



CSI

CHEMICAL COMPATIBILITY CHART

Choosing the right material based on chemical compatibility minimizes costly failures. Use this chart as a quick reference guide to help you with your selection of elastomers for your specific application.

A = Good Resistance | B = Fair Resistance | C = Depends on Conditions | D = Not Recommended

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Acetal	D	B	D	-	-	-
Acetaldehyde	D	A	D	B	A	D
Acetamide	A	A	B	-	A	D
Acetate Solvent	D	A	D	-	B	-
Acetic Acid, 10%	B	A	C	-	A	D
Acetic Acid, 30%	D	A	C	-	A	-
Acetic Acid, 50%	D	A	D	-	A	-
Acetic Acid, Glacial	D	A	D	-	A	D
Acetic Anhydride	D	B	D	D	B	D
Acetic Ester (Ethyl Acetate)	D	A	D	-	-	D
Acetic Ether (Ethyl Acetate)	D	A	D	-	-	-
Acetic Oxide (Acetic Anhydride)	D	B	D	-	-	-
Acetone	D	A	D	D	A	D
Acetophenome	D	A	D	-	A	D
Acetyl Acetone	C	B	D	-	-	D
Acetyl Chloride	D	C	B	C	A	D
Acetylene	A	B	A	-	A	D
Acrylonitrile	D	D	D	-	B	D
Air	A	A	A	A	-	A
Alcohol Aliphatic	A	A	C	-	-	-
Alcohol, Aromatic	C	D	A	-	-	-
Alk-Tri (Trichloroethylene)	D	D	A	-	-	-

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Allyl Alcohol	A	A	B	-	A	D
Allyl Bromide	D	D	B	-	-	-
Allyl Chloride	D	D	A	-	-	-
Alum (Alum Potassium Sulfate)	A	A	A	-	A	-
Aluminum Acetate	C	A	A	-	A	D
Aluminum Chloride	A	A	A	B	A	C
Aluminum Fluoride	A	A	A	-	A	C
Aluminum Hydroxide	A	A	A	-	A	-
Aluminum Phosphate	A	A	A	-	A	-
Aluminum Nitrate	A	A	A	-	A	C
Aluminum Sulfate	A	A	A	A	A	D
Ammonia, Liquid	B	A	A	-	A	D
Ammonia in Water	C	A	B	-	-	D
Ammonium Carbonate	C	A	A	C	A	D
Ammonium Chloride	A	A	A	C	A	D
Ammonium Hydroxide	B	A	B	A	A	D
Ammonium Metaphosphate	A	A	A	-	A	D
Ammonium Nitrate	A	A	A	C	A	-
Ammonium Persulfate	D	B	A	A	A	D
Ammonium Phosphate	A	A	A	-	-	-
Ammonium Sulfate	A	A	A	A	A	D
Ammonium Sulfide	A	A	A	-	A	D

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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Ammonium Sulfite	A	A	A	-	A	D
Ammonium Thiocyanate	A	A	A	-	-	D
Ammonium Thiosulfate	A	A	A	-	A	D
Amyl Acetate	D	A	A	D	D	D
Amyl Acetone	D	B	D	-	-	-
Amyl Alcohol	A	A	A	D	A	D
Amyl Borate	A	D	A	-	D	-
Amyl Chloride	D	D	A	D	D	-
Amyl Chloronaphthalene	D	D	A	-	-	D
Amyl Naphthalene	D	D	A	-	-	D
Amyl Oleate	D	B	C	-	-	-
Amyl Phenol	D	D	A	-	-	-
Anethole	D	D	B	-	-	-
Aniline	D	D	B	B	B	D
Aniline Dyes	D	B	B	-	-	D
Aniline Hydrochloride	B	B	B	-	-	D
Animal Fats	A	C	A	-	-	A
Animal Grease	A	C	A	-	-	-
Animal Oils	A	C	A	-	A	B
Ansul Ether	D	C	D	-	-	B
Antifreeze	A	A	A	-	D	D
Antimony Chloride	A	D	A	-	-	A
Antimony Pentachloride	B	D	A	-	-	A
Aqua Regia	D	B	A	-	C	D
Aromatic Hydrocarbons	D	D	A	-	D	-
Arquad	A	A	A	-	-	-
Arsenic Acid	A	A	A	-	A	D
Arsenic Chloride	C	D	D	-	-	-
Arsenic Trichloride	A	D	D	-	-	-
Asphalt	B	D	A	-	A	B
ASTM #1 Oil	A	D	A	-	-	A
ASTM #2 Oil	A	D	A	-	-	B
ASTM #3 Oil	A	D	A	-	-	B
Aviation Gasoline	A	D	A	-	-	-
Barium Carbonate	A	A	A	-	A	D
Barium Chloride	A	A	A	-	A	A

