





MATERIAL COMPATIBILITY

iii

KEY

A = Excellent
 B = Good
 C = Maybe Suitable
 D = Unsuitable
 ~ = No Data

1 = Satisfactory to 72 F
 2 = Satisfactory to 120 F
 3 = Satisfactory for O-Rings

	EPOXY	SS316	SS304	CAST BRONZE	CAST IRON	WCB	ALU-BRONZE	VITON	BUNA N	NEOPRENE	NITRILE	EPDM	SILICONE	CARBON/GRAPHITE	PTFE
Calgon	A	A	A	C	D	~	~	A	A	A	A	A	~	~	~
Cane Juice	A	A	A	A	A	~	~	A	A	A	A	A	A	~	~
Carboic Acid (See Phenol)	C1	B	B	A	D	~	~	A	D	C	D	B	D	A	~
Carbon Bisulfide	A	B	A	B	~	~	~	A	C	D	C	D	~	~	~
Carbon Dioxide	A1	A1	A	A	D	~	~	B	A	B	A	B	B	A	~
Carbon Dioxide (Dry)	A1	A1	A	A	D	~	~	B	A	B	A	B	B	A	~
Carbon Dioxide (Wet)	A1	A1	A	A	D	~	~	B	A	B	A	B	B	A	~
Carbon Disulfide	C1	B	A1	D	A	D	~	A1	D	D	D	D	~	A	A
Carbon Monoxide	A1	A	A	C	D	B	A	A	A	A	A	A	A	A	A
Carbon Tetrachloride	A1	B	B	A	C	B	~	A	C	D	C	D	D	A	A
Carbonated Water	A	A	A	C	D	~	~	A	A	A	A	~	~	~	~
Carbonic Acid	B1	A	A1	A	D	D	~	A	B	A	B	A	A	A	A
Catsup	A1	A	A	D	D	~	~	A	A	C	A	C	~	~	~
Chloroacetic Acid	C1	A1	B1	~	~	D	D	D	B	D	B	B	~	A	A
Chloric Acid	~	C	D	~	~	D	D	~	~	~	~	~	~	D	A
Chlorinated Glue	A	A	~	A	D	~	~	A	C	D	C	B	~	~	~
Chlorine, Anhydrous Liquid	C1	C	C1	D	C	D	D	A	D	D	D	C	~	A	A
Chlorine, Dry	~	B	C1	~	~	D	D	A	D	C	D	A	D	A	A
Chlorine Water	A1	C	C	~	~	D	D	A	D	D	D	C	~	A	A
Chlorobenzene (Mono)	C1	B	A	A	D	D	~	A	D	D	D	D	D	A	A
Chloroform	C1	A	B1	D	D	D	C	A	D	D	D	D	D	A	A
Chlorosulfonic Acid	C1	B2	D	D	D	D	D	C	D	D	D	D	D	A	A
Chocolate Syrup	A	A	A	D	D	~	~	A	A	A	A	~	~	~	~
Chromic Acid 5%	B1	A	B	D	D	~	~	A	D	D	D	A	C	A	~
Chromic Acid 10%	C1	B	B	D	D	~	~	B	D	D	D	C	C	A	~
Chromic Acid 30%	C1	B2	B1	D	D	~	~	A	D	D	D	B	C	A	~
Chromic Acid 50%	D	B2	C2	D	D	~	~	A	D	D	D	B	C	A1	~
Cider	A	A	A	A	D	~	~	A	A	A	A	~	~	~	~
Citric Acid	A1	A2	B2	C	D	D	D	A	A	A	A	A	A	A	A
Citric Oils	A	A	A	D	D	~	~	A	A	D	A	~	~	~	~
Clorox (Bleach)	A	A	A	D	D	~	~	A	B	B	B	B	~	~	~
Coffee	A	A	A	D	~	C	A	A	A	A	A	A	A	~	A
Copper Chloride	A	D	D	D	D	D	B	A	A	A	A	A	A	~	A
Copper Cyanide	B1	B	B	C	D	~	~	A	A	A	A	A	A	A	~
Copper Fluoborate	A	D	D	D	D	~	~	A	B	A	B	~	~	~	~
Copper Nitrate	A1	B	A	D	~	D	D	A	A	A	A	~	~	A	A
Copper Sulfate 5%	A1	B	B	C	D	D	D	A	A	A	A	A	A	A	A
Copper Sulfate >5%	A1	B	B	C	D	D	D	A	A	A	A	A	A	A	A
Cream	A	A	A	D	D	~	~	A	A	C	A	~	~	~	~
Cresols	A1	A	A2	C	C	D	B	A	D	D	D	D	D	A	A
Cresylic Acid	A1	A	A1	C	C	~	D	A	D	D	D	D	D	A	A
Cyanic Acid	A1	A	A	D	D	~	~	A	C	C	C	~	~	A	~
Cyclohexane	A1	A	A	D	A	C	B	A	A	D	A	D	D	A	A
Detergents	A1	A1	A1	A	~	~	~	A	A	B	A	A	A	A	~
Dichloroethane	B2	B	B	~	~	C	D	C	~	D	~	~	~	A	A
Diesel Fuel	A1	A	A	A	A	B	B	A	A	B	A	D	D	A	A

