X	A	E	A	A	B	B	X	D	D		X	D	E	E
METHYL ISOPROPYL KETONE	D	D	B	X	C	X	A	E	X	X	A	A	X	D	D		X	C	X	D
METHYL METHACRYLATE	D	A	D	B	X	X	A	X	E	X	B	B	A	D	D		X	C	D	E
METHYL SULFATE	X	C	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
METHYL SULFURIC ACID	X	A	X	B	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
METHYL SULFONIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
METHYLENE BROMIDE	X	B	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
METHYLENE CHLORIDE	D	E	B	E	D	E	A	E	C	B	B	A	A	C	D		A	E	X	X
METHYLENE IODINE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
METHYL METHYLBUTYL CARBINOL	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
METHYLAMINE	B	D	C	A	X	X	A	X	B	X	A	A	X	X	D		X	X	X	X
MILK	X	A	A	B	B	A	A	A	B	A	A	A	A	A	A		X	A	A	A
MINERAL SPIRITS	D	A	X	B	X	A	A	C	B	B	A	A	X	C	A		X	D	A	E
MINERIAL OIL	X	A	A	C	C	X	A	X	X	X	X	A	X	D	A		X	B	X	E
MOLASSES	B	A	B	B	B	X	A	X	B	A	A	A	A	X	A		X	A	A	A
MONOCHLOROACETIC ACID	C	D	B	C	C	X	A	E	X	B	B	A	A	A	C		X	C	X	D
MONOETHAOAMINE	B	D	C	B	B	X	A	X	B	X	A	A	X	D	D		X	B	E	X
MORPHOLINE	D	X	B	B	X	X	A	E	C	B	X	A	A	D	D		X	X	X	X
MOTOR OIL	D	B	B	A	X	X	A	A	B	X	B	A	A	X	X		X	X	A	E
MURATIC ACID - SEE HYDROCLHORIC																				
MUSTARD	A	B	A	A	B	X	A	A	A	A	A	A	X	X	D		X	A	X	X
NAPHTHA (flammable)	D	A	A	B	D	A	B	B	B	B	A	A	A	D	A		X	D	A	E
NAPHTHALENE	D	E	A	C	C	E	A	X	B	A	A	A	A	E	D		X	D	A	E
N - HAPTANE	X	A	A	A	E	X	A	X	X	X	X	X	X	X	A		X	E	X	X
NATURAL GAS	D	A	X	A	C	X	A	X	A	X	A	A	X	X	A		X	A	A	A
NICKEL ACETATE	X	A	X	A	X	X	A	X	X	X	X	X	X	X	X		X	E	X	X
NICKEL CHLORIDE	B	A	A	A	A	A	A	B	A	B	E	B	A	B	B		X	A	A	A
NICKEL NITRATE	B	A	A	A	A	X	A	E	B	C	B	B	A	D	A		X	X	A	A
NICKEL SALT	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	A	X	A
NICKEL SULFATE	B	A	A	A	A	A	A	A	A	B	B	B	A	B	B		X	A	A	A
NICOTINE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
NICOTINE ACID	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
NITRATING ACID, < 1% ACID	X	D	A	C	X	X	A	X	C	A	C	A	X	X	X		X	X	X	X
NITRATING ACID, < 15%	X	D	A	C	X	X	A	X	C	A	C	C	X	X	X		X	X	X	X
NITRATING ACID, > 15%	B	D	A	C	X	X	A	X	C	A	C	C	X	X	X		X	X	X	X
NITRATING ACID, < 15%	X	D	A	C	X	X	A	X	C	A	C	D	X	X	X		X	X	X	X
NITRIC ACID, 10%	B	A	A	A	A	C	A	A	A	B	A	C	A	A	A		A	C	A	A
NITRIC ACID, 20%	B	A	A	A	B	E	A	C	B	B	A	B	A	A	A		A	D	D	A
NITRIC ACID, 50%	D	A	A	C	C	E	A	B	B	B	B	C	A	D	A		A	D	E	E
NITRIC ACID, ANHYDROUS	X	E	B	E	E	E	A	X	X	X	B	B	A	E	B		A	D	X	E
NITRIC ACID, CONCENTRATE	D	D	A	X	D	X	A	D	E	C	B	A	X	X	A		A	D	X	X
NITRO BENZENE	C	E	B	C	C	E	A	E	C	E	B	B	A	E	A		A	D	E	E
NITROGEN	X	E	A	X	B	X	A	X	X	X	X	A	X	X	X		X	E	X	X
NITROGEN FERTILIZER	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X		X	A	X	X
NITROGEN SOLUTION	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X		X	X	X	X