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Barium Hydroxide	A	A	A	-	A	D
Barium Sulfate	A	A	A	-	A	-
Barium Sulfide	A	A	A	-	A	A
Beer	A	A	A	-	A	A
Beet Sugar Liquor	A	A	A	-	A	D
Benzaldehyde	D	A	D	-	A	D
Benzene (Benzol)	D	D	A	-	B	D
Benzene Sulphonic Acid	D	D	A	D	-	D
Benzine Solvent (Ligroin)	A	D	A	-	-	-
Benzoic Acid	D	D	A	-	A	D
Benzoic Aldehyde	D	A	D	-	-	-
Benzotrichloride	-	-	-	-	-	-
Benzoyl Chloride	D	D	B	-	C	C
Benzyl Acetate	D	B	D	-	-	D
Benzyl Alcohol	D	B	A	-	A	D
Benzyl Chloride	D	D	A	-	A	D
Bichromate of Soda (Sodium Dichromate)	A	A	A	-	-	-
Black Sulfate Liquor	A	A	A	-	A	-
Blast Furnace Gas	C	C	A	-	-	D
Bleach Solutions	D	B	B	-	-	-
Borax	A	A	A	-	A	A
Bordeaux Mixture	A	A	A	-	-	D
Brandy	FDA TUBE REQUIRED					
Brine	A	A	A	-	-	-
Bromine	D	D	A	D	D	D
Bromine Water	C	C	A	-	-	D
Bromobenzene	D	D	B	-	-	D
Bunker Oil	A	D	A	-	-	B
Butanol	A	A	A	B	-	D
Butane	A	D	A	D	A	A
Butter	A	A	A	-	-	A
Butyl Acetate	D	A	D	D	C	D
Butyl Acrylate	D	D	D	-	D	-
Butylamine	C	C	D	-	D	D
Butyl Benzene	D	D	A	-	-	-
Butyl Bromide	D	D	B	-	-	-



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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Butyl Butyrate	D	B	C	-	-	-
Butyl Carbitol	B	A	A	-	-	D
Butyl Cellosolve	B	A	D	-	-	D
Butyl Chloride	D	D	A	-	D	A
Butyl Ether	B	C	D	-	C	C
Butyl Ethyl Acetaldehyde	D	D	D	-	-	-
Butyl Ethyl Ether	D	C	C	-	-	-
Butyl Oleate	D	B	A	-	-	-
Butyl Phthalate	D	A	C	-	A	-
Butyl Stearate	B	C	A	-	-	-
Butyraldehyde	D	D	D	-	-	D
Butyric Acid	C	C	C	D	A	-
Butyric Anhydride	C	C	C	-	-	D
Calcium Acetate	D	A	D	-	A	D
Calcium Bisulfate	A	B	A	-	-	-
Calcium Bisulfite	A	A	A	-	A	A
Calcium Carbonate	A	A	A	-	A	C
Calcium Chloride	A	A	A	-	A	D
Calcium Hydroxide	A	A	A	-	A	D
Calcium Hypochlorite	D	A	A	-	A	D
Calcium Nitrate	A	A	A	-	A	A
Calcium Oxide	-	-	-	A	A	A
Calcium Salts	-	-	-	B	-	A
Calcium Sulfate	A	A	A	-	A	D
Calcium Sulfide	A	A	A	-	A	A
Calcium Sulfite	A	A	A	-	-	A
Caliche Liquor	A	A	A	-	-	A
Cane Sugar Liquors	A	A	A	-	-	D
Carbitol	B	B	A	-	-	D
Carbitol Acetate	D	B	D	-	-	-
Carbolic Acid	C	A	A	-	B	C
Carbon Bisulfide	D	D	A	-	D	-
Carbon Dioxide	A	A	A	B	A	A
Carbon Disulfide	D	D	A	-	D	D
Carbonic Acid	A	A	A	-	-	A
Carbon Monoxide	C	C	A	-	A	A

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Carbon Tetrachloride	C	D	A	D	D	D
Carbon Tetrafluoride	C	D	-	-	-	D
Castor Oil	A	A	A	-	A	A
Caustic Potash	A	A	C	-	-	D
Caustic Soda	B	A	C	-	-	D
Cellosolve	D	A	C	-	-	D
Cellulose Acetate	D	B	D	-	-	D
Cellulube	D	A	C	-	-	-
China Wood Oil	A	A	C	-	-	C
Chlorine Dioxide	D	D	A	-	C	D
Chlorine Gas	D	D	A	-	D	D
Chlorine Water Solns	D	D	C	-	D	-
Chloroacetic Acid	C	A	D	-	C	D
Chloroacetone	D	D	D	-	-	D
Chlorobenzene	D	D	A	D	B	D
Chlorobutane	D	D	A	-	-	A
Chlorobutadiene	D	D	A	-	-	D
Chloroform	D	D	A	D	C	D
Chlorinated Hydrocarbon	D	D	A	-	-	-
Chloropentane	D	D	A	-	-	-
Chlorophenol	D	D	A	-	-	-
Chloropropanone	D	C	D	-	-	-
Chlorosulfonic Acid	C	D	D	D	D	D
Chlorothene	D	D	A	-	-	-
Chlorotoluene	D	D	A	-	-	D
Chromic Acid	D	C	C	D	D	C
Citric Acid	B	A	A	-	A	A
Coal Oil	A	D	A	-	-	-
Coal Tar	A	B	A	-	-	-
Coal Tar Naptha	C	D	A	-	-	-
Cobalt Chloride	A	A	A	-	-	A
Coconut Oil	A	A	A	-	A	C
Cod Liver Oil	A	A	A	-	-	A
Coke Oven Gas	C	D	D	-	-	D
Copper Arsenate	A	A	A	-	-	-
Copper Chloride	A	A	A	-	A	A