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01

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	EPOXY	SS316	SS304	CAST BRONZE	CAST IRON	WCB	ALU-BRONZE	VITON	BUNA N	NEOPRENE	NITRILE	EPDM	SILICONE	CARBON/GRAPHITE	PTFE
Diethylamine	A	B1	~	A	~	B	~	D	C	C	C	B	B	A	A
Diethylene Glycol	C1	A2	A	A	A	~	~	A	A	A	A	A	B	A	~
Diphenyl Oxide	A	B1	B1	A	A	~	~	A	A	D	A	D	C	~	~
Dyes	A	A	A	C	~	~	~	A	~	C	~	~	~	~	~
Epsom Salts (Magnesium Sulfate)	A	B	B1	C	A	~	~	A	A	A	A	A	A	A	~
Ethane	A1	A1	~	A	~	~	~	A	A	B	A	D	D	A	~
Ethanolamine	A1	A	A	A	~	~	~	D	B	B	B	C	B	A	~
Ether	A1	B1	B1	A	C	~	~	C	D	D	D	C	D	A	~
Ethyl Acetate	C1	B	B	A	A	D	B	D	D	D	D	B	A	A	A
Ethyl Chloride	A1	A	A	A	C	C	B	A	A	B	A	A	D	A	A
Ethyl Sulfate	A1	D1	~	A	~	~	~	A	A	~	A	~	C	A	~
Ethylene Chloride	B1	A	A1	~	~	C	D	B	D	D	D	D	B	A	A
Ethylene Dichloride	C1	A1	A1	C	A	~	~	A	D	D	D	C	D	A	~
Ethylene Glycol	C1	A1	A1	A	A	A	A	A	A	A	A	A	A	A	A
Ethylene Oxide	A1	C1	C1	A	D	D	D	D	D	D	D	C	D	A	A
Fatty Acids	A1	A	B	C	C	D	C	A	B	B	B	D	C	A	A
Ferric Chloride	A1	C1	D	D	D	D	D	A	A	B	A	A	B	A	A
Ferric Nitrate	A1	A1	B1	D	~	D	C	A	A	A	A	A	C	A	A
Ferric Sulfate	A1	A1	B	D	D	D	D	A	A	A	A	A	B	A	A
Ferrous Chloride	A1	C1	D	C	D	D	D	A	A	A	A	~	~	A	A
Ferrous Sulfate	A1	B	B1	D	D	~	~	~	A2	~	A2	A	~	A	~
Fluoboric Acid	A	C	B1	D	D	~	~	~	A	A	A	A2	~	A	~
Fluorine	D	C	C	D	D	~	~	B	~	~	~	A1	D	C	~
Fluosilicic Acid	C	B1	C	D	D	D	C	~	A	A	A	A2	~	A	A
Formaldehyde 40%	A1	A1	A1	A	B	~	~	A	B	B	B	A	~	A	~
Formaldehyde 100%	A	A	C	A	C	~	~	D	C	C	C	A	B	~	~
Formic Acid	C1	C	B	C	D	D	B	C	B	A	B	A	B	A	A
Freon 11	A	A	C	A	C	D	B	A	B	D	B	D	D	~	A
Freon 12	A	~	D	A	A	D	B	B	A	A	A	B	D	~	A
Freon 22	A	~	~	A	C	D	B	D	D	A	D	A	D	~	A
Freon 113	A	~	~	A	~	~	~	B	A	C	A	D	D	~	~
Freon TF	A	~	~	A	~	~	~	B	A	A	A	D	D	~	~
Fruit Juice	A	A	~	C	D	~	~	A	A	A	A	~	~	~	~
Fuel Oils	A1	A	A	A	A	B	B	A	B	C	B	D	C	A	A
Furan Resin	A1	A	A1	A	~	D	~	~	D	D	D	C	D	~	A
Furfural	A1	B	B	A	A	D	B	D	D	D	D	B	D	A	A
Gallic Acid	~	B	B	A	~	D	B	A	B	B	B	B	~	B	A
Gasoline	A	A	A	A	A	C	A	A	A	B	A	D	D	A	A
Gelatin	B	A2	A2	A	D	D	A	A	A	A	A	A	A	A	A
Glucose	B	A	A1	A	A	C	A	A	A	A	A	A	A	A	A
Glue: P.V.A	A	A2	A1	A	A	D	B	A	A	A	A	A	A	B	A
Glycerin	A	A	A2	A	A	B	A	A	A	A	A	A	A	A	A
Glycolic Acid	A	A	A	~	~	D	~	A	A	A	A	A	A	A	A
Gold Monocyanide	A	A	A	A	D	~	~	A	A	A	A	~	~	~	~
Grape Juice	A	A	A	C	D	~	~	A	A	A	A	~	~	~	~