NITROGLYCERINE	X	D	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
NITROGLYCOL	X	D	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X

**CHEMICAL RESISTANCE GUIDE  
INDUSTRIAL CHEMICALS**

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
NITROMETHANE	C	B	A	B	A	X	A	E	C	A	A	A	X	X	D		X	D	E	E
NITROUS ACID	A	A	B	A	A	X	A	X	A	E	B	B	A	A	B		X	X	A	A
NITROUS OXIDE	A	A	D	D	C	X	A	X	E	B	B	X	X	X		X	X	A	A	
OILS AND FATS	X	A	A	A	X	X	A	X	X	X	A	A	A	X	A		X	X	A	E
OLEIC ACID	B	A	A	C	E	E	A	X	C	B	A	B	A	D	D		X	D	A	D
OLEUM, 25%	D	E	E	E	E	E	A	X	E	A	C	X	A	E	A		X	D	A	A
OLEUM, 100%	D	E	E	X	E	E	A	X	E	E	E	X	X	E	A		X	D	X	X
ORTHO DICHLORBENZENE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	E
OXALIC ACID	A	A	A	A	B	D	A	X	B	B	B	C	A	A	A		X	B	E	B
OXYGEN GAS	X	A	A	D	A	X	A	X	X	X	X	A	X	D	A		X	A	X	A
OZONE	A	B	A	B	C	X	A	B	B	X	B	A	X	A	A		X	A	A	A
PALMITIC ACID	C	B	A	B	A	X	A	X	C	B	C	A	A	D	A		X	D	A	D
PARAFFIN	D	B	A	A	X	X	A	B	B	B	A	A	A	X	B		X	X	X	E
PENTANE	D	A	A	D	D	X	A	A	E	A	C	A	A	B	A		X	D	X	X
PERACETIC ACID	X	C	A	X	X	X	A	X	X	X	X	A	X	X	A		X	X	X	X
PERCHLORIC ACID 10%	X	A	X	A	A	X	A	X	C	B	C	C	A	D	A		X	D	X	X
PERCHLORIC ACID 70%	X	C	A	C	C	X	A	X	X	X	X	A	A	X	A		X	D	A	A
PERCHLOROETHYLENE	D	C	A	D	D	X	A	E	E	B	B	A	A	D	A		X	D	E	D
PERPHOSPHATE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
PETROLATUM	A	B	A	D	B	X	C	X	E	A	A	A	X	X	A		X	D	X	X
PETROLATUM ETHER	X	X	X	C	C	X	A	X	X	X	X	A	X	X	X		X	E	X	X
PETROLEUM	D	A	A	B	X	X	A	X	C	X	B	A	X	D	A		X	D	X	X
PETROLEUM OILS	X	A	X	A	X	X	A	X	X	X	X	X	X	C	X		X	E	X	X
PETROLEUM (SOUR)	X	A	X	A	X	X	X	X	X	X	X	X	X	X	A		X	X	X	X
PETROLEUM (REFINED)	X	A	X	A	X	X	X	X	X	X	X	X	X	X	A		X	X	X	X
PHENOL 10%	B	C	A	B	C	C	A	C	C	B	B	B	A	E	A		A	D	A	A
PHENOL (CARBOLIC ACID)	B	C	A	B	C	A	A	E	B	A	B	B	A	E	A		A	D	X	X
PHENYHYLDRAZINE	X	D	X	X	X	X	X	X	X	X	X	X	X	X	A		X	X	X	X
PHENYHYLDRAZINE HYDROCHLORIC	X	C	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
PHOSGENE LIQUID	X	D	X	D	X	X	A	X	X	X	X	A	A	X	D		X	X	X	X
PHOSGENE GAS	X	B	X	X	D	X	A	X	X	X	X	A	A	X	D		X	X	X	X
PHOSPHORIC ACID <40%	B	B	B	X	X	X	A	A	B	A	E	X	X	X	X		D	X	X	X
PHOSPHORIC ACID, 0-50%	X	A	A	A	A	B	A	A	B	A	E	B	A	A	B		D	C	A	A
PHOSPHORIC ACID, 50-100%	X	B	A	B	B	D	A	X	X	A	X	B	A	A	B		D	D	A	A
PHOSPHORIC ACID CRUDE	B	A	X	X	A	X	A	A	C	A	E	C	X	A	A		D	C	X	X
PHOSPHORUS YELLOW	X	A	X	C	X	X	A	X	X	X	X	A	X	X	X		X	X	X	X
PHOSPHORUS RED	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
PHOSPHORUS PENTOXIDE	X	A	X	B	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
PHOSPHORUS OXYCHLORIDE	X	X	X	X	X	X	A	X	X	X	X	A	B	X	X		X	X	X	X
PHOSPHORUS TRICHLORIDE	B	D	A	C	X	C	A	C	X	B	B	A	A	D	A		X	X	B	B
PHOTOGRAPHIC DEVELOPER	B	A	A	X	A	X	A	B	A	B	A	A	X	X	A		X	A	X	X
PHOTOGRAPHIC SOLUTIONS	B	A	A	A	A	X	A	B	B	C	E	A	X	X	A		X	A	X	B