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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Copper Cyanide	A	A	A	-	A	A
Copper Nitrate	A	A	A	-	A	-
Copper Nitrite	A	A	A	-	-	-
Copper Sulfate	A	A	A	-	A	A
Copper Sulfide	A	A	A	-	-	-
Corn Oil	A	C	A	-	A	A
Cottonseed Oil	A	C	A	-	A	A
Creosote (Coal Tar)	A	D	B	-	A	C
Creosote (Wood)	A	D	A	-	A	C
Creosols	C	D	A	-	A	A
Cresylic Acid	C	D	A	-	A	D
Crude Oil	A	D	A	-	-	A
Cumene	C	D	A	-	-	D
Cupric Carbonate	B	A	A	-	-	-
Cupric Chloride	A	A	A	-	-	-
Cupric Nitrate	A	A	A	-	-	-
Cupric Nitrite	A	A	A	-	-	-
Cupric Sulfate	A	A	A	-	-	-
Cyclohexane	B	D	A	D	C	A
Cyclohexanone	D	D	C	D	B	D
Cyclohexanol	B	D	B	-	A	A
Cyclopentane	C	D	A	-	-	A
Cymene	C	D	A	-	-	C
DDT in Kerosene	A	D	A	-	-	C
Decaline	D	D	A	-	D	-
Decane	B	D	A	-	-	B
Detergent Solutions	A	A	A	-	A	D
Diacetone Alcohol	D	B	D	-	A	D
Dibenzyl Ether	D	D	C	-	-	B
Dibenzylsebacate	D	B	B	-	-	B
Dibromobenzene	D	D	A	-	-	-
Dibutylamine	D	D	D	C	-	D
Dibutyl Ether	D	B	C	-	C	B
Dibutyl Phthalate	D	A	D	-	B	C
Dibutyl Sebacate	D	B	B	-	-	D
Dicalcium Phosphate	A	A	A	-	-	-

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Dichloroacetic Acid	D	C	C	-	B	D
Dichlorobenzene	D	D	A	-	-	D
Dichlorobutane	D	D	A	-	-	D
Dichloroisopropyl Ether	D	C	C	-	-	B
Dichlorodifluoromethane (Freon 12)	A	D	A	-	-	A
Dichloroethane	D	D	A	-	D	C
Dichloroethylene	D	D	A	-	-	C
Dichloroethyl Ether	D	D	C	-	-	-
Dichlorohexane	D	D	A	-	-	-
Dichloromethane	D	D	A	-	-	D
Dichloropentane	D	D	A	-	-	-
Dieldrin in Xylene	D	D	A	-	-	C
Dieldrin in Xylene & Water Spray B	D	A	-	-	-	C
Diesel Oil	A	D	A	-	-	C
Diethanolamine	B	A	D	-	-	D
Diethylamine	C	B	D	-	A	D
Diethyl Benzene	D	D	A	-	-	-
Diethyl Ether	B	D	D	-	C	A
Diethylene Dioxide	D	B	D	-	-	-
Diethyl Oxalate	D	A	C	-	-	-
Diethyl Phthalate	D	C	C	-	-	C
Diethyl Sebacate	D	C	B	-	-	D
Diethyl Sulfate	D	A	A	-	-	-
Diethyl Triamine	B	B	C	-	-	-
Dihydroxyethyl Ether	A	B	A	-	-	-
Diisobutylene	A	D	A	-	-	D
Diisobutyl Ketone	D	A	D	-	A	-
Diisodecyl Adipate	D	A	C	-	-	-
Diisodecyl Phthalate	D	A	C	-	-	-
Diisooctyl Adipate	D	A	C	-	-	-
Diisooctyl Phthalate	D	B	B	-	-	-
Diisopropanol Amine	B	A	C	-	-	-
Diisopropyl Benzene	C	D	A	-	-	-
Diisopropyl Ether	B	D	B	-	-	-
Diisopropyl Ketone	D	A	D	-	-	D
Dilauryl Ether	C	D	C	-	-	-

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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Dimethyl Benzene	D	D	A	-	-	-
Dimethylaniline	D	C	D	-	D	-
Dimethylformamide (DMF)	D	C	D	-	A	-
Dimethyl Ketone (Acetone)	D	A	D	-	-	-
Dimethyl Phthalate	D	B	C	-	B	D
Dimethyl Sulfate	D	D	D	-	-	-
Dimethyl Sulfide	D	D	C	-	-	-
Dinitrobenzene	D	C	A	-	-	-
Dinitrotoluene	D	D	B	-	-	D
Diocetyl Adipate (DOA)	D	B	C	-	-	-
Diocetyl Phthalate (DOP)	D	B	B	-	-	D
Diocetyl Sebacate (DOS)	D	B	B	-	-	B
Dioxane	D	B	D	-	B	D
Dioxolane	D	B	C	-	-	D
Dipentene (Limonene)	C	D	A	-	-	D
Diphenyl (Biphenyl)	D	D	A	-	D	-
Dipropyl Ketone	D	B	D	-	-	-
Disodium Phosphate	A	A	A	-	-	-
Divinyl Benzene	D	D	A	-	-	-
D.M.P. (Dimethyl Phenols)	D	D	D	-	-	-
Dodecyl Benzene	D	D	A	-	-	C
Diphenyl Oxide (Phenylether)	D	D	A	-	-	D
Dipropylene Glycol	A	A	A	-	-	-
Dodecyl Toluene	D	D	A	-	-	-
Dowdume W 40, 100%	D	C	C	-	-	-
Dow-Per (Perchloroethylene)	C	D	A	-	-	-
Dowtherm Oil, A & E	D	D	A	-	-	-
Dowtherm S.R.I.	A	A	A	-	-	-
Dry Cleaning Fluids	C	D	A	-	-	D
Epichlorohydrin	D	B	D	-	D	D
Ethanol (Ethyl Alcohol)	A	A	C	B	-	D
Ethers	C	D	D	D	-	B
Ethyl Acetate	D	A	D	D	B	D
Ethyl Acetaoacetate	D	B	D	-	D	D
Ethyl Acrylate	D	D	D	-	-	D
Ethyl Benzene	C	D	A	-	-	D

