

VERDERAIR

CHEMICAL RESISTANCE GUIDE

This information is compiled from numerous sources and believed to be reliable to this date. **It is intended as a guideline to be used with all available information to determine suitability of elastomers and wetted portions of VerderAir pumps for various applications.** We suggest thorough research which should include known applications when determining pump construction. This chart is to be used at your discretion and risk. **The accuracy of these ratings cannot be guaranteed.**

SELECTING THE BEST DIAPHRAGM FOR A VERDERAIR-OPERATED DOUBLE-DIAPHRAGM PUMP

In the absence of previous experience (which is always the best guide) diaphragm material must be selected from available resistance charts. The VerderAir Chemical Resistance Guide is compiled from numerous reliable sources and cross-checked, however, it is only intended as an additional source of information.

Diaphragm life not only depends on a diaphragm's chemical compatibility with the process fluid but also on the diaphragm's ability to flex. Diaphragm life will vary depending on the abrasiveness of your process fluid, temperature, size of diaphragm, pumping media, and lift conditions. Consult your authorized VerderAir distributor regarding which diaphragm material will work best for your application requirements.

As a general rule:

1. Neoprene or Santoprene diaphragms should generally be used unless the chart shows them to be unsatisfactory. Even though Buna-N®, Nordel® and Viton® may show "A" ratings, if Neoprene or Santoprene have at least a "B" rating, it will probably be the most economical choice on a "cost of diaphragms per gallon pumped" basis.
2. This is especially true when considering the use of Viton® diaphragms due to their replacement cost being over six times that of Neoprene. Viton® should only be considered for aggressive media at extreme temperatures if it shows an "A" rating and Neoprene, Buna-N® and Nordel® show an unsatisfactory rating.

These guides for best diaphragm selection do not hold for the valve ball material. Because the diaphragms are securely gripped by their inner and outer beads, they can stand up to 20% swell without causing any trouble. If the valve balls swell even a very small amount, they cannot function properly. Therefore, there will be cases where Neoprene diaphragms will be the best selection but Teflon®, Buna-N®, Nordel® balls will be required.

Caution: Temperature limits are based upon mechanical stress only. Certain chemicals will significantly reduce maximum safe operating temperatures. Consult engineering guides for chemical compatibility and temperature limits.

It must be emphasized that none of these figures are absolute and are only general guidelines.

SELECTION OF PLASTIC MATERIALS

Many factors can affect the chemical resistance of plastics. These include, but are not limited to, exposure time, extremes of temperature and pressure, frequency of temperature and/or pressure cycling, attrition due to abrasive particles, and the type of mechanical stress imposed. The fact that certain combinations of chemicals and mechanical load can induce stress cracking in many otherwise chemically resistant materials, both metallic and nonmetallic, is of particular significance.

The chemical/temperature ratings presented are based on well-processed or well fabricated test specimens being essentially resistant to either chemical attack and/or severe swelling which would normally impair their performance under moderate mechanical stresses.

Operating parameters are dependent upon the particular application of Polypropylene or PVDF and may differ from those experienced in either laboratory testing or apparently similar field service. Because corrosive fluids or vapors are often mixtures of various individual chemicals, it is strongly recommended that trial installations be evaluated under actual service conditions.

For example, immersion testing in individual chemicals at a specific operating temperature doesn't predict the performance of Polypropylene or PVDF should an exothermic reaction take place when mixtures of chemicals are involved.

The ratings given on the following pages are a guide and do not constitute a warranty of any kind, expressed or implied, with respect to the performance of the materials VerderAir offers in any specific application.

CHEMICALS	ELASTOMERS							METALS					PLASTICS				
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	SS-FILLED ACETAL	POLYPROPYLENE	PVDF
ACETALDEHYDE	B	D	D	D	A	D	A	—	B	A	A	A	A/100	B/70	A	C	D
ACETAMIDE	A	D	A	A	A	A	A	—	A	A	A	—	A/200	B/120	A	A/70	A/140
ACETATE SOLV	B	D	D	D	C	—	A	—	B	D	A	—	A/100	A	—	B/72	A
ACETIC ACID, GLACIAL	B	C	D	D	B	D	A	B	B	D	A	A	A/100	D	D	A/100	A/120
ACETIC ACID	B	C	C	C	A	C	A	A	B	D	A	A	A/100	D	D	B/70	A
ACETIC ANHYDRIDE	A	D	D	D	B	D	A	D	B	D	A	A	A/200	D	D	C	B/70
ACETONE	B	D	D	D	A	D	A	B	A	A	A	A	A/200	B/120	A	D	D
ACETOPHENONE	B	D	D	D	A	D	A	—	B	A	B	—	A/200	A	—	A/70	A/70
ACETYL CHLORIDE	B	D	D	D	C	B	A	—	D	A	B	—	A/100	D	—	—	A/120
ACETYLENE	C	—	B	A	A	A	A	A	A	A	—	A/200	A	A	B/72	A	
ACRYLONITRILE	B	—	D	D	D	D	A	—	B	A	A	B	—	B/70	—	B	A/70
ADIPIC ACID	B	—	D	B	—	—	A	—	B	B	B	—	—	—	—	B	B
ALCOHOLS																	
AMYL	A	C	B	B	A	B	A	A	B	B	A	A	A/200	A	A	B	A
BENZYL	A	—	B	D	C	A	A	—	B	B	A	A	A/200	D	A	A/70	A
BUTYL	A	D	A	A	A	A	A	—	B	B	A	A	—	A	A	B	A
DIACETONE	C	B	D	D	B	D	A	—	A	A	A	—	A	A	B/72	A/70	
ETHYL	B	D	A	A	A	A	A	A	B	A	A	A	—	B	A	A	A
HEXYL	B	D	B	A	B	A	A	—	A	A	A	A	—	A	A	A/70	A
ISOBUTYL	A	D	A	C	A	A	A	—	B	C	A	A	—	B/70	A	—	A
ISOPROPYL	B	D	B	C	B	A	A	A	B	C	A	A	A/70	B/70	A	A	A/150
METHYL	A	D	A	A	B	D	A	A	B	A	A	A	A/70	B/70	A	A/120	A
OCTYL	B	D	B	B	A	A	A	—	A	A	A	A	—	A	A	—	—
PROPYL	A	D	A	A	B	A	A	—	A	A	A	A	A/70	B	A	A	A/120
ALKAZENE	D	B	D	D	D	A	A	—	—	—	—	—	—	—	—	—	—
ALUM-NH3-CR-K	A	—	A	A	A	D	A	—	—	—	—	—	—	—	—	—	A
ALUMINUM ACETATE	A	D	B	C	A	D	A	—	A	D	B	B	—	—	—	—	—
ALUMINUM CHLORIDE 20%	A	B	A	A	A	A	A	D	B	D	C	A	—	D	C	A	A
ALUMINUM FLUORIDE	A	C	A	A	B	—	A	—	B	D	C	B	A	B/70	C	A	A
ALUMINUM HYDROXIDE	A	—	A	A	A	A	A	—	A	D	A	—	A	B/70	A	A	A
ALUMINUM NITRATE	A	C	A	A	A	A	A	—	B	D	A	—	A	B/70	B	A	A
ALUMINUM PHOSPHATE	A	—	A	A	A	A	A	—	—	—	A	—	—	—	—	—	—
ALUMINUM POTASSIUM SULFATE (ALUM)	A	—	A	A	A	A	A	—	B	D	A	B	—	D	C	A	A
ALUMINUM SULFATE	A	D	A	A	A	A	A	D	A	D	A	A	A	A/120	B	A	A
AMINES	A	D	B	D	—	D	—	—	A	D	A	—	D	D	D	—	—
AMMONIA, ANHYDROUS	A	D	A	B	A	D	A	—	B	D	A	A	A/200	B/70	D	A/70	D
AMMONIA, GAS (COLD)	A	—	A	A	D	A	A	—	—	—	—	—	—	—	A	B	D
AMMONIA, GAS (HOT)	A	—	B	C	C	D	A	—	—	—	—	—	—	—	—	—	—
AMMONIA, LIQUIDS	A	B	A	B	A	D	A	—	D	A	A	B	—	B/70	D	A/70	A
AMMONIA NITRATE	A	D	C	A	—	—	—	—	C	A	A	—	—	D	C	A	A
AMMONIUM BIFLUORIDE	A	—	A	A	—	A	A	—	D	D	A	B	A	—	D	A/70	A
AMMONIUM CARBONATE	A	—	A	D	A	B	A	—	C	C	A	B	A	A	D	A	A
AMMONIUM CASENITE	A	—	A	—	—	—	—	—	—	—	A	—	—	—	A	—	—
AMMONIUM CHLORIDE	A	A	A	A	A	A	A	A	C	D	C	A	A	C	B	A	A
AMMONIUM HYDROXIDE	A	D	A	B	A	B	A	D	C	A	A	A	A/200	A	C	A	A
AMMONIUM NITRATE	A	D	A	A	A	B	A	—	B	A	A	A	A	B	A	A	A
AMMONIUM NITRITE	A	—	A	A	A	—	A	—	—	—	—	—	—	—	—	A/70	A
AMMONIUM OXALATE	A	—	A	A	—	—	—	—	D	A	A	—	—	—	B	—	—
AMMONIUM PERSULFATE	A	D	A	D	B	A	A	—	C	D	A	A	A/150	D	D	A	A
AMMONIUM PHOSPHATE, DIBASIC	A	—	A	A	A	A	A	—	B	D	A	A	A/70	D	B	A	A
AMMONIUM PHOSPHATE, MONOBASIC	A	—	A	A	A	A	A	—	B	D	A	A	—	B	B	A	A
AMMONIUM PHOSPHATE, TRIBASIC	A	—	A	A	A	A	A	—	B	D	A	A	—	B	B	A	A
AMMONIUM SULFATE	A	A	A	A	A	D	A	B	B	C	A	B	A	B/70	B	A	—
AMMONIUM THIO-SULFATE	A	—	A	A	A	—	A	—	—	D	A	—	—	—	B	—	—
AMYL-ACETATE	B	D	D	D	B	D	A	B	B	C	A	B	A/100	C	B	C/70	A/120

Ratings: A: Minor effect; B: Minor to moderate effect; C: Moderate to severe effect; D: Not recommended — insufficient information.

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The accuracy of these ratings cannot be guaranteed.