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Grease	A	A	~	A	A	~	~	A	D	D	D	~	~	~	~
Heptane	A	A	A	A	A	B	B	A	A	A	A	D	D	B	A
Hexane	B	A	A	A	A	B	B	A	A	B	A	D	D	A	A
Honey	A	A	~	A	A	~	~	A	~	~	~	~	~	~	~
Hydraulic Oil - Petroleum	A	A	A	A	A	~	~	A	A	B	A	D	C	B	~
Hydraulic Oil - Synthetic	A	A	A	A	~	~	~	A	~	~	~	~	~	B	~
Hydrazine	A	A	A	D	C	~	~	A	B	B	B	A	C	~	~
Hydrobromic Acid 20%	B1	D	D	D	D	~	~	A	D	B	D	A	D	A	~
Hydrobromic Acid 100%	D	D	D	D	D	~	~	A	D	D	D	A	D	A	~
Hydrochloric Acid - Dry Gas	A	D	D	D	A	~	~	~	~	~	~	~	~	A	~
Hydrochloric Acid 20%	A1	D	D	D	D	D	D	A	~	~	~	~	~	A	A
Hydrochloric Acid 37%	A	D	D	D	D	~	~	A	B	B	B	A	B	A	~
Hydrochloric Acid 100%	~	D	D	D	D	~	~	A	D	D	D	C	D	A	~
Hydrocyanic Acid	A	B1	B1	D	D	~	~	A	B	A	B	A	~	A	~
Hydrocyanic Acid (Gas 10%)	~	~	~	D	~	~	~	A	B	A	B	A	~	~	~
Hydrofluoric Acid 20%	A	D	D	D	D	~	~	A1	B1	B1	B1	A1	D	A	~
Hydrofluoric Acid 50%	C2	D	D	D	D	~	~	A1	B1	B1	B1	A1	D	A	~
Hydrofluoric Acid 75%	B1	D	D	D	D	D	~	A1	D	D	D	C	D	A2	A
Hydrofluoric Acid 100%	~	B1	B1	D	D	D	B	A1	D	D	D	C	D	~	A
Hydrofluosilicic Acid 20%	C1	B1	C2	D	D	~	~	A	A	C	A	A	~	A	~
Hydrofluosilicic Acid 100%	C1	C2	D	D	D	~	~	A	B	B	B	A	D	A	~
Hydrogen Gas	~	A	A	A	~	A	A	A	A	A	A	A	C	A	A
Hydrogen Peroxide 10%	C1	B	B2	C	C	~	~	A	~	~	~	~	B	C	~
Hydrogen Peroxide 30%	B	B	B2	B	B	~	~	A	~	~	~	~	B	C	~
Hydrogen Peroxide 50%	~	A2	B2	B	~	~	~	A	~	~	~	~	B	C	~
Hydrogen Peroxide 100%	A	A2	B2	D	B	~	~	A	B	A	B	A	B	C	~
Hydrogen Sulfide (Aqua)	A	C1	C	D	D	~	~	D	D	A	D	A	C	A	~
Hydrogen Sulfide (Dry)	A	B	C1	D	D	D	D	D	A	A	A	A	C	A	A
Hydroxyacetic Acid 70%	A	~	~	D	B	~	~	A	A	A	A	A	~	~	~
Ink	A	C	C	D	D	D	~	A	A	A	A	~	~	~	A
Iodine	C	C	C	D	D	C	B	A	B	D	B	B	~	A	A
Iodine (In Alcohol)	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Iodoform	~	B	~	A	~	D	B	~	~	A	~	A	~	~	A
Isobutane	A	~	~	~	~	~	~	A	A	D	A	~	~	~	~
Isopropyl Acetate	A	A	C	B	~	~	~	D	D	D	C	B	D	A	~
Isopropyl Ether	D	A	A	A	~	C	B	D	B	C	B	D	D	A	A
Jet Fuel (JP3: JP4: JP5)	A	A	A	A	A	~	~	A	A	D	A	D	D	A	~
Kerosene	A	A	A	A	A	B	A	A	A	C	A	D	D	A	A
Ketones	C	A	A	A	~	B	C	D	D	D	D	D	~	A	A
Lacquers	A	A	A1	A	C	~	~	D	D	D	D	D	D	A	~
Lacquer Thinners	A	A	A1	A	C	~	~	D	D	D	D	D	D	A	~
Lactic Acid	B1	B1	B1	C	D	D	D	A	A	A	A	A	A	A	A
Lard	B	A	A	A	A	~	~	A	A	C	A	D	B	A	~
Latex	A	A2	A2	A	~	~	~	A	A	~	A	A	~	~	~
Lead Acetate	A	B1	B	A	A	D	C	D	B	B	B	A	D	A	A
Lead Sulfamate	A	C	C	~	~	~	~	A	B	A	B	A	B	~	~