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Ethyl Benzoate	B	B	C	-	B	D
Ethyl Butyl Alcohol	A	A	B	-	-	-
Ethyl Butyl Ketone	D	B	D	-	-	-
Ethyl Cellulose	B	B	D	-	-	B
Ethyl Chloride	D	A	B	D	C	B
Ethyl Dichloride	D	D	B	-	-	-
Ethylene	A	D	A	-	-	D
Ethylene Bromide	D	D	A	-	-	-
Ethylene Chloride	D	D	A	-	B	B
Ethylene Dibromide	D	D	B	-	-	D
Ethylene Dichloride	D	D	B	D	D	D
Ethylene Glycol	A	A	A	A	A	D
Ethylene Oxide	D	C	D	D	-	D
Ethylene Trichloride (Trichloroethylene)	C	D	A	-	-	D
Ethyl Ether	C	D	D	-	C	D
Ethyl Formate	D	C	D	-	-	-
Ethyl Hexanol	A	A	B	-	-	D
Ethyl Methyl Ketone	D	B	D	-	-	-
Ethyl Ozalate	D	B	C	-	-	-
Ethyl Phthalate	D	B	C	-	-	-
Ethyl Propyl Ether	D	D	C	-	-	-
Ethyl Propyl Ketone	D	B	D	-	-	-
Ethyl Silicate	A	A	A	-	-	D
Ethyl Sulfate	D	B	D	-	-	-
EX TRI (Trichloroethylene)	C	D	A	-	-	-
Fatty Acids	B	C	A	C	A	-
Ferric Bromide	A	A	A	-	-	-
Ferric Chloride	A	A	A	B	A	A
Ferric Nitrate	A	A	A	-	A	A
Ferric Sulfate	A	A	A	-	A	-
Ferrous Acetate	D	B	D	-	-	-
Ferrous Ammonium Sulfate	A	A	A	-	-	D
Ferrous Chloride	A	A	A	-	A	-
Ferrous Hydroxide	B	A	C	-	A	-
Ferrous Sulfate	A	A	A	-	A	D
Fish Oil	A	D	A	-	-	C

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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Fluoroboric Acid	A	A	C	A	A	-
Fluorine	D	D	D	-	D	-
Fluosilic Acid	B	B	A	-	A	-
Formaldehyde (Formalin)	A	A	A	B	A	D
Formamide	A	A	D	-	-	D
Formic Acid	B	A	D	C	A	D
Freon 11	A	D	A	-	-	-
Freon 12	B	C	B	-	A	-
Freon 13	A	A	A	-	-	-
Freon 21	D	D	D	-	-	-
Freon 22	D	A	D	-	B	-
Freon 31	D	A	D	-	-	-
Freon 32	A	A	C	-	-	-
Freon 112	B	D	A	-	-	-
Freon 113	A	D	B	-	D	-
Freon 114	A	A	B	-	-	-
Freon 115	A	A	B	-	-	-
Freon 142b	A	A	D	-	-	-
Freon 152a	A	A	D	-	-	-
Freon 218	A	A	A	-	-	-
Freon C316	A	A	A	-	-	-
Freon C318	A	A	A	-	-	-
Freon 13B1	A	A	A	-	-	-
Freon 114B2	B	D	B	-	-	-
Freon 502	B	A	B	-	-	-
Freon TF	A	A	A	-	D	-
Freon T-WD 602	A	B	A	-	-	-
Freon TMC	B	B	A	-	-	-
Freon T-P35	A	A	A	-	-	-
Freon TA	A	A	C	-	-	-
Freon TC	A	B	A	-	-	-
Freon MF	A	D	A	-	-	-
Freon BF	B	D	A	-	-	-
Fuel Oil	A	D	A	-	A	-
Fuel, ASTM	A	A	D	A	-	-
Fuel, ASTM	B	A	D	A	-	-

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Fuel, ASTM	C	B	D	A	-	-
Fumaric Acid	A	D	A	-	-	-
Furan	D	C	D	-	-	D
Furfural	D	C	D	-	C	D
Furfuryl Alcohol	D	C	D	-	-	D
Gallic Acid	B	B	B	-	-	D
Gasoline, Reg	A	D	A	-	C	B
Gasoline, Hi-Test	A	D	A	D	-	-
Gasoline, Lead Free	A	D	A	D	C	-
Gelatin	A	A	A	-	A	D
Gluconic Acid	C	C	A	-	-	D
Glucose	A	A	A	A	A	D
Glue	A	A	C	A	A	-
Glycerine (Glycerol)	A	A	A	A	A	D
Glycois	A	A	A	-	-	D
Grease	A	D	A	-	-	A
Green Sulfate Liquor	-	A	-	-	-	D
Halowax Oil	D	D	A	-	-	-
Heptachlor in Petroleum Solvents	B	D	A	-	-	C
Heptachlor in Petroleum Solvents, Water Spray	B	D	A	-	-	-
Heptanal (Heptaldehyde)	D	B	D	-	-	-
Heptane	A	D	A	-	A	B
Heptane Carboxylic Acid	C	C	A	-	-	-
Hexaldehyde	D	B	D	-	-	B
Hexane	A	D	A	-	A	B
Hexene	B	D	A	-	-	A
Hexanol (Hexyl Alcohol)	A	A	A	-	A	-
Hexylene	A	C	A	-	-	-
Hexylene Glycol	A	A	A	-	-	D
Hexyl Methyl Ketone	D	B	D	-	-	-
Hi-Tri (Trichloroethylene)	C	D	A	-	-	D
Hydraulic Fluid (Petroleum)	A	D	A	C	D	-
Hydraulic Fluid (Phospate Ester Base)	D	A	D	-	-	D
Hydraulic Fluid (Poly Alkylene Glycol Base)	A	A	A	-	-	-
Hydrobromic Acid	C	A	A	-	A	D
Hydrobromic Acid, 5%	D	A	A	-	A	D