PHTHALIC ACID, 9%	B	X	X	X	X	X	X	X	A	C	C	X	X	X	X		X	X	X	A
PHTHALIC ANHYDRIDE	A	A	A	X	B	X	A	B	E	A	A	B	X	X	X		X	X	X	A
PICRIC ACID, 1%	B	X	X	X	X	X	X	E	C	B	B	X	X	X	X		X	X	X	E
PICKLE BRINE	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X		X	X	X	X
PINE OIL	X	C	X	X	C	X	X	X	X	X	X	X	X	D	X		X	D	X	X
PLATING SOLUTIONS, GENERAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
PLATING SOLUTIONS - ANTIMONY	X	X	X	A	X	X	A	X	A	A	A	A	X	A	A		X	B	X	X
PLATING SOLUTIONS - ARSENIC	X	X	X	A	X	X	A	X	A	A	A	A	X	A	A		X	C	X	X
PLATING SOLUTIONS - BRASS	X	A	A	A	A	X	A	X	A	A	A	A	X	X	A		X	E	X	X
PLATING SOLUTIONS - BRONZE	A	X	X	A	X	X	A	X	X	X	X	A	X	X	A		X	E	X	X
PLATING SOLUTIONS - CADMIUM	X	A	A	A	A	X	A	X	X	X	X	A	X	X	A		X	E	X	X
PLATING SOLUTIONS - CHROME	X	A	A	A	A	X	A	X	X	X	X	C	X	X	A		X	E	X	X
PLATING SOLUTIONS - COPPER	X	A	A	A	A	X	A	X	X	X	X	A	X	X	A		X	E	X	X
PLATING SOLUTIONS - CYANIDE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
PLATING SOLUTIONS - GOLD	X	A	A	A	A	X	A	X	X	X	X	A	X	X	A		X	X	X	X

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INDUSTRIAL CHEMICALS**

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
PLATING SOLUTIONS - INDIUM	X	X	X	A	A	X	A	X	X	X	X	A	X	X	A		X	X	X	X
PLATING SOLUTIONS - IRON	X	A	X	A	X	X	A	X	X	X	X	A	X	X	A		X	X	X	X
PLATING SOLUTIONS - LEAD	X	A	A	A	A	X	A	X	X	X	C	X	X	A		X	X	X	X	
PLATING SOLUTIONS - NICKEL	X	A	A	A	A	X	A	X	X	X	B	X	X	A		X	X	X	X	
PLATING SOLUTIONS - RHODIUM	A	A	X	A	A	X	A	X	X	X	X	X	X	A		X	X	X	X	
PLATING SOLUTIONS - SILVER	A	A	A	A	A	X	A	X	X	X	A	X	X	A		X	X	X	X	
PLATING SOLUTIONS - TIN	X	A	A	A	A	X	A	X	X	X	B	X	X	A		X	X	X	X	
PLATING SOLUTIONS - ZINC	X	A	A	A	A	X	A	X	X	X	C	X	X	A		X	X	X	X	
POLYALUMINUM HYDROXYCHLOROSULFATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	
POLYVINYL ACETATE EMULSION	X	X	X	X	X	X	A	X	X	X	X	X	X	X		X	E	X	X	
POTASH	X	A	X	X	B	X	A	X	A	B	B	A	X	X	A		X	C	X	X
POTASSIUM ACETATE	X	B	X	X	B	X	A	X	X	X	B	X	A	X		X	E	X	X	
POTASSIUM ALUM	X	A	A	X	A	X	A	X	X	X	X	X	X	X		X	A	X	X	
POTASSIUM ALUMINUM SULFATE	X	A	A	A	A	X	A	X	X	X	A	X	A	X		X	A	X	X	
POTASSIUM AMYL XANTHATE	X	B	X	X	X	X	A	X	X	X	X	X	X	X		X	X	X	X	
POTASSIUM BICARBONATE	A	A	A	A	B	A	A	X	A	B	B	B	A	B	B		X	B	X	A
POTASSIUM BICROMATE	X	A	A	C	A	X	A	X	X	X	B	X	X	X		X	A	X	X	
POTASSIUM BISULFATE	X	A	X	X	B	X	A	X	X	X	X	X	X	X	A		X	X	X	X
POTASSIUM BORATE	X	A	X	A	A	X	A	X	X	X	X	X	X	X		X	X	X	X	
POTASSIUM BROMATE	X	A	X	A	A	X	X	X	X	X	X	X	X	A		X	X	X	X	
POTASSIUM BROMIDE	B	A	A	A	B	A	A	B	A	B	B	B	A	B	B		X	B	X	A
POTASSIUM CARBONATE	B	A	A	A	B	A	A	X	X	X	B	A	B	B		X	C	A	A	
POTASSIUM CHLORATE	B	A	A	A	B	A	A	B	A	B	C	A	A	B	B		X	C	X	A
POTASSIUM CHLORIDE	B	A	A	A	A	A	A	A	A	A	C	D	A	B	B		X	A	A	A
POTASSIUM CHROMATE	B	A	B	A	B	X	A	X	A	A	C	B	B	A	A		X	X	X	X
POTASSIUM CYANIDE	B	A	A	A	A	A	A	X	A	B	C	A	A	B	B		X	A	A	A