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	EPOXY	SS316	SS304	CAST BRONZE	CAST IRON	WCB	ALU-BRONZE	VITON	BUNA N	NEOPRENE	NITRILE	EPDM	SILICONE	CARBON/GRAPHITE	PTFE
Ligroin	A	A	~	A	~	~	~	A	A	B	A	D	D	~	~
Lime	A	A	A	A	A	B	A	A	A	A	A	D	~	A	A
Lubricants	A	A2	A2	A	A	~	~	A	A	B	A	D	D	A	~
Magnesium Carbonate	A	A1	A1	A	~	~	~	A	A2	~	A2	A	~	~	~
Magnesium Chloride	A	A1	B1	C	D	D	B	A	A	A	A	A	A	A	A
Magnesium Hydroxide	A	A1	B	A	A	B	B	A	B	B	B	A	A	A	A
Magnesium Nitrate	A	A1	A	D	D	D	C	A	A	A	A	A	~	~	A
Magnesium Oxide	A	A	~	A	A	~	~	C	A	A	A	~	~	~	~
Magnesium Sulfate	A	B	B	C	A	D	~	A	A	A	A	A	A	A	A
Maleic Acid	A	B	A	A	A	D	C	A	D	D	D	D	~	A	A
Maleic Anhydride	A	~	~	~	~	~	~	A	D	D	D	D	~	~	~
Malic Acid	~	A2	A	A	~	D	D	A	A	B	A	D	B	A	A
Mash	A	A	~	A	~	~	~	A	A	A	A	A	~	~	~
Mayonnaise	A	A	C	D	D	~	~	A	C	A	C	~	~	~	~
Melamine	A	D	~	D	D	~	~	A	C	D	C	A	~	D	~
Mercuric Chloride (Dilute)	A	C	D	D	D	~	~	A	A	A	A	A	~	C	~
Mercuric Cyanide	A	B	B	D	~	~	~	A	A	A	A	~	~	A	~
Mercury	A	A	A	D	A	C	D	A	A	A	A	A	~	C	A
Methanol (methyl Alcohol)	B1	A	A	A	A	B	B	A	A	A	A	A	A	A	A
Methyl Acetate	D	A	A	A	~	D	A	D	D	B	D	B	D	A	A
Methyl Acetone	A	~	~	~	~	~	~	D	D	B	D	B	D	~	~
Methyl Acrylate	C	A	A	B	~	~	~	A	D	D	D	~	~	A	~
Methyl Alcohol 10%	B1	A	A	A	A	~	~	D	A	A	A	A	~	A	~
Methyl Bromide	B1	A	A	~	~	~	~	A	B	D	B	D	A	A	~
Methyl Butyl Ketone	C	A	~	A	~	D	~	D	D	D	D	A	A	~	A
Methyl Cellosolve	C	A	A	~	~	~	~	D	C	B	C	B	A	A	~
Methyl Chloride	A	A	A	C	A	D	B	A	D	D	D	C	A	A	A
Methyl Dichloride	A	~	~	~	~	~	~	A	D	~	D	D	~	~	~
Methyl Ethyl Ketone	C1	A	A	A	A	B	B	D	D	D	D	A	D	A	A
Methyl Isobutyl Ketone	C	A2	A	C1	A	~	~	D	D	D	D	C	D	A	~
Methyl Isopropyl Ketone	C	A	~	A	~	D	~	D	D	D	D	B	D	~	A
Methyl Methacrylate	A	~	~	~	~	D	~	D	D	D	D	D	C	~	A
Methylamine	A	A	~	D	~	~	~	D	C1	~	C1	A1	~	~	~
Methylene Chloride	A	B	B	A	A	D	B	B	D	~	D	D	~	A	A
Milk	A	A2	A2	C	D	D	C	A	A	A	A	A	A	A	A
Molasses	A	A	A	D	A	C	B	A	A	A	A	~	~	A	A
Mustard	A	A	A	D	D	~	~	D	C	A	C	~	~	A	~
Naphtha	A	A	A	B	A	~	~	A	C	D	C	D	D	A	~
Naphthalene	A	A	A	C	A	A	B	A	D	D	D	D	D	A	A
Nickel Chloride	A	C	D	D	D	D	D	A	A	B	A	A	A	A	A
Nickel Sulfate	A	B1	B	C	D	D	C	A	A	A	A	A	A	A	A
Nitrating Acid (<15% H2SO4)	~	C	C	D	A	~	~	~	~	A	~	~	~	~	~
Nitrating Acid (>15% H2SO4)	D	C	C	D	C	~	~	~	~	A	~	~	~	~	~
Nitrating Acid (<1% Acid)	~	A	C	D	~	~	~	~	~	A	~	~	~	~	~
Nitrating Acid (>S15% HNO3)	~	D	C	D	C	~	~	~	~	A	~	~	~	~	~