VERDERAIR	CHEMICALS				ELASTOMERS					METALS				PLASTICS			
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE	PVDF
AMYL-ALCOHOL	B	D	B	B	A	B	A	A	B	B	A	A	A	B/70	A	B	A
AMYL-BORATE	B	—	B	A	D	A	A	—	—	—	—	—	—	—	—	—	—
AMYL-CHLORIDE	C	—	D	D	D	A	A	—	D	A	A	A	A	D	A	D	A
AMYL-CHLORONAPHTHALENE	C	D	D	B	D	A	A	—	—	—	—	—	—	—	—	—	—
AMYL-NAPHTHALENE	C	D	D	D	D	A	A	—	—	—	—	—	—	—	—	—	—
ANILINE	B	—	D	D	—	D	A	D	C	C	A	B	A/100	C	A	B	C/70
ANILINE DYES	B	D	B	C	A	A	A	—	B	A	B	—	—	—	—	—	—
ANILINE HYDROCHLORIDE	A	D	D	C	B	B	A	—	D	D	D	—	—	D	—	—	A
ANIMAL FATS	B	B	B	A	A	A	A	—	A	A	A	—	—	—	A	—	—
ANSUL ETHER	D	B	D	C	C	D	A	—	—	—	—	—	—	—	—	—	—
ANTI-FREEZE	A	—	C	A	—	A	—	—	A	A	A	—	—	D	D	A	—
AQUA REGIA (80% HCl, 20% HNO3)	D	D	D	D	C	C	A	—	D	D	D	D	A/100	D	D	B	A/70
AROCHLOR(S)1248	D	—	D	D	C	A	A	—	A	B	A	—	—	B/70	—	—	—
AROMATIC HYDROCARBONS	C	D	D	D	D	A	A	—	A	A	A	—	—	A	A	D	—
ARSENIC ACID	A	C	A	A	A	A	A	—	D	D	A	—	A	C	D	A	A
ARSENIC TRICHLORIDE	B	—	A	C	D	D	A	—	D	D	D	—	—	—	D	—	—
ASKAREL	D	D	C	B	D	A	A	—	—	—	—	—	—	—	—	—	—
ASPHALT	B	B	B	B	D	A	A	D	C	A	A	—	—	A	B	A	A
BARIUM CARBONATE	A	—	—	A	A	A	A	—	B	A	A	—	A	B/70	A	A	A
BARIUM CHLORIDE	A	A	A	A	A	A	A	—	D	C	C	A	A	B/120	A	A	A
BARIUM CYANIDE	A	—	A	C	—	A	—	—	C	C	A	—	—	—	B	—	—
BARIUM HYDROXIDE	A	A	A	A	A	A	A	D	D	D	A	B	A	B/70	D	A	A
BARIUM NITRATE	A	—	A	A	—	A	—	—	B	A	A	—	A/73	B/70	B	—	—
BARIUM SULFATE	A	A	—	A	A	A	A	—	D	B	A	—	A	B/70	B	A	A
BARIUM SULFIDE	A	A	A	A	A	A	A	—	D	D	A	—	A	B/70	A	A	A
BEER	A	D	A	A	A	A	A	A	A	D	A	—	A/150	B/70	A	B/70	A/175
BEET SUGAR LIQUIDS	A	D	B	A	A	A	A	—	A	A	A	—	—	A	B	A	A
BEET SUGAR LIQUORS	A	D	A	A	A	A	A	—	A	B	A	—	A/150	—	A	—	—
BENZALDEHYDE	B	D	D	D	B	D	A	—	B	A	A	—	A/73	C	A	D	A/70
BENZENE	C	D	D	D	D	A	A	B	B	A	A	B	A/200	A	A	B/72	A/70
BENZENESULFONIC ACID	A	D	A	C	C	A	A	—	D	D	B	—	A/200	D	C	—	A/70
BENZYL BENZOATE	C	—	D	D	B	A	A	—	A	B	B	—	—	—	—	—	—
BENZYL CHLORIDE	C	D	D	D	D	C	A	—	D	D	B	—	A/100	A	A	D	C
BENZOIC ACID	A	D	D	D	B	A	A	—	B	D	A	A	A/250	D	B	B	A
BENZOL	B	D	D	D	D	D	A	A	B	B	A	A	—	D	A	D	A/70
BLAST FURNACE GAS	A	D	A	C	B	A	A	—	—	—	—	—	—	—	D	—	—
BLEACH SOLUTIONS	B	D	D	D	A	A	A	—	D	—	—	—	A	—	D	B	—
BORAX (SODIUM BORATE)	A	A	D	B	A	A	A	A	C	A	A	A	A	A	B	A	A
BORDEAUX MIXTURE	A	D	A	A	A	A	A	—	D	C	A	—	—	—	—	—	—
BORIC ACID	A	A	A	A	A	A	A	A	B	D	A	A	A	B	A	A	A
BRINE	A	A	A	A	A	A	A	—	C	C	—	A	A	—	A	A	A
BREWERY SLOP	A	—	A	A	—	A	—	—	—	A	A	—	—	—	—	—	—
BROMINE	C	D	D	D	C	A	A	—	D	—	D	A	A/150	D	D	B/72	A/150
BROMINE-ANHYDROUS	C	D	D	—	C	A	A	D	D	D	D	—	—	D	D	D	A/150
BROMINE-TRIFLUORIDE	C	D	D	D	D	D	A	—	D	D	B	—	—	—	D	D	—
BROMINE-WATER	B	D	B	—	—	A	A	—	D	D	B	—	A/250	—	D	D	A
BROMOBENZENE	D	D	D	D	D	B	A	—	D	B	B	—	A/73	—	—	D	—
BUNKER OIL	B	B	B	A	D	A	A	—	A	A	A	—	—	—	—	—	—
BUTADIENE	C	D	B	A	C	A	A	—	A	—	A	—	A/200	—	A	—	A
BUTANE	C	A	B	A	C	A	A	A	A	—	A	—	A/200	B/70	A	B/72	A/200
BUTTER	B	A	B	A	A	A	A	—	A	D	A	—	—	—	A	—	—
BUTTERMILK	A	—	A	A	—	A	—	—	A	D	A	—	—	B/70	A	—	—
BUTYL ACETYL RICINOLEATE	B	D	B	A	D	A	A	—	A	A	A	—	—	—	A	—	—
BUTYL ACETATE	B	C	D	D	B	D	A	B	A	A	C	B	A/150	A	A	D	A/70
BUTYL ACRYLATE	C	—	D	D	D	D	A	—	—	—	—	—	—	—	A	D	A/70

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	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE	PVDF
BUTYL AMINE	A	D	D	B	D	D	A	—	A	—	—	B	—	A	C	—	B/70
BUTYL BENZOATE	C	—	D	—	B	A	A	—	B	B	—	—	—	A	—	—	—
BUTYL CARBITOL	B	—	B	A	A	A	A	—	—	—	—	—	—	A	—	—	—
BUTYL CELLOSOLVE	A	D	C	B	A	C	A	—	—	—	—	—	A/73	A	—	—	—
BUTYL OLEATE	C	—	D	—	B	A	A	—	—	—	—	—	—	A	—	—	—
BUTYL STEARATE	C	—	D	A	B	A	A	—	B	B	B	—	A/73	A	—	—	—
BUTYLENE	D	D	—	B	D	A	A	—	A	—	A	—	A	B/70	A	D	A
BUTRALDEHYDE	C	C	C	D	B	D	A	—	—	—	—	—	—	—	D	B	—
BUTYRIC ACID, AQUEOUS	A	—	D	D	C	D	A	—	B	—	A	A	A	B/70	C	A	A
CALCIUM BISULFIDE	D	A	A	A	—	A	—	C	—	B	A	A	A	A	A	A	A
CALCIUM CARBONATE	A	—	A	A	A	A	A	—	C	—	A	A	A	A	A	A	A
CALCIUM CHLORIDE	A	A	A	A	A	A	A	A	C	C	C	A	A	B/70	D	A	A
CALCIUM HYDROXIDE	A	A	A	A	A	A	A	B	C	A	A	A	A	A/120	D	A	A
CALCIUM HYPOCHLORITE	A	D	B	B	B	A	A	B	C	D	A	A	A	C	D	A	A
CALCIUM NITRATE	A	A	A	A	A	A	A	—	B	C	B	B	A	D	D	A	A
CALCIUM SULFATE	A	—	D	A	A	A	A	—	B	A	A	B	A	D	D	A	A
CALCIUM SULFIDE	A	A	B	A	A	A	A	—	A	B	B	—	—	—	A/120	A	A
CALGON	A	—	A	A	—	A	—	—	—	D	A	—	—	A	A	A	—
CANE JUICE	A	D	A	A	—	—	—	B	A	A	—	—	—	A	A	B/72	A
CANE SUGAR LIQUORS	A	D	A	A	A	A	A	—	A	B	A	—	A/150	—	—	A	—
CARBAMATE	A	D	B	C	B	A	A	—	—	—	—	—	—	—	—	—	—
CARBITOL	B	D	B	B	B	A	A	—	B	B	B	—	—	—	—	C	A
CARBOLIC ACID (SEE PHENOL)	A	C	C	D	C	A	A	D	B	D	A	A	A/150	C	D	C	A/70
CARBON BISULFIDE	D	C	D	D	D	A	A	B	A	—	A	—	—	A	A	B/72	A
CARBON DIOXIDE	A	A	B	A	A	B	A	A	A	D	A	A	A	B/70	A	A	A
CARBON DISULFIDE	D	C	D	D	D	A	A	—	C	A	A	B	A/200	B/70	A	B/72	A/70
CARBON MONOXIDE	A	A	B	A	C	A	A	A	A	A	A	B	A/150	A	A	A	B
CARBON TETRACHLORIDE	D	C	D	C	D	A	A	D	D	C	A	A	A/200	D	A	B/72	A
CARBONATE WATER	A	—	A	A	—	A	—	—	A	D	A	—	—	A	A	A	A
CARBONIC ACID	A	A	A	B	A	A	A	—	A	D	B	A	A	B/70	B	A	A
CATSUP	A	—	C	A	—	A	—	A	D	D	A	—	—	A	B	A	—
CELLOSOLVE	C	D	C	C	A	B	A	—	B	B	B	—	A/200	A	A	A	A
CELLOSOLVE ACETATE	C	D	D	C	A	A	A	—	—	—	—	—	A/73	—	—	—	A/120
CELLULUBE	D	D	D	D	A	A	A	—	—	—	—	—	—	—	A	—	—
CLORACETIC ACID	D	D	D	D	B	D	A	—	D	D	C	A	A	D	D	B/72	A
CHLORINATE GLUE	C	—	D	C	—	A	—	—	D	D	A	—	—	—	D	—	—
CHLORINE (DRY)	C	D	D	D	C	A	A	D	D	D	—	A	A/150	D	D	D	A
CHLORINE (WET)	C	D	D	D	D	A	A	D	D	B	D	A	A/200	C	D	D	A
CHLORINE, ANHYDROUS LIQUID	D	—	D	D	—	A	A	D	D	D	D	A	—	C	D	D	A
CHLORINE DIOXIDE	D	—	D	D	C	A	A	D	D	D	D	A	A/200	—	—	—	A
CHLORINE TRIFLUORIDE	D	D	D	D	D	C	A	D	D	D	A	—	—	—	—	—	—
CHLOROACETONE	C	D	C	D	D	B	A	D	D	B	B	—	—	—	B	D	—
CHLOROBENZENE (MONO)	C	D	D	D	D	A	A	D	D	B	A	A	A/100	B/70	B	D	A/150
CHLOROBROMOMETHANE	D	D	D	D	B	A	A	D	D	B	B	—	—	—	B	D	—
CHLOROBUTADIENE	C	D	D	D	D	A	A	D	D	B	A	—	—	—	—	D	—
CHLORODODECANE	D	D	D	D	D	A	A	D	D	—	—	—	—	—	—	D	—
CHLOROFORM	D	C	D	D	D	A	A	D	D	D	A	B	A/200	D	A	D	A
1-CHLORONAPHTHALENE	D	—	D	D	D	A	A	D	D	B	B	—	—	—	—	D	—
1-CHLORO 1-NITRO ETHANE	C	D	D	D	D	C	A	D	D	—	—	—	—	—	—	D	—
CHLOROSULFONIC ACID	A	D	D	D	D	D	A	D	D	D	D	B	—	D	D	D	D
CHLOROTOLUENE	C	D	D	D	D	A	A	D	D	B	B	—	—	—	A	D	—
CHLOROX (BLEACH)	B	D	B	C	—	A	A	D	D	D	A	A	—	—	D	B	—
CHOCOLATE SYRUP	A	—	—	A	—	A	—	—	A	D	A	—	—	A	A	A	—
CHROMIC ACID 5%	A	D	D	D	A	A	A	—	C	D	A	A	A/200	D	D	A/70	A/120
CHROMIC ACID 50%	A	D	D	D	C	A	A	—	C	D	B	A	A/200	C	D	A/70	A/120