POTASSIUM DICHROMATE	B	A	A	A	B	A	A	B	A	B	B	A	A	B	B		X	A	A	A
POTASSIUM ETHYL XANTHATE	X	B	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
POTASSIUM FERRICYANIDE	A	B	B	A	A	X	B	X	B	C	C	C	B	B	A		X	X	X	X
POTASSIUM FERROCYANIDE	A	A	A	A	A	A	A	X	A	B	B	B	B	A	A		X	X	X	X
POTASSIUM FLUORIDE	X	A	A	A	A	X	A	X	X	X	B	A	A	A		X	X	X	X	
POTASSIUM HYDROXIDE	B	A	A	A	A	E	A	E	A	C	B	B	E	B	B		X	C	A	A
POTASSIUM HYPOCHLORITE	B	B	B	X	B	X	A	X	X	C	D	B	D	B	X		X	X	A	A
POTASSIUM IODIDE	A	A	A	A	A	X	A	X	B	B	B	A	B	A	A		X	X	A	A
POTASSIUM NITRATE	A	A	A	A	A	A	A	B	A	C	B	B	A	B	B		X	A	A	A
POTASSIUM OXIDE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
POTASSIUM OXALATE	X	X	X	X	X	X	A	X	X	B	B	B	A	X	X		X	X	X	X
POTASSIUM PERBORATE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
POTASSIUM PERCHLORATE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
POTASSIUM PERMANGANATE	A	A	A	A	A	A	A	B	B	B	B	B	A	B	B		X	X	A	A
POTASSIUM PERSULFATE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
POTASSIUM SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
POTASSIUM SULFATE	B	A	A	A	A	A	A	B	A	C	C	B	A	B	B		X	A	A	A
POTASSIUM SULFIDE	A	A	A	A	A	X	A	X	A	X	B	B	A	B	A		X	A	A	A
PROPANE	D	A	A	C	A	X	A	D	A	A	A	A	A	B	A		X	E	X	A
PROPANOL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	D
PROPYLENE CHLOROHYDRIN	X	X	C	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
PROPYLENE DICHLORIDE	X	D	X	C	C	X	A	X	X	X	X	A	A	X	X		X	E	X	X
PROPYLENE GLYCOL	A	A	X	A	A	X	A	C	B	B	B	A	A	A	A		X	A	X	A
PROPYLENE OXIDE	X	D	C	X	B	X	A	X	X	X	A	A	A	C	D		X	E	X	A
PYRIDINE	B	D	D	A	C	X	A	E	B	B	A	A	A	D	D		X	D	X	D
PYROGALLIC ACID	B	A	A	A	B	X	A	X	A	B	C	B	A	D	D		X	D	X	X
QUATERNARY AMMONIUM SALTS	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
RAYON ACID WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
RAYON COLGULATING	X	A	X	A	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
RAYON SPIN BATH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
RESORCINAL	C	C	X	A	A	X	A	C	B	X	X	X	X	X	A		X	C	X	X

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ROSINS	X	C	X	A	A	X	A	X	B	X	B	A	X	B	A		X	A	X	X
RUMS	A	A	X	A	X	X	A	X	A	X	A	A	X	A	A		X	A	X	X
RUST INHIBITORS	X	X	X	A	X	X	X	X	A	X	A	A	X	X	A		X	X	X	X
SALAD DRESSINGS	X	X	X	A	X	X	X	X	A	X	A	A	X	X	A		X	X	X	X
SALENIC ACID	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
SALICYLALDEHYDE	X	C	A	X	B	X	A	X	X	X	X	X	X	X	X		X	X	X	X
SALICYLIC ACID	X	B	A	A	A	X	A	B	B	B	C	B	X	A	A		X	X	A	A
SALINE SOLUTIONS	X	A	X	X	X	X	X	X	X	X	X	X	X	X	A		X	X	X	X
SALT BRINE	A	A	A	A	X	X	A	A	A	B	C	A	X	A	A		X	A	X	X
SEA WATER	B	A	A	A	B	A	A	B	A	A	C	C	X	A	A		X	A	X	X
SELENIC ACID	X	X	X	B	B	X	X	X	X	X	X	A	X	X	X		X	X	X	X
SEWAGE	X	X	A	X	X	X	A	X	X	X	X	B	X	A	X		X	B	X	X
SHELLAC (BLEACHED)	B	E	X	A	A	X	A	X	A	X	A	A	X	A	A		X	X	X	X