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Nitric Acid (5-10%)	A1	A	A	D	D	D	D	A	D	B	D	B	C	A	A
Nitric Acid (20%)	B1	A	A	D	D	D	D	A	D	D	D	B	D	A	A
Nitric Acid (50%)	D	A1	A	D	D	D	D	A	D	D	D	D	D	D	A
Nitric Acid (Concentrated)	D	A1	A	D	D	D	D	A	D	D	D	D	D	D	A
Nitrous Acid	~	A	A	A	~	~	~	A	~	D	~	A	~	~	~
Nitrobenzene	C1	A	B	C	C	B	B	B	D	D	D	D	D	B	A
Oils - Aniline	A	A	A	A	A	~	~	C	D	D	D	B	D	~	~
Oils - Aninse	A	A	~	A	A	~	~	~	~	D	~	~	~	~	~
Oils - Bay	A	A	~	A	A	~	~	A	~	D	~	~	~	~	~
Oils - Bone	A	A	~	A	A	~	~	A	A	D	A	~	~	~	~
Oils - Castor	A	A	A	A	A	A	A	A	A	A	A	B	A	~	A
Oils - Cinnamon	A	A	A	A	~	~	~	A	~	C	~	~	~	~	~
Oils - Citric	A	A	~	D	D	~	~	A	~	D	~	~	~	~	~
Oils - Clove	A	A	A	A	~	~	~	A	A	C	A	~	~	~	~
Oils - Cocoa Nut	A	A	A	A	A	~	~	A	A	C	A	C	A	~	~
Oils - Cod Liver	A	A	A	A	~	~	~	A	A	B	A	A	B	~	~
Oils - Corn	A	A	~	C	A	A	A	A	A	C	A	C	A	~	A
Oils - Cotton Seed	A1	A	A	A	A	~	~	A	A	C	A	C	A	A	~
Oils - Caresote	A1	B2	A2	A	A	~	~	A	B	C	B	D	D	A	~
Oils - Diesel Fuel (20: 30: 40: 50)	A1	A	A	A	A	~	~	A	A	B	A	D	D	A	~
Oils - Fuel (1: 2: 3: 5A: 5B: 6)	A1	A	A	A	A	~	~	A	B	D	B	D	C	A	~
Oils - Ginger	A	A	A	D	~	~	~	A	A	A	A	A	~	~	~
Oils - Hydraulic (See Hydraulic)	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Oils - Lemon	A	A	A	A	~	~	~	A	~	D	~	D	~	~	~
Oils - Linseed	A	A1	A1	A	~	~	~	A	~	C	A	C	A	A	~
Oils - Mineral	A	A	A	A	~	B	~	A	~	B	A	D	C	A	A
Oils - Olive	A	A	A	A	~	~	~	A	~	B	A	B	D	A	A
Oils - Orange	A	A	A	A	~	~	~	A	A	C	A	~	D	~	~
Oils - Palm	A	A	A	A	A	~	~	A	A	D	A	~	~	~	~
Oils - Peanut	A	A	A	A	A	C	A	A	A	B	A	C	A	~	A
Oils - Peppermint	A	A	A	A	~	~	~	A	D	D	B	~	~	~	~
Oils - Pine	A	A	A	D	C	~	~	A	B	D	D	D	D	~	~
Oils - Grapeseed	A	A	A	A	A	~	~	A	B	B	B	A	D	~	~
Oils - Rosin	A	A1	A1	A	~	~	~	A	A	~	A	~	~	A	~
Oils - Sesame Seed	A	A	A	A	A	~	~	A	A	D	A	~	~	~	~
Oils - Silicone	A	A	B	A	A	A	A	A	A	A	A	A	C	A	A
Oils - Soybean	A	A	A	A	A	B	A	A	D	C	D	C	A	A	A
Oils - Sperm	A	A	A	A	A	~	~	A	A	D	A	~	~	~	~
Oils - Tanning	A	A	A	A	~	~	~	A	A	D	A	~	~	~	~
Oils - Turbine	A	A	A	A	A	D	~	A	B	D	B	D	D	~	A
Oleic Acid	A	B	B1	C	~	D	B	B	C	C	C	B	D	A	A
Oleum 25%	D	B	B2	D	~	D	D	A	D	D	D	D	D	D	A
Oleum 100%	D	B	B2	D	~	~	~	A	D	D	D	D	D	D	~
Oxalic Acid (Cold)	A	B1	B	A	C	D	B	A	B	B	B	A	B	A	A
Paraffin	A	A	A	A	~	C	B	B	A	A	A	D	~	A	A