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CHEMICALS	ELASTOMERS							METALS					PLASTICS			
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE
CHROME PLATING SOLUTIONS	B	D	D	D	D	A	A	D	D	D	A	A	—	D	B	A
CIDER	A	—	A	A	—	A	—	D	B	D	A	—	—	A	—	—
CITRIC ACID	A	A	A	A	A	A	A	A	C	D	A	A	B/70	C	A	A
CITRIC OILS	C	—	D	A	B	A	A	—	C	D	A	—	—	B	A	—
COBALT CHLORIDE (2N)	A	D	A	A	C	A	A	—	D	D	—	—	—	—	A	—
COFFEE	A	D	A	A	—	A	—	A	—	A	A	A	A	A	A	—
COKE OVEN GAS	B	D	C	C	D	A	A	—	—	—	—	A	—	A	—	—
COPPER ACETATE	A	D	B	B	A	—	A	A	D	D	C	—	—	A	—	—
COPPER CHLORIDE	A	A	B	A	A	A	A	A	D	D	D	—	A	A	A	A
COPPER CYANIDE	A	A	A	A	A	A	A	A	D	D	A	A	A	B/70	A	A
COPPER FLUOBORATE	A	—	A	B	—	A	—	A	D	D	D	B	—	B	—	—
COPPER NITRATE	A	—	A	A	A	A	A	A	D	D	A	A	A	D	A	A
COPPER SULFATE (5% SOLUTION)	A	A	A	A	A	A	A	A	D	D	A	A	A	C	D	A
CREAM	A	—	C	A	—	A	—	A	D	A	—	—	A	A	A	—
CRESOLS	C	D	D	D	D	A	A	—	B	C	A	B	A/150	D	B	D
CRESYLIC ACID	B	D	D	D	D	A	A	—	C	A	A	B	—	D	D	A
CYCLOHEXANE	C	B	D	A	D	A	A	A	A	B	A	B	A	A	A	A
CYCLOHEXANOL	B	—	A	B	C	A	A	—	C	B	B	A	A	B	A	B
CYCLOHEXANONE	C	D	D	D	C	D	A	—	B	B	B	—	A/73	A	A	D
CYANIC ACID	B	—	D	C	—	—	—	—	—	D	A	—	—	—	D	—
DECALIN (DEKLIN)	C	D	D	D	D	A	A	—	—	—	—	—	—	—	B/120	A/175
DECANE	C	B	D	B	C	A	A	—	—	—	—	—	—	—	A/70	—
DENATURED ALCOHOL	B	D	B	A	A	B	A	—	A	A	A	—	—	A	A	A
DETERGENTS	B	A	B	A	A	A	A	—	A	—	A	—	A/200	A	A	A
DEVELOPING FLUIDS	A	D	A	A	A	A	A	—	—	—	B	—	—	A	—	—
DIACETONE	B	B	—	D	A	D	A	—	A	A	A	—	A/100	A	—	D
DIBENZYL ETHER	C	B	D	D	C	C	A	—	B	B	B	—	—	—	—	—
DIBENZYL SEBECATE	C	D	D	D	B	B	A	—	—	—	—	—	—	—	—	—
DIBUTYL AMINE	B	—	D	C	D	B	A	—	—	—	—	—	—	—	D	—
DIBUTYL ETHER	B	B	C	B	C	C	A	—	B	B	B	—	—	—	D	A/20
DIBUTYL PHTHALATE	B	C	D	D	A	B	A	A	A	A	A	—	—	A	—	C
DIBUTYL SEBECATE	B	D	D	D	B	B	A	—	A	A	—	A/200	—	—	B/72	D
O-DICHLOROBENZENE	D	D	D	D	D	A	A	—	D	B	B	—	—	—	B/70	A/150
DICHLORO-ISOPROPYL ETHER	D	B	D	D	C	C	A	—	D	—	—	—	—	—	D	—
DICYCLOHEXYLAMINE	B	D	D	D	D	B	A	—	—	—	—	—	—	—	—	—
DIESEL FUEL	C	B	D	A	D	A	A	—	A	A	A	B	A/200	A	A	B/70
DIETHYL BENZENE	C	D	D	D	D	A	A	—	—	—	—	—	—	—	—	—
DIETHYL ETHER	B	A	C	B	D	D	A	—	B	B	B	A/200	C	—	—	A/70
DIETHYL SEBECATE	B	D	D	D	B	A	A	—	A	A	A	—	—	—	A/120	A/120
DIETHYLAMINE	B	C	B	B	—	D	—	—	A	B	A	A	A/73	B/70	B	C
DIETHYLENE GLYCOL	A	D	A	A	A	A	A	—	B	A	A	B	A/70	B/70	D	—
DIISOBUTYLENE	C	D	C	B	—	A	A	—	B	B	B	—	—	A	—	A
DIISOPROPYL BENZENE	C	—	D	D	D	A	A	—	—	—	—	—	—	A	—	—
DIISOPROPYL KETONE	C	D	D	D	A	D	A	—	—	—	—	A/73	—	A	—	—
DIMETHYL ANILINE	B	—	D	D	B	C	A	—	A	—	—	B	A/200	A	D	A
DIMETHYL FORMAMIDE	A	—	D	C	—	A	A	—	A	A	A	—	A/100	A	C	A/120
DIMETHYL PHTHALATE	A	—	D	D	B	C	A	—	—	—	B	—	A/200	C	—	A/70
DINITROTOLUENE	B	D	D	D	D	B	A	—	—	—	—	—	—	—	—	—
DIOCTYL PHTHALATE	C	C	D	D	B	A	A	A	A	A	A	—	A/200	A	B	—
DIOCTYL SEBECATE	C	B	D	D	B	B	A	—	—	—	—	—	—	B	—	—
DIOXANE	C	D	D	D	A	D	A	—	B	A	A	—	A/150	A	B	C/120
DIOXOLANE	C	D	D	D	C	B	A	—	—	—	—	—	—	B	—	—
DIPENTENE	C	D	D	C	D	A	A	—	A	A	A	—	—	—	—	—
DIPHENYL	C	D	D	D	D	A	A	—	A	B	B	B	—	—	—	A/120
DIPHENYL OXIDE	C	D	D	D	D	A	A	—	B	A	A	B	—	D	—	B