SHELLAC (ORANGE)	A	E	X	A	A	X	A	X	A	X	A	A	X	X	A		X	X	X	X
SHORTNING	X	C	X	A	A	X	X	X	X	X	X	X	X	X	X		X	X	X	X
SILICIC ACID	X	A	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
SILICONE	A	A	A	A	A	X	A	B	A	X	A	A	X	A	A		X	C	A	X
SILICONE OIL	X	A	X	X	A	X	A	X	X	X	X	A	X	X	A		X	C	X	D
SILVER BROMIDE	X	X	X	X	X	X	A	X	X	A	E	D	X	X	X		X	X	X	X
SILVER CYANIDE	X	A	A	X	A	X	A	X	X	X	X	A	X	A	X		X	E	X	X
SILVER NITRATE	A	A	A	A	B	A	A	B	B	A	B	B	A	A	A		A	A	A	A
SILVER SULFATE	X	X	X	X	X	X	A	X	X	X	X	X	X	X	A		X	X	X	X
SKYDROL 500A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	E
SOAPS	A	A	A	A	C	A	A	B	A	A	A	A	A	B	B		A	A	A	B
SODA ASH (SODIUM CARBONATE)	B	A	A	A	A	A	A	B	A	A	A	B	A	B	B		X	A	A	A
SODIUM ACETATE	A	A	A	A	A	A	A	B	A	A	B	B	A	A	E		X	D	A	A
SODIUM ALUM (Sodium aluminium sulfate)	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	A	X	X
SODIUM ALUMINATE	A	A	A	C	A	X	A	X	X	B	A	A	A	A	A		X	X	X	X
SODIUM BENZOATE	A	A	A	A	A	X	A	B	B	B	X	B	A	X	X		X	X	X	A
SODIUM BICHROMATE (SODIUM DICHROMATE)	X	A	A	X	A	X	A	X	X	X	X	B	X	X	X		X	X	X	X
SODIUM BICARBONATE	B	A	A	A	A	A	A	B	A	C	A	B	A	B	B		X	A	A	A
SODIUM BISULFATE	B	A	A	A	A	A	A	B	A	C	E	A	A	B	B		X	A	A	A
SODIUM BISULFITE	B	A	A	A	A	A	A	B	A	B	C	B	A	B	B		X	A	X	A
SODIUM BORATE	A	A	A	A	A	X	A	B	B	A	C	A	A	A	A		X	A	X	X
SODIUM BROMATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
SODIUM BROMIDE	A	B	A	A	A	X	A	X	X	X	C	C	A	B	A		X	X	X	X
SODIUM CARBONATE	B	A	A	A	A	A	A	B	A	A	A	B	A	B	B		X	A	A	A
SODIUM CHLORATE	A	A	A	A	A	A	A	B	A	C	A	B	A	B	B		X	C	A	A
SODIUM CHLORIDE	A	A	A	A	A	A	A	B	A	A	B	B	A	B	B		X	A	A	A
SODIUM CHLORITE	X	D	A	A	A	X	A	X	X	X	X	C	A	A	A		X	X	X	X
SODIUM CHROMATE	X	A	A	A	A	X	A	B	X	A	C	B	A	A	A		X	A	X	X
SODIUM CYANIDE	B	A	A	A	B	A	A	X	A	A	B	A	A	B	B		X	A	A	A
SODIUM DICHROMATE	X	A	A	A	A	X	A	X	X	X	X	A	A	A	A		X	B	X	A
SODIUM FERROCYANIDE	A	A	A	A	A	A	A	X	A	A	B	B	A	B	A		X	A	X	X
SODIUM FLUORIDE	A	A	A	A	C	A	A	X	A	A	E	D	A	B	A		X	X	A	A
SODIUM HEXAMETAPHOSPHATE	X	A	A	A	A	X	A	X	X	X	X	A	A	A	A		X	A	X	X
SODIUM HYDROSULFITE	B	C	A	X	A	A	A	X	X	A	X	A	A	B	A		X	C	X	X
SODIUM HYDROXIDE, 20%	B	A	A	A	A	B	A	B	A	B	B	A	B	B	E		X	A	A	A
SODIUM HYDROXIDE, 50%	C	A	A	A	B	B	A	E	A	C	B	A	B	B	E		X	A	A	A
SODIUM HYDROXIDE, 80%	C	A	D	A	C	X	A	E	A	B	C	B	A	A	B		X	A	X	X
SODIUM HYPOCHLORITE	C	A	A	C	A	A	A	X	B	B	E	D	A	B	A		X	B	A	A
SODIUM HYPOSULFATE	X	X	X	X	X	X	A	X	X	X	A	A	X	X	X		X	X	X	X
SODIUM IODINE	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X		X	E	X	X
SODIUM METAPHOSPHATE	A	A	A	A	A	A	A	X	B	X	A	A	A	B	A		X	A	X	X
SODIUM METASILICATE	B	A	A	A	A	X	A	X	A	A	A	A	A	B	A		X	X	X	X
SODIUM NITRATE	A	A	A	A	A	A	A	X	A	B	C	A	A	B	B		X	D	A	A
SODIUM NITRITE (SALT PETER)	A	A	A	A	A	A	A	X	A	B	C	A	A	B	B		X	D	A	A

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INDUSTRIAL CHEMICALS**

CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
SODIUM PALMITRATE	X	A	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
SODIUM PERBORATE	A	A	X	A	B	X	A	X	A	B	B	B	X	B	A		X	B	A	A
SODIUM PERCHLORATE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
SODIUM PERMANGANATE	A	A	A	C	A	X	A	X	C	A	C	A	A	X	C		X	X	X	X
SODIUM PEROXIDE	A	B	A	B	B	X	A	B	B	B	A	A	A	B	A		X	D	A	A
SODIUM PHOSPHATE	X	A	A	A	A	A	A	X	X	X	X	B	A	B	A		X	D	A	A
SODIUM PHOSPHATE ALKALINE	X	A	X	A	A	X	A	X	X	X	X	X	X	X	A		X	X	X	X
SODIUM PHOSPHATE ACID	X	A	X	A	A	X	A	X	X	X	X	X	X	X	A		X	X	X	X
SODIUM POLYPHOSPHATE	A	X	X	X	X	X	X	X	A	A	B	B	X	X	A		X	X	X	X
SODIUM SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
SODIUM SILICATE	A	A	A	A	A	A	A	X	A	B	A	B	A	A	A		X	A	X	A
SODIUM SULFATE	A	A	A	A	A	A	A	B	A	B	B	A	A	B	B		X	A	A	A
SODIUM SULFIDE	B	A	A	A	A	A	A	E	A	C	B	B	A	B	B		X	A	A	A
SODIUM SULFITE	A	A	A	A	A	A	A	X	B	B	B	A	A	A	A		X	A	A	A
SODIUM TETRABORATE	A	A	A	A	A	X	A	X	X	X	B	A	A	A	A		X	A	X	X
SODIUM THIOCYANATE	X	A	X	X	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
SODIUM THIOSULFATE	B	A	A	A	A	A	A	E	B	B	B	B	A	A	A		X	A	X	X
SORGHUM	X	X	X	X	X	X	X	X	X	X	A	A	X	X	A		X	X	X	X
SOUR CRUDE OIL	X	A	X	A	B	X	X	X	X	X	X	X	X	X	D		X	X	X	X
SOY JUICE	X	X	X	X	X	X	X	X	X	X	X	A	X	X	A		X	X	X	X
SOY SAUCE	X	X	X	X	X	X	X	X	X	X	A	A	X	X	A		X	D	X	X
STANNIC CHLORIDE	A	A	A	A	A	A	A	B	A	B	E	E	A	D	B		X	B	A	A
STANNIC FLUOBORATE	X	X	X	X	X	X	X	X	X	X	X	A	X	X	A		X	X	X	X
STANNOUS CHLORIDE	C	A	A	A	A	A	A	X	A	B	D	A	A	A	A		X	B	X	A
STARCH	A	A	X	A	B	X	A	X	B	X	A	A	A	A	A		X	X	X	X
STEAM 300 DEG F	X	A	C	X	A	X	A	X	X	X	X	A	X	X	X		X	A	X	X
STEARIC ACID	B	A	A	C	E	E	A	B	B	B	B	A	A	D	A		A	B	A	B
STODDARDS SOLVENT	D	E	A	X	X	A	A	B	C	A	A	A	X	X	A		X	D	X	B
STRONTIUM CARBONATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
STYRENE	D	D	X	X	X	X	A	E	X	E	A	A	A	D	B		X	D	D	X
STYRENE MONOMER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	E
SUCCINIC ACID	X	A	X	A	X	X	A	X	X	X	X	X	X	X	X		X	X	X	X
SUGAR (LIQUIDS)	A	A	X	A	A	X	A	X	A	A	A	A	X	A	A		X	A	X	X
SUGAR ION EXCHANGE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
SULFAMIC ACID	X	A	X	A	X	X	A	X	X	X	X	C	A	X	X		X	X	X	X
SULFATE (LIQUORS)	A	B	A	A	A	X	A	X	A	B	B	B	X	A	A		X	A	X	X
SULFATED DETERGENTS	X	A	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
SULFINOL	X	X	A	A	A	X	X	X	X	X	X	A	X	X	X		X	X	X	X
SULFUR	X	A	A	D	B	X	A	X	X	X	X	A	A	D	D		X	C	X	X
SULFUR CHLORIDE	D	C	A	C	A	X	A	X	D	A	E	C	X	C	A		X	C	A	E
SULFUR DIOXIDE	B	A	A	A	C	C	A	X	B	C	E	A	A	X	A		X	B	A	A
SULFUR DIOXIDE (DRY)	B	A	A	A	D	X	A	B	B	B	E	B	X	X	A		X	B	A	A
SULFUR HEXAFLUORIDE	B	B	X	X	B	X	B	X	X	X	X	B	X	B	X		X	B	X	X
SULFURYSR	X	A	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
SULFUR TRIOXIDE	D	A	C	C	C	X	A	X	C	X	A	C	A	D	A		X	B	B	B