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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Hydrobromic Acid, 15%	D	A	A	-	A	D
Hydrobromic Acid, 37%	-	A	A	-	A	D
Hydrocyanic Acid	B	C	A	-	A	D
Hydrofluoric Acid	D	C	A	D	A	D
Hydrofluosilic Acid	B	A	A	-	A	-
Hydrogen Gas	-	-	-	-	A	A
Hydrogen Peroxide, 3%	C	A	-	-	A	-
Hydrogen Peroxide, 10%	D	A	-	-	A	-
Hydrogen Peroxide, 30%	D	C	-	-	A	-
Hydrogen Peroxide, 90%	D	C	B	C	D	-
Hydrogen Sulfide	-	-	-	-	A	-
Hydroquinone	D	B	D	-	A	-
Hypochlorous Acid	D	B	A	D	A	-
Ink Oil (Linseed Oil Base)	B	B	A	-	-	-
Insulating Oil	A	D	A	-	-	-
Iodine	D	D	C	-	A	D
Iron Acetate	D	B	D	-	-	-
Iron Hydroxide	B	B	C	-	-	-
Iron Salts	A	A	A	-	-	-
Iron Sulfate	A	A	A	-	-	-
Iron Sulfide	A	A	A	-	-	-
Isomyl Acetate	D	B	D	-	-	D
Isomyl Alcohol	A	A	A	-	-	-
Isoamyl Bromide	D	D	B	-	-	-
Isoamyl Butyrate	D	C	D	-	-	D
Isoamyl Chloride	D	D	B	-	-	-
Isomyl Ether	D	D	D	-	-	-
Isoamyl Phthalate	D	B	C	-	-	-
Isobutanel (Isobutyl Alcohol)	B	A	B	-	-	D
Isobutyl Acetate	D	B	D	-	-	D
Isobutyl Aldehyde	D	B	D	-	-	-
Isobutyl Amine	D	B	D	-	-	-
Isobutyl Bromide	D	D	B	-	-	-
Isobutyl Carbinol	A	A	B	-	-	-
Isobutyl Chloride	D	D	B	-	-	-
Isobutylene	A	D	A	-	-	C

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Isobutyl Ether	D	D	D	-	-	-
Isocyanates	D	B	C	-	-	-
Isoctane	A	D	A	-	A	-
Isopentane	A	D	A	-	-	A
Isopropyl Acetate	D	B	D	-	B	D
Isopropyl Alcohol (iso-propanol)	B	A	B	-	A	-
Isopropyl Amine	C	B	D	-	-	D
Isopropyl Benzene	D	D	A	-	-	-
Isopropyl Chloride	D	D	B	-	-	D
Isopropyl Ether	C	D	D	-	B	D
Isopropyl Toluene	D	D	A	-	-	-
Jet Fuels (JP1-JP6)	A	D	A	-	B	B
Kerosene	A	D	A	D	A	A
Ketones	D	A	D	-	C	-
Lactic Acid	C	C	A	A	A	-
Lacquers	D	D	D	-	D	D
Lacquer Solvents	D	D	D	D	D	D
Lard	A	C	A	B	A	A
Lauryl Alcohol	A	A	B	-	-	-
Lead Acetate	C	B	C	D	A	D
Lead Nitrate	A	A	A	-	A	D
Lead Sulfamate	B	A	A	-	A	-
Lead Sulfate	A	A	A	-	A	-
Ligroin	A	D	A	-	A	B
Lime Water	C	A	A	-	-	-
Linseed Oil	A	A	A	-	A	B
Lindol (Tricresyl Phosphate)	D	A	A	-	-	B
Liquid Soap	A	A	A	-	-	-
Liquid Petroleum Gas	A	D	A	-	-	A
Lubricating Oils	A	D	A	-	A	-
Lye (Sodium Hydroxide)	B	A	D	-	A	D
Magnesium Acetate	D	B	D	-	-	-
Magnesium Carbonate	A	A	A	-	A	-
Magnesium Chloride	A	A	A	A	A	A
Magnesium Hydrate	B	A	B	-	-	-
Magnesium Hydroxide	B	A	A	-	A	D