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CHEMICALS	ELASTOMERS							METALS					PLASTICS				
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE	PVDF
DOWTHERM OIL	D	B	D	—	D	A	A	—	C	B	A	—	A/200	A	—	—	—
DRY CLEANING FLUIDS	D	C	D	C	D	A	A	—	A	A	A	—	—	—	—	D	—
DYES	B	—	C	—	—	A	—	—	B	—	A	—	—	A	C	—	—
EPICHLOROHYDRINE	B	D	D	D	B	D	A	D	D	A	A	—	A/200	A	B	B/70	D
EPSOM SALTS (MAGNESIUM SULFATE)	A	—	A	A	A	A	A	—	A	A	A	B	A	B/70	B	A	A
ETHANE	C	B	B	A	D	A	A	—	A	—	A	—	—	D	A	—	A
ETHANOLAMINE	A	C	B	B	B	D	A	—	B	—	A	B	—	A	D	D	C
ETHER	C	C	D	D	D	C	A	—	A	C	A	B	A/200	A	A	C	A/70
ETHYL ACETATE	C	D	D	D	B	D	A	B	B	A	A	B	A/150	B/120	A	B/72	D
ETHYL ACETOACETATE	C	C	D	D	B	D	A	—	A	A	—	—	A/73	—	A	—	A/70
ETHYL ACRYLATE	C	D	D	D	B	D	A	—	A	A	A	—	A/150	—	A	D	C
ETHYL BENZENE	C	D	D	D	D	A	A	—	A	B	B	A	—	—	A	D	C
ETHYL BENZOATE	C	D	D	D	B	A	A	—	A	A	A	—	—	—	A	—	D
ETHYL CELLOSOLVE	B	D	C	C	A	B	A	—	—	—	—	—	—	—	A	—	—
ETHYL CELLULOSE	A	B	B	B	B	A	A	—	B	A	B	—	—	—	A	—	—
ETHYL CHLORIDE	C	C	A	A	C	A	A	D	D	C	A	B	A	B/70	A	D	A
ETHYL CHLOROCARBONATE	A	D	C	—	—	A	A	D	D	A	—	—	—	—	A	—	—
ETHYL CHLOROFORMATE	C	D	C	—	—	A	A	D	D	—	—	—	—	—	A	D	—
ETHYL ETHER	C	C	D	B	D	D	A	—	C	B	A	B	A/150	B/70	A	C	A
ETHYL FORMATE	B	—	B	D	B	C	A	—	C	A	B	—	A/120	—	A	—	—
ETHYL MERCAPTAN	C	—	D	D	D	B	A	—	B	A	B	—	—	—	—	—	—
ETHYL OXALATE	B	A	D	D	A	B	A	—	A	—	—	—	—	—	—	—	—
ETHYL PENTOCHLOROBENZENE	D	C	D	D	D	A	A	—	D	—	—	—	—	—	—	D	—
ETHYL SILICATE	B	—	A	A	A	A	A	—	B	A	A	—	—	—	—	—	—
ETHYL SULFATE	B	—	—	A	—	A	A	—	—	—	D	—	—	—	—	—	—
ETHYLENE	C	—	—	B	C	A	A	—	A	A	A	—	—	—	A	—	—
ETHYLENE CHLORIDE	D	D	D	D	C	A	A	—	D	C	A	B	A	B/70	A	B/72	A
ETHYLENE CHLOROHYDRIN	C	D	B	D	A	B	A	—	D	B	B	B	A/73	D	B	D	A/70
ETHYLENE DIAMINE	A	D	A	B	A	D	A	—	D	A	A	C	A/73	B/70	A	A	D
ETHYLENE DICHLORIDE	D	D	D	D	B	A	A	D	D	A	A	B	A/73	B/70	A	D	A
ETHYLENE GLYCOL	A	B	A	A	A	A	A	A	A	B	A	B	A	B/70	D	A/120	A
ETHYLENE OXIDE	A	C	D	D	D	D	A	A	A	D	—	A	A	A/70	—	D	A
ETHYLENE TRICHLORIDE	D	D	D	D	D	A	A	—	D	A	A	—	—	—	—	D	A
FATTY ACIDS	B	—	B	C	D	A	A	—	B	D	A	A	A	B/70	B	B/70	A
FERRIC CHLORIDE	A	D	B	A	A	A	A	B	D	D	D	B	A	C	D	A	A
FERRIC NITRATE	A	A	A	A	A	A	A	—	D	—	A	A	A	C	D	A	A
FERRIC SULFATE	A	—	A	B	A	A	A	—	D	D	A	A	A	C	D	A	A
FERROUS CHLORIDE	A	D	A	B	A	A	A	—	D	D	D	B	A	D	D	A	A
FERROUS SULFATE	A	—	A	B	A	A	A	—	D	D	A	B	A	D	D	A	A
FISH OIL	B	—	—	A	—	A	A	—	—	—	—	—	—	—	—	—	—
FLUOBORIC ACID	A	—	A	B	A	A	A	—	D	D	B	A	A/73	D	A	A	A
FLUORINE (LIQUID)	D	—	D	D	C	B	A	—	D	D	A	B	—	D	D	D	A/70
FLUOROBENZENE	C	—	D	D	D	A	A	—	D	—	—	—	—	—	A	D	—
FLUOROCARBON OILS	D	—	—	—	A	—	A	—	D	—	—	—	—	—	—	D	—
FLUOROLUBE	D	—	A	C	A	B	A	—	—	—	—	—	—	—	—	—	—
FLUORINATE CYCLIC ETHERS	D	—	—	—	—	—	—	—	D	—	—	—	—	—	—	D	—
FLUOSILICIC ACID	A	B	A	A	B	—	A	B	D	D	B	—	A	D	A	A	—
FORMALDEHYDE	B	D	D	C	A	A	A	B	A	D	A	B	A/200	D	A	A	A/120
FORMIC ACID	A	D	D	D	B	B	A	B	D	D	A	A	A/250	D	D	A	A
FREON 11	D	D	D	C	D	C	A	A	D	C	A	A	A/150	D	A	D	A
FREON 12 (WET)	D	A	B	A	B	A	A	A	D	A	A	A	A/150	D	A	B/72	A
FREON 13	D	—	A	A	A	A	A	A	D	—	—	—	—	—	A	D	A
FREON 21	D	—	D	D	D	D	A	A	D	—	—	—	A/150	—	A	D	A
FREON 22	D	D	A	D	C	D	A	A	D	D	A	A	A/150	B	A	D	A
FREON 31	D	—	A	D	A	D	A	A	D	—	—	—	—	—	A	—	—

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CHEMICALS	ELASTOMERS								METALS				PLASTICS			
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE
FREON 32	D	—	A	A	A	C	A	A	D	—	—	—	—	A	—	—
FREON 112	D	—	B	B	D	A	A	A	D	—	—	—	—	A	—	—
FREON 113	D	B	A	A	D	C	A	A	D	—	A	A	A/150	A	D	A
FREON 114	D	A	A	A	C	A	A	A	D	—	—	—	A/150	A	D	A
FREON 115	D	—	A	A	A	B	A	A	D	—	—	—	—	A	—	—
FREON 142B	D	—	A	A	A	D	A	A	D	—	—	—	—	A	—	—
FREON 152A	D	—	A	A	A	D	A	A	D	—	—	—	—	A	—	—
FREON 218	D	—	A	A	A	A	A	A	D	—	—	—	—	A	—	—
FREON C316	D	—	A	A	A	A	A	A	D	—	—	—	—	A	—	—
FREON C318	D	—	A	A	A	A	A	A	D	—	—	—	—	A	—	—
FREON 13 B1	D	A	A	A	A	A	A	A	D	—	—	—	—	A	—	—
FREON 114B2	D	—	A	B	D	B	A	A	D	—	—	—	—	A	—	—
FREON 502	D	—	A	B	—	B	A	A	D	—	—	—	—	A	—	—
FREON TF	D	A	A	A	D	B	A	A	D	A	A	A	—	D	A	B
FREON T-WD602	D	A	B	B	B	A	A	A	D	—	—	—	—	—	—	—
FREON TMC	D	B	B	B	B	A	A	A	D	—	—	—	—	—	—	—
FREON T-P35	D	A	A	A	A	A	A	A	D	—	—	—	—	—	—	—
FREON TA	D	A	A	A	A	C	A	A	D	—	—	—	—	—	—	—
FREON TC	D	A	A	A	B	A	A	A	D	—	—	—	—	—	—	—
FREON MF	D	C	C	A	—	—	A	A	D	—	—	—	—	—	—	—
FREON BF	D	—	B	B	—	—	A	A	D	—	—	—	—	—	—	—
FRUIT JUICE	A	—	—	A	—	A	A	—	B	D	A	A	A/150	A	D	A
FUEL OIL	C	B	B	A	D	A	A	—	A	A	A	A	A	B/70	A	C
FUMARIC ACID	A	—	B	C	—	A	A	—	—	—	—	—	—	—	—	—
FURAN, FURFURAN	C	—	D	D	D	C	A	—	—	—	—	—	—	—	C	—
FURAN RESIN	C	—	D	D	D	A	A	—	A	—	A	B	—	D	C	D
FURFURAL	C	D	D	D	A	D	A	—	A	B	A	B	A/200	B	A	D
GALLIC ACID	B	D	C	D	B	A	A	—	A	D	B	B	A/150	B/70	—	A
GASOLINE — LEADED	C	C	D	A	D	A	A	A	A	A	A	A	A	A	A	D
GASOLINE — UNLEADED	C	D	D	D	D	A	A	—	A	A	A	A	A	A	A	D
GELATINE	A	A	A	A	A	A	A	—	A	D	A	A	A/250	B/70	B	A
GLUCOSE	A	A	A	A	A	A	A	—	A	B	A	A	A	B/70	A	A
GLUE P.V.A.	A	A	A	D	B	A	A	A	B	A	A	A	—	A/70	A	A
GLYCERINE	A	A	A	A	A	A	A	A	A	B	A	A	A	A/70	A	A
GLYCOLIC ACID	A	—	A	A	—	A	—	—	—	—	A	A/150	—	A	A/70	A/70
GLYCOLS	A	B	A	A	A	A	A	—	B	B	B	—	A	B/70	D	A
GOLD MONOCYANIDE	A	—	A	A	—	A	—	—	—	D	A	—	—	A	—	—
GRAPE JUICE	A	—	A	A	—	A	—	—	B	D	A	—	—	A	B	A
GREASE	B	—	D	A	D	A	A	—	A	A	A	—	—	—	A	—
GREEN SULFATE LIQUOR	A	A	A	A	A	A	A	—	—	—	—	—	—	—	A	—
HALOWAX OIL	D	—	D	D	D	A	A	—	—	—	—	—	—	—	—	—
HEPTANE	C	B	B	A	—	A	A	—	A	A	A	A	A	A	C/170	A
HEXANE	C	B	B	A	D	A	A	A	A	A	A	A	A	B/70	C/170	—
N-HEXALDEHYDE	C	B	A	D	B	C	A	—	A	A	A	—	—	—	—	—
N-HEXENE-1	C	A	B	A	D	A	A	—	—	—	—	—	—	—	—	—
HONEY	A	—	A	A	—	A	—	—	A	A	A	A	—	A/70	A	A
HYDRAULIC OILS (PETROLEUM)	D	A	B	A	C	A	A	—	A	A	A	A	A/100	A/70	A	A/150
HYDRAULIC OILS (SYNTHETIC)	D	—	—	C	—	A	—	—	A	A	A	A	A/100	A	A	—
HYDRAZINE	A	D	B	B	A	A	A	D	—	C	A	—	—	B	A/70	A/120
HYDROBROMIC ACID	B	D	D	D	A	A	A	—	D	D	D	D	A	D	D	B
HYDROCHLORIC ACID (20%)	A	B	D	C	A	A	A	B	D	D	D	D	A/200	D	D	A
HYDROCHLORIC ACID (37%) (HOT)	C	C	D	D	C	A	A	D	D	D	D	D	—	D	D	—
HYDROCHLORIC ACID (37%) (COLD)	B	C	D	C	B	A	A	D	D	D	D	D	—	D	D	A
HYDROCYANIC ACID	B	C	B	C	B	A	A	C	A	D	A	D	A	—	D	A
HYDROFLUORIC ACID (20%)*	C	—	C	D	—	A	A	D	D	D	D	D	A/250	D	D	A*