SULFUR TRIOXIDE (DRY)	D	A	C	D	C	X	A	X	D	B	E	A	X	X	A		X	B	X	X
SULFURIC ACID, 0-10%	A	A	A	A	A	E	A	B	B	A	E	E	A	D	A		A	C	A	A
SULFURIC ACID, 10 -75%	C	A	A	A	C	E	A	C	B	A	E	E	A	D	A		A	D	A	E
SULFURIC ACID, 75-95%	C	C	A	C	C	E	A	E	D	A	C	E	A	D	A		A	D	A	E
SULFURIC ACID, 95-100%	X	D	A	C	C	E	A	E	D	B	C	B	A	E	A		A	D	A	E
SULFUROUS ACID	B	A	A	A	B	A	A	X	A	B	C	B	A	A	A		A	D	A	A
SYRUP	X	X	X	A	X	X	X	X	X	X	X	A	X	X	A		X	X	X	X
TALL OIL	X	A	A	A	X	X	A	X	X	X	X	B	X	X	X		X	A	X	X
TALLOW	A	B	X	A	C	X	A	X	B	X	A	A	X	C	A		X	C	X	X
TANNIC ACID	X	A	A	A	B	X	A	C	A	C	C	B	A	B	B		X	B	E	B
TANNING LIQUORS	A	A	A	A	A	X	A	X	B	B	B	A	A	X	A		X	B	X	A
TAR	X	X	X	X	X	X	A	X	X	X	X	A	X	X	A		X	X	X	X

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CHEMICAL	PULSAtron and All															BLACKLINE		Mec-O-Matic 2400T	Chem-Tech XP & XPV	
	EPDM	PVC	PVDF	GFPPL	PE	SAN	TFE	Poly Carbonate	PP	HCO	304 SS	316 SS	ALA (CER)	CSPE (HYP)	Viton	Incoloy 825	PYREX BOROSILLIATE GLASS	Silicon	Fluran	Norprene
TARTARIC ACID	B	A	A	A	A	E	A	X	A	B	D	B	A	B	B		X	A	A	A
TETRACHLOROETHANE	D	C	A	C	C	X	A	X	C	A	B	A	A	D	A		X	D	X	X
TETRACHLOROETHYLENE	D	E	A	C	E	X	A	E	E	X	X	B	A	E	A		X	D	X	X
TETRAETHYL LEAD	X	A	A	X	C	X	A	X	X	X	X	C	X	X	A		X	X	X	X
TETRAHYDROFURAN	D	D	B	C	D	X	A	E	D	A	A	A	A	D	D		X	D	E	E
TETRA SODIUM PHOSPHATE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
TETRALIN	X	D	X	D	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
THIONYLCHLORIDE	X	D	D	D	D	X	A	X	X	X	X	B	A	X	X		X	E	X	A
THREAD CUTTING OIL	X	A	X	A	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
TIN SALTS	B	A	A	A	A	X	A	X	X	C	X	D	X	A	A		X	B	A	A
TIRPINEOL	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	E	X	X
TITANIUM SALTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
TITANIUM TETRACHLORIDE	X	D	X	X	C	X	A	X	X	X	X	A	A	A	A		X	X	X	X
TOLUENE (**FLAMABLE**)	D	D	A	C	D	D	A	E	D	A	A	A	A	D	C		A	D	D	E
TOLUENE KEROSENE	X	D	X	D	X	X	X	X	X	X	X	X	X	X	X		A	X	X	X
TOLUENE TOLUOL	X	D	B	C	X	X	X	X	X	X	X	A	X	D	A		X	E	X	X
TOMATO JUICE	A	A	A	A	D	X	A	B	A	X	A	A	X	A	A		X	A	X	X
TOXAPHENE XYLENE	X	D	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
TRANSFORMER OIL	X	A	X	B	C	X	A	X	B	X	A	X	X	X	A		X	B	X	X
TRIBUTYL CITRATE	X	A	X	X	B	X	A	X	X	X	X	X	X	X	X		X	X	X	X
TRIBUTYL PHOSPHATE	X	D	B	A	C	X	A	X	X	X	X	A	A	D	D		X	D	X	X
TRICHLOROACETIC ACID	B	B	B	A	B	X	A	E	A	B	E	C	A	X	C		X	D	E	B
TRICHLOROETHANE	D	C	A	C	C	X	A	E	C	A	B	B	A	D	A		A	D	E	D
TRICHLOROETHYLENE	D	D	B	C	E	D	A	X	D	A	B	B	A	E	A		A	D	E	D
TRICHLOROPROPANE	X	X	X	X	X	C	A	X	X	A	A	A	X	X	A		X	X	E	D
TRICRESYL PHOSPHATE	A	E	A	C	C	X	A	X	B	A	B	A	A	E	A		X	C	E	A
TRIETHANOLAMINE	X	B	C	A	C	X	A	X	X	X	X	A	A	C	C		X	E	X	D
TRIETHYLAMINE	A	B	A	D	X	A	A	X	D	X	A	A	B	X	D		X	E	X	X
TRIMETHYL PHOSPHATE	X	X	X	X	X	X	A	X	X	X	X	X	A	C	C		X	X	X	X