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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Magnesium Nitrate	A	A	A	-	A	-
Magnesium Sulfate	A	A	A	A	A	-
Malathion 50 in Aromatic Solvents	C	D	A	-	-	D
Malathion 50 in Aromatic Solvents, Water Spray	C	D	A	-	-	D
Maleic Acid	D	C	A	-	A	-
Maleic Anhydride	D	C	A	-	-	-
Malic Acid	B	D	A	B	A	-
Manganese Sulfate	A	A	A	-	A	D
Manganese Sulfide	A	B	A	-	-	-
Manganese Sulfite	A	B	A	-	-	-
Mercuric Chloride	B	A	A	-	A	A
Mercury	A	A	A	-	A	A
Methane	A	D	A	-	A	C
Methyl Acetate	D	B	D	-	B	D
Methyl Acrylate	D	B	D	-	-	D
Methacrylic Acid	D	B	D	-	-	D
Methyl Alcohol (Methanol)	A	A	C	A	A	-
Methyl Benzene (Toluene)	D	D	A	-	-	-
Methyl Bromide	D	D	B	-	D	D
Methyl Butyl Ketone	D	B	D	-	D	D
Methyl Cellosolve	C	B	D	-	A	D
Methyl Chloride	C	C	A	D	C	B
Methyl Cyclohexane	D	D	B	-	-	-
Methylene Bromide	D	D	B	-	-	C
Methylene Chloride	D	D	B	-	-	D
Methyl Ethyl Ketone (MEK)	D	A	D	D	-	D
Methyl Formate	D	B	C	-	-	-
Methyl Hexanol	A	A	B	-	-	-
Methyl Hexyl Ketone	D	B	D	-	-	D
Methyl Isobutyl Carbinol	B	A	B	-	A	-
Methyl Isobutyl Ketone (MIBK)	D	A	D	-	A	D
Methyl Isopropyl Ketone	D	C	D	-	-	D
Methyl Propyl Ether	D	D	D	-	-	-
Methyl Propyl Ketone	D	B	D	-	-	-
Methyl Methacrylate	D	D	D	-	-	D
Methyl Salicylate	D	B	C	-	-	-

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Methyl tert-Butyl Ether (MTBE)	D	D	D	-	-	-
Mineral Oil	A	D	A	-	-	A
Mineral Spirits	A	D	A	-	B	-
Monochlorobenzene	D	D	A	-	B	D
Monochlorodifluoromethane (Freon 22)	D	A	D	-	-	-
Monomethylether	A	A	C	-	-	-
Monovinyl Acetate	D	C	A	-	-	D
Motor Oil	A	D	A	-	A	A
Muriatic Acid	-	A	A	-	-	-
Naphtha	A	D	A	D	A	D
Napthalene	D	D	A	-	B	B
Napthenic Acid	C	D	A	-	-	-
Neatsfoot Oil	A	B	A	-	-	A
Neu-Tri (Trichloroethylene)	C	D	A	-	-	D
Nickel Acetate	D	B	D	-	A	D
Nickel Chloride	A	A	A	A	A	C
Nickel Nitrate	A	A	A	-	A	D
Nickel Plating Solution	B	B	A	-	-	-
Nickel Sulfate	A	A	A	-	A	C
Niter Cake	A	A	A	-	-	A
Nitric Acid, 10%	D	C	C	-	A	-
Nitric Acid, 20%	D	C	A	-	A	-
Nitric Acid, 30%	D	C	A	-	A	-
Nitric Acid, 30-70%	D	D	C	-	C	-
Nitric Acid, Red Fuming	D	D	D	-	D	-
Nitrobenzene	D	D	B	D	A	D
Nitrogen Gas	A	A	A	-	-	A
Nitrogen Tetraoxide	D	D	D	-	-	D
Nitromethane	D	B	D	-	-	D
Nitropropane	D	B	D	-	-	D
Nitrous Oxide	A	A	A	-	A	A
Octadecanoic Acid	A	C	C	-	-	-
Octane	A	D	A	-	-	D
Octanol (Octyl Alcohol)	B	B	A	-	-	A
Octyl Acetate	D	B	D	-	-	D
Octyl Carbinol	A	A	B	-	-	-

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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Octylene Glycol	A	A	A	-	-	-
Oil, Petroleum	A	D	A	-	B	-
Oil, ASTM #1	A	D	A	-	B	-
Oil, ASTM #2	A	D	A	-	B	-
Oil, ASTM #3	A	D	A	-	B	-
Oleic Acid	B	B	C	D	A	B
Oleum (Fuming Sulfuric Acid)	D	D	D	-	D	-
Olive Oil (Non FDA)	A	B	A	-	A	A
Orthodichlorobenzene	D	D	A	-	-	-
Oxalic Acid (Cold)	B	A	A	B	A	B
Oxygen, Cold	C	A	A	-	A	A
Oxygen, Hot	A	A	-	A	-	D
Ozone	D	A	A	-	D	A
Paint Thinner (Duco)	D	D	C	-	-	D
Palmitic Acid (Hexadecanoic Acid)	A	B	A	D	A	A
Palm Oil	A	B	A	-	-	-
Papermaker's Alum	A	A	A	-	-	-
Paradichlorobenzene	D	D	A	-	-	-
Paraffin	A	D	A	-	A	A
Paraformaldehyde	B	B	C	-	-	-
Peanut Oil	A	D	A	-	-	B
Pentane	A	D	A	-	D	D
Perchloroethylene	C	D	A	-	B	D
Perchloric Acid	D	B	A	D	C	D
Petrolatum	A	D	A	-	D	A
Petroleum, Crude	A	D	A	-	B	A
Petroleum Ether (Naphtha)	A	D	A	-	-	A
Petroleum Oils	A	D	A	-	-	A
Phenol 10%	D	C	A	-	B	D
Phenol Sulfonic Acid	D	C	A	-	-	D
Phenyl Chloride	D	D	A	-	-	-
Phenylhydrazine	D	C	A	-	C	-
Phorone	D	B	C	-	-	D
Phosphate Esters	D	A	C	-	-	-
Phosphoric Acid, 10%	A	A	A	-	A	-
Phosphoric Acid, 10-85%	C	A	A	-	A	-