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CHEMICALS	ELASTOMERS							METALS					PLASTICS			
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE
HYDROFLUORIC ACID (50%)*	D	D	C	D	A	A	A	D	D	D	D	D	D	D	B/72*	A
HYDROFLUORIC ACID (75%)*	D	—	D	D	C	A	A	D	D	D	D	D	—	D	D	B/72*
HYDROFLUORIC ACID (CONC—) (HOT)	D	D	D	D	—	B	A	D	D	D	D	D	—	D	D	D
HYDROFLUORIC ACID (CONC—) (COLD)	D	D	B	D	—	A	A	D	D	D	D	D	—	D	D	D
HYDROFLUOSILICIC ACID (20%)	B	B	B	B	B	A	A	—	D	D	D	B	—	D	—	A
HYDROGEN GAS	A	A	A	A	B	A	A	A	A	A	A	A	A	B/120	—	A
HYDROGEN PEROXIDE	A	C	D	B	C	A	A	—	A	D	A	A	A/150	D	D	A/70
HYDROGEN SULFIDE (WET) (COLD)	A	B	B	C	A	A	A	A	D	D	A	A	—	C	D	A
HYDROGEN SULFIDE (WET) (HOT)	A	—	C	D	A	B	A	A	D	D	A	A	—	D	D	A
HYDROGEN SULFIDE AQUEOUS SOLUTION	A	—	B	C	A	D	A	—	D	D	A	A	A/150	—	C	A
HYDROQUINONE	A	—	D	C	—	C	A	—	A	B	B	B	A/250	—	A	A
HYDROXYACETIC ACID (70%)	A	—	A	A	—	A	A	—	D	B	—	—	—	—	C	—
HYPOCHLOROUS ACID	A	—	D	D	B	A	A	—	D	D	D	—	A	—	D	A
INK	A	—	—	A	—	A	—	—	C	D	A	—	—	C	A	—
IODINE (IN ALCOHOL)	A	D	D	B	D	A	A	—	D	D	D	B	A/150	C	A	A/70
IODINE PENTAFLUORIDE	B	D	D	D	D	D	A	—	—	—	—	—	—	—	—	—
IODOFORM	B	—	—	D	A	—	A	—	B	A	B	D	—	—	—	A
ISOCTANE	C	B	B	A	D	A	A	A	A	—	—	—	A/73	B/70	—	A
ISOTANE	D	—	—	A	—	A	—	—	A	—	—	—	—	D	—	B/72
ISOPHORONE	B	B	D	D	C	D	A	—	A	B	A	—	—	—	—	—
ISOPROPYL ACETATE	B	A	D	D	B	D	A	—	C	—	B	B	—	B/70	A	—
ISOPROPYL CHLORIDE	C	D	D	D	D	B	A	—	D	A	A	—	—	—	A	D
ISOPROPYL ETHER	C	B	D	B	D	D	A	—	A	—	A	A	A/73	A/70	A	B/72
JET FUEL (JP3, JP4, JP5)	C	C	D	A	D	A	A	A	A	A	A	A	A	A/70	A	D
KEROSENE	C	C	B	A	D	A	A	B	A	A	A	B	A	A	A	B/72
KETONES	C	A	D	D	B	D	A	B	B	—	A	A	A/200	A/120	A	D
LACQUERS	C	D	D	D	D	D	A	—	A	C	A	A	A/70	A/70	A	C
LACQUER SOLVENTS	C	D	D	D	D	D	A	B	A	B	A	—	A/70	A/70	A	D
LACTIC ACID	A	—	C	B	B	A	A	B	C	D	A	B	A/300	C	A	A/70
LARD	B	A	B	A	C	A	A	A	A	A	A	A	A	A/70	A	A
LATEX — WATER BASE	A	—	B	A	—	A	A	—	A	—	A	—	—	A/70	A	—
LAVENDER OIL	B	D	C	B	C	B	A	—	—	—	—	—	—	—	—	—
LEAD ACETATE	A	D	B	B	A	D	A	—	D	A	B	B	A	B/70	A	A
LEAD SULFAMATE	A	—	A	B	A	A	A	—	C	—	—	—	—	B/70	A	A
LIGROIN	B	B	B	A	D	A	A	—	D	—	A	—	—	D	B	B/175
LIME	A	—	B	A	A	A	A	—	C	A	A	—	—	B/70	B	—
LIME BLEACH	A	—	B	A	A	A	A	—	D	—	A	—	—	—	—	B
LIME SULFUR	B	—	A	D	C	A	A	—	—	—	—	—	A/150	B/70	—	A
LINDOL	A	C	C	D	A	B	A	—	—	—	—	—	—	—	—	—
LINOLEIC ACID	B	—	D	B	D	A	A	—	A	D	A	—	—	—	—	A/70
LIQUEFIED PETROLEUM GAS	C	A	B	A	D	A	A	—	—	—	A	—	—	A	D	—
LUBRICANTS	B	B	B	A	D	A	A	—	A	A	A	—	—	A/70	A	B
LUBRICATING OILS (PETROLEUM)	D	B	B	A	D	A	A	A	A	A	—	A	—	A/70	A	B
LYE	A	C	B	C	B	B	A	—	—	—	A	—	—	A/70	—	A
MAGNESIUM CARBONATE	A	—	A	A	C	—	A	—	D	—	A	B	A	—	A	A
MAGNESIUM CHLORIDE	A	A	A	A	A	A	A	D	D	D	D	A	A	A/70	A	A
MAGNESIUM HYDROXIDE	A	A	B	B	A	A	A	D	D	B	A	A	A	B/70	A	A
MAGNESIUM NITRATE	A	—	A	A	A	—	A	D	D	D	A	A	A	A/70	A	A
MAGNESIUM OXIDE	A	—	A	A	—	A	D	B	A	A	—	—	—	—	A	—
MAGNESIUM SULFATE	A	—	A	A	A	A	A	D	D	C	A	B	A	A/70	A	B
MALEIC ACID	A	—	D	D	C	A	A	—	B	A	A	B	A/250	B/70	A	A
MALEIC ANHYDRIDE	A	—	D	D	C	A	A	—	A	—	—	A	—	—	A	—
MALIC ACID	A	—	C	B	D	A	A	—	B	D	A	B	A/250	C/70	A	B
MASH	A	—	A	A	—	—	—	—	A	—	A	—	—	A	A	—
MAYONNAISE	A	—	—	A	—	A	—	A	D	D	A	A	—	A	A	A

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	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE
MELAMINE	B	—	—	C	—	—	—	—	D	D	—	—	A	A	—	—
MERCURIC CHLORIDE (DILUTE SOLUTION)	A	—	A	A	A	A	A	B	D	D	B	A/250	D	B	A	A
MERCURIC CYANIDE	A	—	A	A	A	—	A	—	D	C	A	A	A/250	A	—	A
MERCURY	A	A	A	A	A	A	A	A	C	A	A	A	A	A/120	A	A
MESITYL OXIDE	C	D	D	D	B	D	A	—	A	A	A	—	—	—	—	—
METHANE	C	D	B	A	D	A	A	—	A	—	A	A	A/250	A/120	A	B
METHANOL (SEE ALCOHOL METHYL)	A	B	A	A	B	C	A	—	B	A	A	A	A/70	B/70	A	A/120
METHYL ACETATE	B	D	B	D	A	D	A	—	A	A	A	A	—	A/120	A	C
METHYL ACRYLATE	B	—	B	D	B	D	A	—	—	A	—	—	—	A	—	B
METHYL ACETONE	B	—	D	D	—	—	A	—	A	A	A	—	A	A	D	D
METHYL BROMIDE	D	—	D	B	A	A	A	—	D	A	—	—	A	C	A	D
METHYL BUTYL KETONE	C	D	D	D	B	D	A	—	A	—	A	—	—	D	A	D
METHYL CELLOSOLVE	B	D	D	D	B	D	A	—	A	C	—	—	A	C	A	B
METHYL CHLORIDE	D	D	D	D	C	A	A	—	D	D	A	B	A	C	A	D
METHYL CYCLOPENTANE	C	D	C	B	D	A	A	—	—	—	—	—	—	A	—	—
METHYL DICHLORIDE	D	D	D	D	—	A	—	—	D	—	—	—	—	C	A	D
METHYL ETHYL KETONE	B	D	D	D	A	D	A	B	A	A	A	A/150	A/70	A	C	D
METHYL FORMATE	B	D	B	D	A	D	A	—	A	B	B	—	—	A	—	—
METHYL ISOBUTYL KETONE	C	D	D	D	B	D	A	—	B	C	A	A	A/150	A/70	A	B/72
METHYL ISOPROPYL KETONE	C	—	D	D	C	D	A	—	A	C	A	—	—	D	A	C
METHYL METHACRYLATE	B	—	D	D	C	D	A	—	—	C	—	—	A/73	—	A	A
METHYL OLEATE	C	—	D	D	C	B	A	—	—	—	—	—	—	—	A	B
METHYL SALICYLATE	B	—	D	D	C	B	A	—	A	A	—	—	—	—	A	B
METHYLACRYLIC ACID	A	—	B	—	B	B	A	—	—	—	—	—	—	A	—	—
METHYLAMINE	A	—	—	B	A	—	A	—	—	A	A	—	—	A	—	C
METHYLENE CHLORIDE	D	D	D	D	C	B	A	D	D	B	A	A	A/73	—	A	D
MILK	A	—	A	A	A	A	A	—	A	D	A	A	A/250	A/120	A	A
MOLASSES	A	D	A	A	A	A	A	—	A	A	A	A	A/150	A/70	A	A
MONOCHLOROBENZENE	C	D	D	D	D	A	A	—	D	A	A	—	A/100	B/70	A	D
MONOMETHYL ANILINE	B	—	D	D	D	C	A	—	—	—	—	—	—	B	C	—
MONOETHANOLAMINE	A	C	C	B	B	C	A	—	B	A	A	—	—	A	D	D
MONOMETHYLETHER	C	—	B	A	A	A	A	—	—	—	—	—	—	—	—	—
MONOVINYL ACETYLENE	C	—	B	A	A	A	A	—	—	—	—	—	—	—	—	—
MUSTARD	A	—	C	B	—	A	—	—	B	C	A	A	—	A/70	B	A
MUSTARD GAS	B	—	A	—	A	A	A	—	—	—	—	—	—	—	—	—
NAPHTHA	C	C	D	B	D	A	A	A	A	B	A	B	A	A/70	A	C
NAPHTHALENE	C	B	D	D	D	A	A	B	B	B	B	A	A/150	A/70	A	A/70
NAPHTHENIC ACID	B	—	—	B	D	A	A	—	B	B	A	A	—	—	A	—
NATURAL GAS	C	B	A	A	C	A	A	—	A	A	A	—	A/150	—	A	A
NEATSFOOT OIL	B	—	—	A	B	A	A	—	A	A	A	—	—	—	B	—
NEVILLE ACID	A	—	C	C	B	A	A	—	—	—	—	—	—	—	—	—
NICKEL ACETATE	A	—	B	B	A	A	A	—	D	—	—	—	A/73	—	—	—
NICKEL CHLORIDE	A	—	A	A	A	A	A	—	D	D	A	—	A	C	A	A
NICKEL SULFATE	A	A	A	A	A	A	A	—	D	D	A	B	A	A/70	A	A
NITER CAKE	A	—	A	A	A	A	A	—	—	—	—	—	—	—	—	—
NITRIC ACID (5-10% SOLUTION)	A	C	D	D	B	A	A	B	D	D	A	A	A	C	C	A/120
NITRIC ACID (20% SOLUTION)	B	C	D	D	B	A	A	D	D	D	A	A	—	D	C	B/70
NITRIC ACID (50% SOLUTION)	C	C	D	D	D	A	A	D	C	D	A	A	A/150	D	C	B/70
NITRIC ACID (CONCENTRATED SOLUTION)	C	D	D	D	A	A	D	A/120	D	A	B	A/150	D	C	D	A/125
NITRIC ACID — RED FUMING	D	D	D	D	D	B	A	D	A/B	D	A	—	—	D	C	D
NITROBENZENE	B	—	D	D	C	B	A	D	C	C	B	B	A/150	B/70	B	B/72
NITROBENZINE	B	—	D	—	C	A	A	—	—	—	—	—	—	—	B	—
NITRO ETHANE	A	—	C	D	B	C	A	—	A	A	A	—	—	—	B	C
NITROMETHANE	A	—	C	D	A	C	A	—	A	A	A	A	A/200	B/70	B	C
NITROGEN (GAS)	A	A	A	A	A	A	A	—	A	A	A	A	A	—	A	A