TRIMETHYL PROPANE	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
TRISODIUM PHOSPHATE	A	A	A	A	A	X	A	X	A	A	B	B	A	A	D		X	C	A	A
TRITHANOLAMINE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
TUNG OIL	X	X	A	A	X	X	A	X	X	X	X	A	A	A	A		X	E	X	X
TUNGSTIC ACID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
TUNGSTIC OIL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
TURPENTINE	D	A	A	A	D	A	A	E	E	B	A	B	A	C	A		A	A	A	E
UNICHROME SOLUTION ALKALI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
UREA	A	A	A	A	A	X	A	E	A	B	B	B	A	A	E		X	B	A	A
UREA AMMONIA ACID	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X		X	X	X	X
URIC ACID	X	A	X	X	A	X	A	X	X	B	B	B	D	A	X		X	X	D	A
URINE	B	A	A	A	B	X	A	X	A	X	A	A	X	X	A		X	X	X	X
VANILLA EXTRACT	X	X	X	A	A	X	A	X	X	X	X	X	X	X	X		X	X	X	X
VARNISH	D	D	X	A	A	X	A	X	A	A	A	A	X	D	A		X	D	X	X
VASELINE	X	A	X	A	X	X	A	X	X	X	X	X	X	X	X		X	D	X	X
VEGETABLE JUICE	X	A	X	X	A	X	A	X	X	X	A	A	A	X	A		X	B	X	X
VEGETABLE OIL	A	A	X	X	A	X	A	X	X	X	X	A	X	X	A		X	A	X	X
VINEGAR	A	A	A	A	A	A	A	B	A	A	A	A	A	B	B		X	A	E	A
VINYL ACETATE	C	D	A	B	X	X	A	X	C	X	B	A	B	A	A		X	D	E	B
VINYL CHLORIDE	C	D	B	X	X	X	A	X	X	B	C	A	A	X	A		X	X	X	X
WATER, BRINE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	A
WATER, DEIONIZED	B	A	A	A	A	A	A	X	B	B	E	A	A	A	A		X	A	A	A
WATER, ACID, MINE	A	B	A	A	A	A	A	C	A	A	B	B	B	X	A		X	B	X	X
WATER, DISTILLED	A	A	A	A	A	A	A	B	A	A	A	A	A	A	A		X	C	A	A
WATER DEMINERALIZED	X	A	A	A	X	X	A	X	X	X	X	X	X	X	A		X	X	X	X
WATER, FRESH	A	B	A	A	D	A	A	B	A	A	A	A	A	X	A		A	B	X	X
WATER, SALT	A	B	A	A	A	A	A	B	A	A	B	B	B	X	A		X	B	X	X
WATER SEWAGE	X	A	X	A	X	X	X	X	X	X	X	X	X	X	A		X	X	X	X

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**CONSULT FACTORY FOR FLAMMABLES																				
WATER STEAM CONDENSATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
WEED KILLERS	X	X	X	X	X	X	X	X	X	X	A	A	X	X	X		X	A	X	X
WHEY	X	X	X	X	X	X	A	X	X	X	A	A	X	X	A		X	X	X	X
WHISKEYS AND WINES	A	A	A	A	A	A	A	B	A	B	A	A	A	A	A		X	A	X	X
WHITE LIQUOR (ACID)	X	A	A	X	X	E	A	X	B	A	A	A	A	X	A		X	A	X	A
WHITE WATER	X	A	X	A	X	X	X	X	A	X	A	A	X	X	A		X	X	X	X
X-RAY DEVELOPER BATH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
XYLENE (**FLAMABLE**)	D	D	A	B	D	X	A	E	B	A	B	B	A	D	D		A	D	D	E
ZEOLITE WATER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ZINC ACETATE	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X		X	E	X	X
ZINC CHLORIDE	A	A	A	A	A	A	A	B	A	B	B	B	A	B	B		X	B	A	A
ZINC HYDROSULFITE	A	X	X	X	X	X	A	X	X	X	A	A	X	X	X		X	X	X	X
ZINC NITRATE	X	A	A	A	X	X	X	X	X	X	X	A	X	X	A		X	X	X	X
ZINC PHOSPHATE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
ZINC SALTS	X	A	X	X	A	X	A	X	X	X	X	X	X	A	X		X	A	X	A
ZINC SULFATE	A	A	A	A	A	A	A	B	A	B	C	A	A	A	A		X	A	A	A