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Pentane	A	C	C	C	~	B	B	A	A	B	A	D	D	A	A
Perchloroethylene	D	A1	B2	D	A	C	B	A	C	D	C	D	D	A	A
Petrolatum	A	A	~	A	~	~	~	A	A	A	A	A	~	~	~
Phenol (10%)	C	B	B	C	D	C	D	A	D	D	D	B	D	A	A
Phenol (Carbolic Acid)	C	B	B	C	D	~	~	A	D	D	D	B	D	A	~
Phosphoric Acid (<40%)	A	B	A	D	D	D	D	A	D	B	D	B	D	A	A
Phosphoric Acid (>40%)	B1	B	A2	D	D	D	D	A	D	D	D	B	C	A	A
Phosphoric Acid (Crude)	B1	B	D	D	D	~	~	A	D	D	D	B	C	A	~
Phosphoric Acid Anhydride	~	~	~	A	~	~	~	~	~	A	~	~	~	~	~
Phosphoric Acid (Molten)	~	~	~	A	~	~	~	~	~	A	~	~	~	~	~
Photographic Developer	A	A	C	D	D	~	~	A	A	A	A	B	A	A	~
Phthalic Anhydride	~	A	A	B	~	~	~	A	B	A	B	A	~	A	~
Picric Acid	A	B	B	D	A	D	D	A	B	B	B	B	D	A	A
PLATING SOLUTIONS															
Antimony Plating 130 degrees	B	A	A	A	A	~	~	A	A	A	A	~	~	~	~
Arsenic Plating 110 degrees	B	A	A	A	A	~	~	A	A	A	A	~	~	~	~
BRASS PLATING															
Regular Brass Bath 100 degrees	B	A	A	A	A	~	~	A	A	A	A	~	~	A	~
High Speed Brass Bath 110 degrees	B	A	~	A	A	~	~	A	A	A	A	~	~	A	~
BRONZE PLATING															
Cu-Cd Bronze Bath R.T	B	A	A	A	A	~	~	A	A	A	A	A	~	~	~
Cu-Sn Bronze Bath 160 degrees	C	A	A	A	A	~	~	A	A	A	A	A	~	~	~
Cu-Zn Bronze Bath 100 degrees	B	A	A	A	A	~	~	A	A	A	A	~	~	~	~
Cadmium Plating	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Cyanide Bath 90 degrees	B	A	~	A	A	~	~	A	A	A	A	~	~	~	~
Fluoroborate Bath 100 degrees	B1	A	A	A	D	~	~	A	B	C	B	~	~	~	~
Chromium Plating	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Chromic - Sulfuric Bath 130 degrees	C	C	~	C	A	~	~	C	D	D	D	~	~	~	~
Fluosilicate Bath 95 degrees	C	C	~	C	C	~	~	C	D	D	D	~	~	~	~
Fluoride Bath 130 degrees	C	D	~	D	C	~	~	C	D	D	D	~	~	~	~
Black Chrome Bath 115 degrees	C	C	~	C	A	~	~	C	C	D	C	~	~	~	~
Barrel Chrome Bath 95 degrees	C	D	~	D	C	~	~	C	D	D	D	~	~	~	~
COPPER PLATING (CYANIDE)															
Cu Strike Bath 120 degrees	B	A	~	~	A	~	~	A	A	A	A	~	~	~	~
Rochell Salt Bath 150 degrees	C	A	~	~	A	~	~	A	A	B	A	~	~	~	~
High Speed Bath 180 degrees	C	A	~	~	A	~	~	A	A	B	A	~	~	~	~
Copper Plating (Acid)	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Copper Sulfate Bath R.T	D	D	~	D	A	~	~	A	A	A	A	~	~	~	~
Copper Fluoroborate Bath 120 degrees	D	D	A	D	D	~	~	A	B	C	B	~	~	~	~
Copper Plating (Misc)	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Copper Pyrophosphate	B	A	~	A	A	~	~	A	A	A	A	~	~	~	~
Copper (Electroless)	B	~	~	~	~	~	~	A	D	D	D	~	~	~	~
GOLD PLATING															
Cyanide 150 degrees	D	A	~	~	~	~	~	A	A	A	A	~	~	~	~
Neutral 75 degrees	A	C	~	~	~	~	~	A	A	A	A	~	~	~	~
Acid 75 degrees	A	C	~	~	~	~	~	A	A	A	A	~	~	~	~