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CHEMICALS	ELASTOMERS							METALS					PLASTICS				
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE	PVDF
NITROGEN TETROXIDE	D	—	D	D	C	C	A	—	D	D	—	—	—	—	—	D	C
OCTADECANE	B	A	B	A	D	A	A	—	—	—	—	—	—	—	—	—	—
N-OCTANE	B	—	—	A	D	A	A	—	—	—	—	—	—	—	D	A	
OCTACHLOROTOLUENE	D	D	D	D	D	A	A	—	D	—	—	—	—	—	D	—	
OILS — ANILINE	B	C	D	D	B	A	A	—	C	A	A	B	—	A	D	A	A/70
ANISE	C	—	D	—	—	—	A	—	—	A	A	—	—	—	D	—	—
BAY	C	—	D	—	—	A	—	—	—	A	A	—	—	—	D	—	A
BONE	C	—	D	A	—	A	A	—	—	A	A	—	—	—	D	—	A
CASTOR	B	A	A	A	B	A	A	B	A	A	A	—	—	A	A	—	A
CINNAMON	C	—	D	—	—	—	—	—	—	A	—	—	—	D	—	—	—
CITRIC	C	—	D	A	B	A	A	—	A	D	A	A	—	A	A	—	A
CLOVE	C	—	—	A	—	—	—	—	B	—	A	A	—	—	B	B	—
COCONUT	B	A	A	A	A	A	A	—	B	A	A	A	—	—	A	A	A
COD LIVER	C	A	B	A	A	A	A	—	B	—	A	A	—	—	A	A	A
CORN	B	A	D	A	A	A	A	—	B	A	A	A	—	A	A	A	A
COTTON SEED	B	A	D	A	A	A	A	A	B	A	A	A	—	A	A	A	A
CREOSOTE	B	—	B	A	D	A	A	—	A	—	A	B	—	D	B	D	—
DIESEL FUEL (2D, 3D, 4D, 5D)	C	—	D	A	—	A	—	A	A	A	A	B	—	A	A	B/70	A
FUEL (1, 2, 3, 5A, 5B, 6)	C	—	D	B	D	A	A	—	A	A	A	A	—	A/70	A	B/70	A
OILS — GINGER	C	—	A	A	—	A	—	—	—	—	A	—	—	—	A	—	A
HYDRAULIC (SEE HYDRAULIC)																	
LEMON	C	—	D	—	—	A	—	—	A	—	A	—	—	—	A	D	A
LINSEED	B	B	D	A	B	A	A	D	A	A	A	B	—	A/70	A	A	A
MINERAL	C	A	B	A	D	A	A	—	A	A	A	A	—	A	A	B	A
OLIVE	B	A	B	A	A	A	A	—	A	A	A	A	—	A/70	A	A	—
ORANGE	C	—	D	A	—	A	—	—	A	—	A	A	—	—	A	A	A
PALM	B	—	D	A	—	A	A	—	A	A	A	—	—	—	A	—	A
PEANUT	B	B	D	A	C	A	A	—	A	A	A	—	—	—	A	B/175	A
PEPPERMINT	C	—	D	D	—	A	—	—	D	—	A	—	—	—	A	B/175	A
PINE	C	—	D	A	D	A	A	—	A	C	A	—	—	A	A	—	A
RAPE SEED	B	B	D	B	A	A	A	—	—	A	A	—	—	—	A	—	A
ROSIN	A	—	—	A	—	A	A	—	A	—	A	A	—	A/70	A	A	A
SESAME SEED	B	—	D	A	—	A	—	—	A	A	A	—	—	—	A	—	A
SILICONE	C	A	A	A	A	A	A	—	A	A	A	A	—	A/70	A	A	A
SOYBEAN	B	B	D	A	B	A	A	D	A	A	A	A	—	B/70	A	A	A
SPERM	B	—	D	A	—	A	—	—	—	A	A	—	—	—	A	—	A
TANNING	B	—	D	A	—	A	—	—	—	—	A	—	—	—	A	—	A
TURBINE	C	—	D	A	D	A	A	—	A	A	A	—	—	—	—	B/70	A
OLEIC ACID	B	B	D	B	B	B	A	A	B	C	A	A	A/250	B/120	A	B	A
OLEUM	D	D	D	C	D	A	A	D	D	D	A	D	A/73	D	D	D	D
OLEUM SPIRITS	D	C	D	C	C	A	A	D	D	D	B	—	—	—	D	D	D
O-DICHLOROBENZENE	D	D	D	D	A	A	—	D	A	A	—	—	—	—	A	D	—
OXALIC ACID (COLD)	A	—	B	B	A	A	A	—	C	D	A	B	A/150	B/120	C	A/70	A/120
OXGEN — COLD	A	A	A	C	B	A	A	—	A	A	A	—	A	B/70	B	C	A
OXYGEN — 200°-400°F	D	D	D	D	D	B	A	—	A	A	A	—	—	D	D	D	A
OZONE	A	A	B	D	A	A	A	—	B	—	—	—	A	—	D	D	A
PAINT THINNER, DUOCO	C	D	C	A	D	B	A	—	A	A	A	—	—	—	A	D	—
PALMITIC ACID	B	A	B	A	B	A	A	A	C	C	A	B	A/250	C	A	A	A
PARAFFIN	A	—	—	A	D	A	A	—	A	—	A	B	A/150	A/70	A	A	A
PENTANE	A	D	B	A	D	A	A	—	A	—	C	B	—	A/70	A	—	A
PERCHLORIC ACID	C	D	A	D	B	A	A	—	D	D	D	B	A/200	D	C	A	A/120
PERCHLOROETHYLENE	A	D	D	C	D	A	A	D	D	B	A	B	A/200	D	A	B/72	A
PETROLATUM	B	—	B	A	—	A	—	—	B	—	A	A	—	D	A	A	A
PETROLEUM — BELOW 250	B	B	B	A	D	A	A	—	A	A	A	—	A	A	A	A/70	A/200
PETROLEUM — ABOVE 250	C	D	D	C	D	B	A	—	A	A	A	—	—	D	A	—	—

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	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE	PVDF
PHENOL (CARBOLIC ACID)	A	C	D	D	C	A	A	D	B	D	A	A	A/150	C	A	C	A/70
PHENYLBENZENE	C	D	D	D	D	A	A	—	—	—	—	—	—	—	—	—	—
PHENYL ETHYL ETHER	C	D	D	D	D	C	A	—	—	—	—	—	—	—	—	—	—
PHENYL HYDRAZINE	B	D	D	D	C	A	A	—	—	—	—	—	A/73	—	—	—	D
PHORONE	B	D	D	D	C	A	A	—	—	—	—	—	—	—	—	—	—
PHOSPHORIC ACID — 20%	A	B	B	C	A	A	A	—	D	D	B	A	—	D	D	A/120	A
PHOSPHORIC ACID (TO 40% SOLUTION)	A	B	D	D	B	A	A	—	D	D	A	A	—	D	D	A/120	A
PHOSPHORIC ACID — 45%	B	B	B	D	B	A	A	—	D	D	B	—	—	D	D	A/120	A
PHOSPHORIC ACID (40%-100% SOLUTION)	C	C	D	D	B	A	A	—	D	D	B	A	A/250	C	D	A/120	A
PHOSPHORIC ACID CRUDE	C	A	D	D	C	A	A	—	D	D	C	A	—	C	D	A/120	A
PHOSPHOROUS TRICHLORIDE ACID	B	—	D	D	A	A	A	—	D	B	A	A	A/250	—	D	D	A
PHOTOGRAPHIC (DEVELOPER)	A	—	A	A	—	A	—	—	C	D	A	A	A/150	—	A	A	—
PICKLING SOLUTION	A	C	C	—	C	B	A	D	—	—	—	A	—	—	D	—	—
PICRIC ACID	B	B	B	B	B	A	A	—	C	D	D	D	A/73	C	D	B/70	A/70
PINENE	C	B	D	B	D	A	A	—	—	—	—	—	—	—	—	—	—
PIPERIDINE	B	D	D	D	D	C	A	—	—	—	—	—	—	—	—	—	—
PLATING SOLUTIONS:																	
ANTIMONY	A	—	A	A	—	A	A	—	D	A	A	A	—	D	A/130	A	A/70
ARSENIC	A	—	A	A	—	A	A	—	C	A	A	A	—	A	A/110	A	—
BRASS	A	—	—	A	—	A	A	—	C	A	A	A	A/150	A	A/100	A	A
BRONZE	A	—	A	A	—	A	—	—	C	A	A	A	—	A	B	A	—
CADMIUM	A	—	A	A	—	A	A	—	C	—	—	D	A/150	A	C	A	A
CHROME	A	—	D	D	A	A	A	—	C	—	A	D	A/150	D	—	A	A
COPPER	A	—	—	A	—	A	A	—	C	—	—	D	A/150	A	—	A	A
GOLD	A	—	A	A	—	A	A	—	C	—	A	—	A/150	A/70	—	A	A
INDIUM	A	—	—	A	—	A	—	—	C	—	A	A	—	D	—	A	—
IRON	A	—	A	A	—	A	A	—	C	—	A	A	—	D	—	A	A
LEAD	A	—	A	A	—	A	A	—	C	—	—	—	A/150	D	—	A	A
NICKEL	A	—	—	A	—	A	A	—	C	—	—	—	A/150	A	—	A	A
SILVER	A	—	A	A	—	A	A	—	C	—	A	—	A/150	A/120	—	A	A
TIN	A	—	A	A	—	A	A	—	C	—	A	—	A/150	D	—	A	A
ZINC	A	—	A	A	—	A	A	—	C	—	A	—	A/150	D	—	A	A
POLYVINYL ACETATE EMULSION	A	—	B	—	A	—	A	—	—	B	—	—	—	—	—	B/70	A
POTASH	A	B	B	A	B	A	A	—	C	B	A	B	A	A	A	A	A
POTASSIUM ACETATE	A	D	B	B	A	B	A	—	D	A	B	—	A/70	—	A	A	A
POTASSIUM BICARBONATE	A	—	A	A	—	A	A	—	C	A	B	B	—	A/70	A	A	A
POTASSIUM BROMIDE	A	—	A	A	A	A	A	—	C	D	A	A	A	A/70	A	A	A
POTASSIUM CARBONATE	A	—	B	A	A	A	A	—	C	B	A	B	A	A/70	A	A	A
POTASSIUM CHLORATE	A	—	A	A	A	A	A	—	B	C	A	B	—	C	A	A	A
POTASSIUM CHLORIDE	A	A	A	A	A	A	A	—	B	B	C	B	A	B/70	A	A	A
POTASSIUM CHROMATE	A	—	A	A	—	A	A	—	A	A	B	A	A	A	D	A	A
POTASSIUM CUPRO CYANIDE	A	A	A	A	A	A	A	—	—	—	—	—	—	—	C	—	—
POTASSIUM CYANIDE SOLUTIONS	A	A	A	A	A	A	A	—	D	B	A	B	A	A/70	C	A	A
POTASSIUM DICHROMATE	A	A	A	A	A	A	A	D	A	B	A	B	A	D	D	A	A
POTASSIUM HYDROXIDE	A	B	B	B	B	D	A	D	D	C	A	B	A/150	C	A	A	A/150
POTASSIUM NITRATE	A	A	A	A	A	A	A	—	B	A	A	B	A	B/70	B	A	A
POTASSIUM PERMANGANATE	A	—	A	A	A	A	A	—	B	B	B	A	—	D	C	B	A
POTASSIUM SULFATE	A	A	A	A	A	A	A	—	A	B	B	B	A	A/70	B	A	A
PRODUCER GAS	C	A	B	A	C	A	A	—	—	—	—	—	—	—	A	—	—
PROPANE (LIQUIFIED)	C	B	B	A	D	A	A	—	A	A	A	A	A	A/70	A	B/72	B/200
PROPYL ACETATE	B	D	D	D	C	D	A	—	—	—	—	—	A/120	—	A	C	A/70
PROPYL NITRATE	B	—	—	—	B	C	A	—	A	D	—	—	—	—	A	—	—
PROPYLENE	B	D	D	D	D	A	A	—	A	A	A	—	—	—	A	—	—
PROPYLENE GLYCOL	A	—	C	A	A	A	A	—	A	B	A	B	—	—	D	A	A
PROPYLENE OXIDE	A	D	D	—	B	—	A	—	B	B	A	—	D	—	A	C	D