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Phosphorous Trichloride	D	A	A	-	D	-
Pickling Solution	C	C	B	-	-	D
Picric Acid, Molten	C	C	C	-	A	-
Picric Acid, Water Soln.	B	B	C	-	A	-
Pinene	A	D	A	-	-	B
Pine Oil	C	D	B	-	-	A
Piperidine	D	D	D	-	-	C
Pitch	B	D	C	-	-	-
Plating Solution, Chrome	B	A	B	-	-	D
Plating Solution, Others	B	A	B	D	-	-
Polyvinyl Acetate Emulsion (PVA)	C	A	C	-	A	-
Polyethylene Glycol	A	A	A	-	-	-
Polypropylene Glycol	A	A	A	-	A	-
Potassium Bicarbonate	A	A	A	-	A	D
Potassium Bisulfate	A	A	A	-	A	D
Potassium Bisulfite	A	A	A	-	-	D
Potassium Carbonate	A	A	A	-	A	D
Potassium Chloride	A	A	A	-	A	D
Potassium Chromate	D	B	A	-	A	D
Potassium Cyanide	A	A	A	-	A	A
Potassium Dichromate	D	B	A	-	A	B
Potassium Hydrate	B	A	C	-	-	-
Potassium Hydroxide	C	A	C	C	A	D
Potassium Nitrate	A	A	A	-	A	D
Potassium Permanganate	D	A	A	-	A	D
Potassium Silicate	A	A	A	-	-	-
Potassium Sulfate	A	A	A	-	A	A
Potassium Sulfide	A	A	A	-	A	D
Potassium Sulfite	A	A	A	-	A	A
Producer Gas	A	D	A	-	-	A
Propanediol	A	A	A	-	-	-
Propyl Acetate	D	B	D	-	-	D
Propyl Alcohol (Propanol)	A	A	A	-	A	-
Propyl Aldehyde	D	B	D	-	-	-
Propyl Chloride	D	C	B	-	-	-
Propylene Dichloride	D	D	B	-	D	C

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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Propylene Glycol	A	A	A	-	A	D
Pydraul Hydraulic Fluids	D	B	C	-	-	-
Pyranol	C	D	A	-	-	-
Pyridine	D	B	D	D	A	D
Pyroligneous Acid	C	B	A	-	-	D
Pyrrole	D	C	C	-	-	-
Rape Seed Oil	B	B	A	-	-	B
Red Oil (Crude Oleic Acid)	B	B	B	-	-	A
Richfield A Weed Killer, 100%	D	D	C	-	-	-
Richfield B Wedd Killer, 33%	B	D	C	-	-	-
Rosin Oil	A	D	A	-	-	-
Rotenone and Water	A	A	A	-	-	-
Rum	FDA TUBE REQUIRED					
Sal Ammoniac (Ammonium Chloride)	A	A	A	-	-	A
Salicylic Acid	D	A	A	-	A	A
Salt Water (Sea Water)	A	A	A	A	A	-
Sewage	A	C	A	-	-	D
Silicate of Soda (Sodium Silicate)	A	A	-	A	-	-
Silicate Esters	B	D	A	-	-	A
Silicone Greases	A	A	A	-	-	A
Silicone Oils	A	A	A	-	A	A
Silver Nitrate	A	A	A	A	A	A
Skelly Solvent	A	D	A	-	-	-
Skydrol Hydraulic Fluids	D	A	D	-	-	-
Soap Solutions	A	A	A	B	A	A
Soda Ash (Sodium Carbonate)	A	A	A	-	A	B
Soda, Caustic (Sodium Hydroxide)	B	A	D	-	-	B
Soda, Lime	B	A	C	-	-	-
Soda Niter (Sodium Nitrate)	A	A	A	-	-	-
Sodium Acetate	D	B	D	-	A	C
Sodium Aluminate	A	A	A	-	-	D
Sodium Bicarbonate	A	A	A	A	A	A
Sodium Bisulfate	A	A	A	-	A	-
Sodium Bisulfite	A	A	A	A	A	-
Sodium Borate	A	A	A	A	-	-
Sodium Carbonate	A	A	A	A	A	B
Sodium Chloride	A	A	A	B	A	A