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Indium Sulfamate Plating R.T	A	C	~	~	~	~	~	A	A	A	A	~	~	~	~	
IRON PLATING																
Ferrous Chloride Bath 190 degrees	D	D	~	~	~	~	~	A	B	D	B	~	~	~	~	
Ferrous Sulfate Bath 150 degrees	D	C	~	~	~	~	~	A	A	B	A	~	~	~	~	
Ferrous Am Sulfate Bath 150 degrees	D	C	~	~	~	~	~	A	A	B	A	~	~	~	~	
Sulfate - Chloride Bath 160 degrees	D	D	~	~	~	~	~	A	B	C	B	~	~	~	~	
Fluoroborate Bath 145 degrees	D	D	~	~	~	~	~	A	B	C	B	~	~	~	~	
Sulfamate 140 degrees	A	D	~	~	~	~	~	A	A	A	A	~	~	~	~	
Lead Fluoroborate Plating	A	C	~	~	~	~	~	A	B	A	B	~	~	~	~	
NICKEL PLATING																
Watts Type 115/160 degrees	D	C	~	~	~	~	~	A	A	A	A	~	~	~	~	
High Chloride 130/160 degrees	D	C	~	~	~	~	~	A	A	B	A	~	~	~	~	
Fluoroborate 100/170 degrees	A	C	~	~	~	~	~	A	B	A	B	~	~	~	~	
Sulfamate 100/140 degrees	A	C	~	~	~	~	~	A	A	A	A	~	~	~	~	
Electroless 200 degrees	B	~	~	~	~	~	~	A	D	D	D	~	~	~	~	
Rhodium Plating 120 degrees	A	D	~	~	~	~	~	A	A	B	A	A	~	~	~	
Silver Plating 80/120 degrees	A	A	~	~	~	~	~	A	A	A	A	A	~	~	~	
Tin Fluoroborate Plating 100 degrees	A	C	~	~	~	~	~	A	B	C	B	~	~	~	~	
Tin Lead Plating 100 degrees	A	C	~	~	~	~	~	A	B	C	B	~	~	~	~	
ZINC PLATING																
Acid Chloride 140 degrees	A	D	~	~	~	~	~	A	A	A	A	~	~	~	~	
Acid Sulfate Bath 150 degrees	D	C	~	~	~	~	~	A	A	B	A	~	~	~	~	
Acid Fluoroborate Bath R.T	A	C	~	~	~	~	~	A	B	C	B	~	~	~	~	
Alkaline Cyanide Bath R.T	A	A	~	~	~	~	~	A	A	A	A	~	~	~	~	
Potash	A	A	A	D	C	~	~	A	A	A	A	~	~	~	~	
Potassium Bicarbonate	A	B	B	D	A	~	~	A	A	A	A	~	~	A	~	
Potassium Bromide	A	B	C	C	~	~	~	A	A	A	A	A	A	A	~	
Potassium Carbonate	A	B1	B	D	A	B	B	A	A	A	A	A	A	A	A	
Potassium Chlorate	A	B1	B	B	~	C	D	A	C	A	C	A	~	A	A	
Potassium Chloride	A	B1	A1	D	A	D	B	A	A	A	A	A	C	C	A	
Potassium Chromate	C	B1	B1	A	A	~	~	A	A	A	A	A	A	A	~	
Potassium Cyanide Solutions	A	B1	B1	D	A	D	D	A	A	A	A	A	A	A	A	
Potassium Dichromate	C	B	B1	A	A	D	C	A	A	A	A	A	A	A	A	
Potassium Ferrocyanide	A	B	B	A	~	~	~	A	A	~	A	A	~	A	~	
Potassium Hydroxide (Caustic Potash)	A	B	B1	D	~	B	C	B	B	B	B	A	C	C	A	
Potassium Nitrate	A	B	B	B	A	D	C	A	A	A	A	A	A	A	A	
Potassium Permanganate	A	B1	B	C	A	D	B	A	C	A	C	A	~	A	A	
Potassium Sulfate	A	B1	B	C	A	D	~	A	A	A	A	A	A	A	A	
Potassium Sulfide	~	A1	B	~	~	D	D	A	A	A	A	A	A	A	A	
Propane (Liquefied)	A	A	A	A	~	~	~	A	A	B	A	D	D	A	~	
Propylene Glycol	C	B	B	A	A	~	~	A	A	C	A	~	~	~	~	
Pyridine	A	A	A	D	A	C	B	D	D	D	D	B	D	A	A	
Pyrogalllic Acid	A	B2	B	B	~	~	~	A	~	~	~	~	~	A	~	
Rosins	A	A1	A1	B	~	~	~	~	A	~	A	~	~	A	~	
Rum	A	A	A	~	~	~	~	A	A	A	A	~	~	~	~	
Rust Inhibitors	A	A	A	B	C	~	~	A	A	C	A	~	~	~	~	



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Salad Dressings	A	A	A	B	D	~	~	A	A	~	A	~	~	~	~
Sea Water	A	A	C	A	~	~	~	A	A	A	A	A	A	A	~
Shellac (Bleached)	A	A	A	A	A	~	~	~	A	D	A	~	~	A	~
Shellac (Orange)	A	A	A	A	A	~	~	~	A	D	A	~	~	A	~
Silicone	A	A	B	A	A	A	A	A	A	A	A	A	C	A	A
Silver Bromide	A	A	D	~	~	~	~	~	~	~	~	~	~	~	~
Silver Nitrate	A	B	A	D	D	D	~	A	B	A	B	A	A	A	A
Soap Solutions	A	A	A1	C	A	B	~	A	A	A	A	A	A	A	A
Soda Ash (see Sodium Carbonate)	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Sodium Acetate	A	B	B1	A	~	D	C	D	B	B	B	A	D	A	A
Sodium Aluminate	A	A	A	B	~	~	~	A	A	A	A	A	~	A	~
Sodium Bicarbonate	A	B	A1	A	C	~	~	A	B	B	B	A	D	A	~
Sodium Bisulfate	A	B1	D	C	D	~	~	A	B	C	B	A	~	A	~
Sodium Bisulfite	A	B1	B1	C	D	~	~	A	A	A	A	A	A	A	~
Sodium Borate (Borax)	A	B2	C	A	~	C	D	A	A	A	A	A	A	A	A
Sodium Carbonate	C1	A	B	B	A	B	B	A	A	A	A	A	A	A	A
Sodium Chlorate	A	B1	B1	B	~	C	D	A	C	A	C	A	~	C	A
Sodium Chloride	A	C	B	C	A	C	B	A	A	A	A	A	A	A	A
Sodium Chromate	C	B1	B	A	A	~	~	A	A	A	A	~	~	A	~
Sodium Cyanide	A	A1	B1	D	A	D	D	A	A	A	A	A	A	A	A
Sodium Fluoride	A	D	D	C	~	D	D	A	A1	D	A1	A	~	A	A
Sodium Hydrosulfite	~	~	~	C	~	~	~	A	~	A	~	~	~	~	~
Sodium Hydroxide (20%)	A2	A	B2	D	A	C	C	B	B	B	B	A	B	A2	A
Sodium Hydroxide (50%)	B2	B	B1	D	C	C	C	B	B	B	B	A	B	A2	A
Sodium Hydroxide (80%)	A1	C	B1	D	C	C	C	B	B	B	B	A	C	A2	A
Sodium Hypochlorite (<20%)	C	C	C	D	D	D	D	A	B	B	B	B	B	B	A
Sodium Hypochlorite (100%)	D	D	D	D	D	D	D	A	B	B	B	B	B	C	A
Sodium Hyposulfate	C	A	A	D	~	~	~	~	~	C	~	~	~	~	~
Sodium Metaphosphate	A	A	A	C	D	D	~	A	A	B	A	A	A	A	A
Sodium Metasilicate	A	A	A	B	~	~	~	A	A	A	A	A	~	~	~
Sodium Nitrate	A	B1	B1	C	A	C	C	A	B	B	B	A	D	C	A
Sodium Perborate	B	B	B	D	C	D	~	A	B	B	B	A	B	C	A
Sodium Peroxide	C	A	A	D	C	C	D	A	B	B	B	A	D	A	A
Sodium Polyphosphate	A	B	B	C	D	~	~	A	A	B	A	A	D	A	~
Sodium Silicate	A	A	B	A	A	B	~	A	A	A	A	A	~	A	A
Sodium Sulfate	A	B	B1	C	A	B	B	A	A	A	A	A	A	A	A
Sodium Sulfide	A	B	D	D	A	~	~	A	A	A	A	A	A	A	~
Sodium Sulfite	A	B	A	C	A	~	~	A	A	A	A	A	A	A	~
Sodium Tetraborate	A	A2	A	~	~	~	~	A	A	~	A	~	~	A	~
Sodium Thiosulfate (Hypo)	A	A2	B	D	C	D	C	A	B	A	B	A	A	A	A
Sorghum	A	A	A	D	A	~	~	A	A	A	A	~	~	~	~
Soy Sauce	A	A	A	A	D	~	~	A	A	A	A	~	~	~	~
Stannic Chloride	A	D	D	D	D	~	~	A	A	D	A	B	B	A	~
Stannic Fluoborate	A	A	~	D	D	~	~	A	A	A	A	~	~	~	~
Stannous Chloride	A	A2	C2	D	~	~	~	A	A	A	A	A	B	~	~
Starch	A	A	A	A	C	B	B	A	C	A	C	A	~	A	A
Stearic Acid	B	A	B	C	C	C	B	A	B	B	B	B	B	A	A