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CHEMICALS	ELASTOMERS							METALS					PLASTICS			
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE
PYRANOL	D	B	D	A	D	A	A	—	—	—	—	—	—	—	—	—
PYDRAULS	D	D	D	D	B	A	A	A	—	—	—	A/70	A/70	—	—	—
PYRIDINE	C	—	D	D	B	D	A	D	B	A	B	A	D	C	B	C
PYROGALLIC ACID	A	—	—	—	—	A	—	—	—	D	A	B	A/150	—	D	—
PYROLIGNEOUS ACID	B	—	C	C	B	A	A	—	D	C	B	—	A/100	—	—	—
PYRROLE	C	B	D	D	C	C	A	—	—	—	—	—	—	—	—	—
RADIATION	A	A	B	B	C	B	A	—	—	—	—	—	—	—	D	—
RED OIL	B	B	C	A	B	A	A	—	—	—	—	—	—	—	—	—
ROSINS	A	—	—	A	—	—	A	—	A	D	A	—	—	A/70	B	A
RUM	A	D	—	A	A	A	A	—	—	—	A	—	—	A	A	A
RUST INHIBITORS	B	—	C	A	—	A	—	—	C	A	—	—	—	A	A	A
SALAD DRESSING	A	—	—	A	—	A	—	—	B	D	A	—	—	A	A	A
SAL AMMONIAC	A	A	A	A	A	A	A	—	D	D	A	—	—	—	—	—
SALT WATER	A	A	B	B	A	A	A	A	D	D	C	—	—	A/120	A	A
SEA WATER	A	A	B	A	A	A	A	A	D	D	C	—	A/250	A/120	A	A
SEWAGE	A	D	A	A	B	A	A	—	B	B	A	—	—	—	A	A
SHELLAC (BLEACHED)	B	—	—	A	—	—	—	—	A	A	A	—	—	A/70	A	A
SHELLAC (ORANGE)	B	—	—	A	—	—	—	—	A	A	A	—	—	A/70	A	A
SILICATE ESTERS	B	A	B	A	D	A	A	—	—	—	—	—	—	—	—	—
SILICONE	B	—	A	A	—	A	—	—	B	A	A	—	—	A/70	A	A
SILICONE GREASES	B	A	A	A	A	A	A	—	—	—	—	—	—	A	—	—
SILVER BROMIDE	A	—	—	—	—	—	—	—	D	D	B	A	—	—	A	—
SILVER NITRATE	A	A	A	C	A	A	A	—	D	D	A	A	A	A/70	A	A
SKYDROL 500	B	D	D	D	A	C	A	A	—	—	—	—	A/70	C	A	—
SKYDROL 7000	B	D	D	D	C	B	A	—	—	—	—	—	A/70	C	A	—
SOAP SOLUTIONS	A	A	B	A	A	A	A	A	C	B	A	A	A/150	A/70	A	A
SODA ASH (SEE SODIUM CARBONATE)																
SODIUM ACETATE	A	D	B	B	A	D	A	—	B	B	A	A	A	B/70	A	A
SODIUM ALUMINATE	A	—	A	A	—	A	A	—	C	A	A	B	A	A/70	A	A
SODIUM BICARBONATE	A	—	A	A	A	A	A	—	A	C	A	B	A	A	A	A
SODIUM BISULFATE	A	—	A	A	A	A	A	—	D	D	A	B	A	A/70	A	A
SODIUM BISULFITE	A	—	A	A	A	A	A	—	A	D	A	A	A	C	A	A
SODIUM BORATE	A	—	A	A	A	A	A	—	C	B	B	A	A	A/70	A	A
SODIUM CARBONATE	A	—	A	A	A	A	A	—	C	B	A	A	A	B/70	A	A
SODIUM CHLORATE	A	—	A	A	A	A	A	A	B	—	A	A	A	D	A	A
SODIUM CHLORIDE	A	A	A	A	A	A	A	A	C	B	C	A	—	A/70	A	A
SODIUM CHROMATE	A	—	A	A	—	A	A	D	D	B	—	A	A	D	D	A
SODIUM CYANIDE	A	—	A	A	A	A	A	—	D	B	A	A	—	A/70	B	A
SODIUM HYDROXIDE (20%)	A	B	B	A	A	A	A	B	D	B	A	B	—	A	A	A
SODIUM HYDROXIDE (50% SOLUTION)	A	B	C	D	A	A	A	B	D	C	B	A	A/250	A	A	C
SODIUM HYDROXIDE (80% SOLUTION)	A	B	C	D	A	B	A	—	D	C	D	B	—	C	A	C
SODIUM HYPOCHLORITE (TO 20%)	A	D	D	C	C	A	A	D	D	D	C	A	A	D	D	B/72
SODIUM METAPHOSPHATE	A	—	B	A	A	A	A	—	A	C	A	—	A	A/70	B	D
SODIUM METASILICATE	A	—	A	A	—	A	—	—	B	A	A	A	—	—	D	—
SODIUM NITRATE	A	—	B	C	A	A	A	—	A	A	A	B	A	A/70	A	A
SODIUM PERBORATE	A	—	B	B	A	A	A	—	B	C	C	B	—	B/70	B	A
SODIUM PEROXIDE	B	D	B	C	B	A	A	—	D	D	A	B	A	A/70	C	B/120
SODIUM PHOSPHATE	A	A	B	B	A	A	A	—	D	B	B	—	A	A/70	—	A
SODIUM POLYPHOSPHATE (MONO, DI, TRIBASIC)	A	A	D	A	—	A	—	—	D	D	A	A	—	A/70	B	A
SODIUM SILICATE	A	—	A	A	A	A	A	—	C	B	A	B	A	A/70	C	A
SODIUM SULPHATE	A	A	A	A	A	A	A	—	B	A	A	B	A	A	B	A
SODIUM SULFIDE	A	A	A	A	A	A	A	—	D	A	A	B	A	A/70	B	A
SODIUM TETRABORATE	A	—	—	A	A	A	A	—	C	—	A	—	A	A	B	—
SODIUM THIOSULPHATE ("HYPO")	A	A	A	B	A	A	A	—	B	C	A	A	A	B	C	A