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Sodium Chromate	D	B	C	-	-	D
Sodium Cyanide	A	A	A	-	A	-
Sodium Dichromate	D	B	C	-	-	-
Sodium Fluoride	A	A	A	-	A	D
Sodium Hydroxide	C	A	C	A	A	B
Sodium Hypochlorite	D	A	A	B	B	D
Sodium Metaphosphate	A	A	A	-	A	-
Sodium Nitrate	C	A	A	D	A	-
Sodium Nitrite	A	A	A	-	A	-
Sodium Perborate	C	A	A	-	A	-
Sodium Peroxide	C	A	A	-	A	D
Sodium Phosphate	B	A	A	-	A	A
Sodium Silicate	A	A	A	A	A	-
Sodium Sulfate	A	A	A	-	A	A
Sodium Sulfide	A	A	A	A	A	A
Sodium Sulfite	A	A	A	A	A	A
Sodium Thiosulfate	A	A	A	-	A	A
Soybean Oil	A	A	A	-	A	B
Stannic Chloride	A	B	A	-	A	-
Stannic Sulfide	A	A	A	-	A	-
Stannous Chloride	A	A	A	-	A	-
Stannous Sulfide	A	A	A	-	-	-
Stearic Acid	B	B	A	B	A	A
Stoddards Solvent	A	D	A	D	C	A
Styrene	D	D	A	-	-	C
Sugar Sols. (Sucrose) Non FDA	A	A	A	-	A	-
Sulfamic Acid	B	A	C	-	A	D
Sulfite Liquors	B	B	A	-	-	D
Sulfonic Acid	D	D	D	-	-	D
Sulfur (Molten)	B	A	A	-	-	D
Sulfur Chloride	C	D	A	-	C	C
Sulfur Dioxide	C	C	A	-	A	-
Sulfur Hexafluoride	A	A	A	-	-	B
Sulfur Trioxide	C	C	A	-	D	D
Sulfuric Acid, 25%	B	-	A	D	A	D
Sulfuric Acid, 25-50%	D	-	A	D	A	D
Sulfuric Acid, Fuming	D	D	A	D	D	D



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	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Sulfurous Acid	C	C	A	D	A	C
Tall Oil	A	D	A	-	-	-
Tallow	A	D	A	-	A	A
Tannic Acid	C	A	A	B	A	A
Tar	C	D	B	-	-	-
Tartaric Acid	C	B	A	A	A	A
Terpineol	D	C	A	-	-	B
Tertiary Butyl Alcohol	A	A	A	-	A	-
Tetrachlorobenzene	D	D	B	-	-	-
Tetrachloroethane	D	D	A	-	B	D
Tetrachloroethylene	D	D	A	-	D	D
Tetraethylene Glycol	A	A	A	-	-	-
Tetrachloromethane	C	D	A	-	-	-
Tetrachloronaphthalene	D	D	B	-	-	-
Tetraethyl Lead	B	D	A	-	-	B
Tetrahydrofuran (THF)	D	D	D	-	B	C
Thionyl Chloride	D	D	B	-	-	C
Tin Chloride	A	A	A	B	-	A
Tin Tetrachloride	A	A	A	-	-	A
Titanium Tetrachloride	B	C	A	-	A	A
Toluene (Toluol)	C	D	A	D	A	D
Toluene Diisocyanate (TDI)	C	A	B	-	-	-
Toxaphene	B	D	A	-	-	-
Transformer Oils (Petroleum Base)	A	D	A	-	-	-
Transformer Oils	D	D	A	-	-	A
Transmission Fluids - A	B	D	A	-	-	A
Transmission Fluids - B	C	D	A	-	-	-
Tricetin	B	A	D	-	-	-
Tributyl Phosphate	D	B	D	-	-	D
Trichlorobenzene	D	D	B	-	-	C
Trichloroethane	D	D	A	-	C	D
Trichloroethylene	D	D	A	D	C	D
Trichloropropane	D	D	A	-	-	D
Tricresyl Phosphate (TCP)	D	B	B	-	C	B
Triethylene Glycol	A	A	A	-	-	D
Trinitrotoluene (TNT)	D	D	B	-	-	-
Triphenyl Phosphate	D	B	C	-	-	A

	Buna/Nitrile	EPDM	Viton (FKM)	Silicone	PP	Urethane
Trisodium Phosphate	A	A	A	-	A	D
Tung Oil	A	D	A	-	-	C
Turbine Oil	B	D	A	-	-	A
Turpentine	B	D	A	D	B	D
2, 4D with 10% Fuel Oil	A	D	A	-	-	-
Ucon Hydrolube Oils	A	A	A	-	-	D
Undecanol	A	A	B	-	-	-
Unsymmetrical Dimethyl-Hydrazine (UDMH)	D	A	D	-	-	-
Uran	B	B	C	-	-	-
Varnish	B	D	A	-	A	C
Vegetable Oils	A	A	A	-	-	-
Versilube	A	A	A	-	-	-
Vinegar	C	A	A	-	A	D
Vinyl Acetate	D	B	A	-	-	-
Vinyl Benzene	D	D	A	-	-	C
Vinyl Chloride (Monomer)	D	D	A	-	-	C
Vinyl Ether	D	C	D	-	-	-
Vinyl Toluene	D	D	A	-	-	-
Vinyl Trichloride	D	D	A	-	-	-
V.M. & P. Naptha	A	D	A	-	-	-
Water, Fresh (Non FDA)	A	A	A	B	A	D
Water, Salt	B	A	A	A	A	-
Whiskey, Wines	FDA TUBE REQUIRED					
White Liquor	A	C	A	-	A	-
White Oil	A	D	A	-	-	A
Wood Alcohol (Methanol)	A	A	D	-	-	D
Xylene (Xy101)	C	D	A	D	D	D
Xylidine	D	D	C	-	-	-
Zeolites	C	A	A	-	-	A
Zinc Acetate	C	B	D	-	A	A
Zinc Carbonate	A	A	A	-	-	-
Zinc Chloride	C	A	A	B	A	-
Zinc Chromate	A	A	A	-	-	D
Zinc Sulfate	A	A	A	-	A	D



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