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CHEMICALS	ELASTOMERS							METALS					PLASTICS			
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE
SORGHUM	A	—	A	A	—	A	—	—	A	A	—	—	A	A	—	—
SOY SAUCE	A	B	A	A	B	A	A	—	A	D	A	—	—	A	A	—
STANNIC CHLORIDE	A	B	D	A	B	A	A	C	D	D	D	—	A	B	A	A
STANNIC FLUOBORATE	A	—	A	A	—	A	—	—	D	D	—	—	—	C	—	—
STARCH	A	A	A	A	A	A	A	—	A	C	A	—	A/150	A/70	A	—
STEAM TO 200°F	A	C	C	C	A	D	D	B	A	A	A	—	A	D	B	—
STEAM 220°F-300°F	B	D	D	D	A	D	D	C	A	A	A	—	A	D	D	—
STEARIC ACID	B	A	B	C	B	A	A	C	B	—	A	A	A/150	A/120	A	B/72
STODDARD SOLVENT	C	A	B	B	D	A	A	—	A	A	A	A	A	A	A	B/120
STYRENE	C	C	D	D	D	B	A	D	A	A	A	D	—	A/70	A	D
SUCROSE SOLUTION	A	D	A	A	A	A	A	—	—	B	—	A	—	A	A	—
SUGAR (LIQUIDS)	A	—	B	A	—	A	—	—	A	—	A	A	—	A/70	A	A
SULFATE LIQUORS	A	—	C	—	—	—	—	—	B	C	C	A	A/73	B/70	D	A
SULFITE LIQUORS	A	—	A	A	B	A	A	—	D	D	B	—	A/73	—	—	—
SULFUR	A	B	B	B	A	A	A	C	D	B	A	—	A/250	A/70	—	A
SULFUR CHLORIDE	D	—	D	D	D	A	A	C	D	D	D	A	A/73	A	D	A/70
SULFUR DIOXIDE	A	—	B	D	A	D	A	D	D	D	A	B	A/150	C	D	A
SULFUR HEXAFLUORIDE	B	—	B	B	A	A	A	—	D	D	—	—	—	D	—	—
SULFUR TRIOXIDE	C	B	C	C	C	A	A	—	D	D	B	—	—	—	—	—
SULFUR TRIOXIDE (DRY)	C	B	D	D	C	A	A	—	A	A	C	B	—	A/70	D	D
SULFURIC ACID (DILUTE)	A	C	C	D	—	A	A	A	D	D	B	—	—	C	D	A
SULFURIC ACID (TO 10%)	A	D	D	D	A	A	A	A	D	D	C	A	A/250	C	D	A/120
SULFURIC ACID (10%-75%)	A	D	D	D	C	A	A	B	D	D	C	B	A/150	D	D	A/72
SULFURIC ACID (CONCENTRATED TO 98%)	B	D	D	D	C	A	A	C	D	D	B	—	A/150	D	D	C/72
SULFURIC ACID (20% OLEUM)	D	D	D	D	D	B	A	—	D	D	—	—	—	D	D	D
SULFUROUS ACID	A	D	B	C	—	A	A	B	D	D	B	B	A/250	D	D	A
SYRUP	A	—	B	A	—	A	—	A	A	—	A	—	—	—	A	A
TALLOW	B	A	—	A	A	A	A	—	A	—	A	—	—	A/70	A	B/70
TANNIC ACID	A	A	B	A	C	A	A	A	C	C	A	B	A/250	C	B	A
TANNING LIQUORS	A	—	—	C	—	A	A	—	C	—	A	A	A/250	A/70	B	A
TAR, BITUMINOUS	B	—	C	B	D	A	A	—	—	B	B	—	A	B	B	—
TARTARIC ACID	A	A	B	A	B	A	A	C	C	C	A	B	A/250	B/70	B	A
TERPINEOL	B	B	D	C	B	A	A	—	A	A	A	—	—	—	—	B/120
TERTIARY BUTYL ALCOHOL	B	D	A	A	A	B	A	—	—	—	—	—	—	—	A	D
TERTIARY BUTYL CATECHOL	B	D	B	D	B	A	A	—	C	B	B	—	—	—	A	—
TERTIARY BUTYL MERCAPTAN	B	D	D	D	D	A	A	—	—	—	—	—	—	—	B	—
TETRA BROMOMETHANE	D	—	D	D	D	A	A	—	D	—	—	—	—	—	—	D
TETRABUTYL TITANATE	B	—	A	B	B	A	A	—	—	—	—	—	—	—	—	—
TETRACHLOROETHYLENE	D	B	D	D	D	A	A	—	D	A	A	—	A/200	A/70	A	D
TETRACHLOROETHANE	D	—	—	D	D	A	A	—	D	A	A	—	—	C	A	D
TETRAETHYL LEAD	C	—	D	B	D	A	A	—	—	—	—	—	—	—	A/70	A
TETRAHYDROFURAN	B	C	D	D	C	B	A	B	—	—	A	A	D	A	C	B/70
TETRALIN	C	—	D	D	D	A	A	—	A	A	A	—	—	—	D	—
THIONYL CHLORIDE	B	—	D	D	D	A	A	—	D	D	—	—	A/150	C	—	D
TITANIUM TETRACHLORIDE	D	D	D	C	D	A	A	—	D	A	B	—	—	A/70	—	D
TOLUENE	C	C	D	C	D	A	A	B	A	A	A	A	A/200	A/70	A	D
TOLUENE DIISOCYANATE	B	—	D	—	A	—	A	—	—	—	—	—	—	—	C	—
TOLUENE, TOLUOL	C	C	D	D	D	A	A	B	A	A	A	—	A/150	A/70	A	B/175
TOMATO JUICE	A	—	A	A	—	—	A	A	A	—	A	—	A/250	A	A	A
TRANSFORMER OIL	D	D	C	B	D	A	A	—	A	A	A	—	A/250	A/70	A	B/70
TRANSMISSION FLUID TYPE A	C	A	C	A	D	A	A	—	A	A	A	—	—	—	A	—
TRIA CETIN	A	D	A	A	A	C	A	—	B	—	—	—	—	—	—	—
TRIBUTOXY ETHYL PHOSPHATE	B	D	D	D	A	B	A	—	—	—	—	—	—	—	—	—
TRIBUTYL PHOSPHATE	B	D	D	D	C	D	A	—	—	A	—	—	A/73	—	A/70	A/70
TRIBUTYL MERCAPTAN	B	—	D	D	D	A	A	—	—	—	—	—	—	—	—	—

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CHEMICALS	ELASTOMERS							METALS					PLASTICS				
	SANTOPRENE	POLYURETHANE	NEOPRENE	BUNA-N®	NORDEL®	VITON®	TEFLON®	HYTREL	ALUMINUM	CAST IRON	STAINLESS STEEL (316)	HASTELLOY	HALAR® ECTFE COATED	NYLON	CARBON-FILLED ACETAL (CFA)	POLYPROPYLENE	PVDF
TRICHLOROACETIC ACID	B	D	B	C	B	B	A	—	D	D	D	B	A/150	D	D	B/70	A/70
TRICHLORETHANE	D	D	D	D	D	A	A	—	D	B	A	A	—	C	A	D	A/120
TRICHLORETHYLENE	D	D	D	D	D	A	A	D	D	C	A	A	A	A	A	B/72	A
TRICHLOROPROPANE	D	—	A	A	—	A	A	—	D	A	A	A	—	—	A	D	—
TRICRESYLPHOSPHATE	B	C	D	D	A	B	A	—	D	B	A	A	—	A/120	C	B/70	—
TRIETHYLAMINE	B	—	B	A	—	A	A	—	—	A	—	—	A/150	A/70	A	C	A/120
TRIETHANOL AMINE	A	D	B	B	B	B	A	D	B	A	A	—	A/73	A/70	A	A/70	A/70
TRIETHYL ALUMINUM	B	—	D	D	—	B	A	—	—	—	—	—	—	—	—	—	—
TRIETHYL BORANE	B	—	D	D	—	A	A	—	—	—	—	—	—	—	—	—	—
TRINITROTOLUENE	A	—	A	D	D	C	A	—	—	—	—	—	—	—	—	—	—
TRIOCTYL PHOSPHATE	B	—	D	D	A	B	A	—	—	—	—	—	—	—	—	—	—
TRIARYL PHOSPHATE	B	B	C	D	A	A	A	—	—	—	—	—	—	—	—	—	—
TUNG OIL	B	B	B	A	C	B	A	C	A	B	B	—	—	—	—	—	—
TURPENTINE	C	D	D	A	D	A	A	—	A	B	A	B	A/200	A/70	A	B/175	A
UNLEADED GASOLINE	C	D	D	D	D	A	A	—	A	A	A	A	—	A	A	D	C
UNSYMMETRICAL DIMETHYL HYDRAZINE (UDMH)	B	—	B	C	A	D	A	—	B	A	A	—	—	—	—	—	A/70
URINE	A	—	D	A	—	A	—	—	B	B	A	—	—	A/70	A	A	A
VEGETABLE JUICE	A	A	D	A	A	A	A	—	A	D	A	—	—	A	A	—	—
VEGETABLE OILS	B	A	B	A	A	A	A	—	A	B	A	—	—	—	A	A/120	A
VERSILUBE F44 & F50D	D	—	C	A	A	A	A	—	—	—	—	—	—	—	—	—	—
VINEGAR	A	B	B	C	A	A	A	—	D	C	A	A	A/200	C	A	A	A
VARNISH	B	C	D	B	D	A	A	—	A	C	A	A	—	C	A	A	—
VINYL CHLORIDE	D	—	D	D	C	A	A	—	D	B	—	A	—	A/70	—	D	A
WAGNER 21 B FLUID	C	—	A	C	A	D	A	—	—	—	—	—	—	—	A	—	—
WATER, ACID, MINE	A	A	B	A	A	A	A	—	D	D	A	—	A/250	B	A	A	A
WATER, DISTILLED, LAB GRADE 7	A	A	B	A	A	A	A	—	B	D	A	—	A/250	A/70	A	A	A
WATER, FRESH	A	A	B	A	A	A	A	—	A	B	A	A	A/250	A/70	A	A	A
WATER, SALT	A	A	B	A	A	A	A	—	D	D	C	A	A/250	A/120	A	A	A
WEED KILLERS	B	—	C	B	—	A	—	—	D	—	A	—	—	A	A	—	—
WHEY	A	—	—	A	—	A	—	—	B	—	A	—	—	—	A	—	—
WHISKEY AND WINES	A	D	A	A	A	A	A	—	D	D	A	—	A/200	A/70	A	A	A
WHITE LIQUOR (PULP MILL)	A	—	A	A	A	A	A	—	B	C	A	A	A/200	A/70	A	A	A
WHITE PINE OIL	C	—	D	B	D	A	A	—	—	—	—	—	—	—	A	—	—
WHITE OIL	C	—	B	A	D	A	A	—	—	—	—	—	—	—	A	—	—
WHITE WATER (PAPER MILL)	A	—	A	—	—	A	—	—	—	A	A	—	—	A	A	A	—
WOOD OIL	B	B	B	A	C	B	A	—	A	A	A	—	—	—	—	—	—
XYLENE	C	D	D	D	D	A	A	B	A	A	A	A	A/200	A/120	A	B/72	A
XYLIDENES	C	D	D	D	—	C	A	—	—	—	—	—	—	—	—	—	—
ZEOLITES	A	—	C	C	A	A	A	—	—	—	—	—	—	—	—	—	—
ZINC ACETATE	A	D	C	C	A	C	A	—	—	—	A	—	—	—	—	—	—
ZINC CHLORIDE	A	A	A	A	A	A	A	A	D	D	C	C	A	C	D	A	A
ZINC HYDROSULPHITE	A	—	A	A	—	—	—	—	D	D	A	—	—	—	C	—	A
ZINC SULFATE	A	—	A	A	A	A	A	—	D	D	A	A	A	C	C	A	A

Ratings: A: Minor effect; B: Minor to moderate effect; C: Moderate to severe effect; D: Not recommended — insufficient information.

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