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Stoddard Solvent	A	A	A	A	A	~	~	A	A	C	A	D	D	A	~
Styrene	A	A	A	A	~	B	~	B	D	D	D	D	D	A	A
Sugar (Liquids)	A	A	A	A	~	~	~	A	A	B	A	A	A	A	~
Sulfate (Liquors)	A	B	B	D	D	~	~	A	A	A	A	A	~	A	~
Sulfur Chloride	C	D	D	D	D	D	D	A	D	D	D	D	C	D	A
Sulfur Dioxide	A1	A1	D	B	~	D	A	A	D	B	D	A	B	A	A
Sulfur Dioxide (Dry)	A1	A	D	A	A	~	~	A	D	D	D	A	B	A	~
Sulfur Trioxide (Dry)	A	A	D	B	~	~	~	A	D	D	D	B	B	D	~
Sulfuric Acid (<10%)	A1	B	D	D	D	C	D	A	D	B	D	B	D	A1	A
Sulfuric Acid (10-75%)	A1	D	D	D	D	D	D	A	D	C	D	B	D	A1	A
Sulfuric Acid (75-100%)	C1	D	D	D	D	D	D	A	D	D	D	B	D	C1	A
Sulfuric Acid (Cold Concentrated)	D	C	D	D	D	~	~	A	D	D	D	D	D	D	~
Sulfuric Acid (Hot Concentrated)	D	B	C	D	D	~	~	A	D	D	D	B	D	D	~
Sulforous Acid	A	B	B1	D	D	D	D	A	B	B	B	B	D	A	A
Sulfuryl Chloride	A	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Tallow	A	A	A	~	~	~	~	A	A	~	A	~	~	A	~
Tannic Acid	A	A	B1	A	C	D	D	A	A	B	A	A	B	A	A
Tanning Liquors	A	A2	A2	A	~	~	~	A	A	A	A	B	~	A	~
Tartaric Acid	A	C2	C2	A	C	D	D	A	A	B	A	B	A	A	A
Tetrachloroethane	A	A	B	~	~	D	~	A	D	~	D	~	~	A	A
Tetrachloroethylene	~	A	~	~	~	C	~	A	D	D	D	D	~	A	A
Tetrahydrofuran	A	A	A	D	~	D	~	D	D	D	D	B	~	A	A
Toluene (Toluol)	B1	A	A	A	A	A	A	A	D	D	D	D	D	A	A
Tomato Juice	A	A	A	C	~	~	~	~	A	A	A	~	~	A	~
Trichloroethane	A	A	B	A	A	~	~	A	D	D	D	D	D	A	~
Trichloroethylene	C1	B	B2	A	C	~	~	A	C	D	C	D	D	A	~
Trichloropropane	A	A	A	A	A	~	~	A	A	A	A	~	~	~	~
Tricresylphosphate	A	A2	B	A	~	~	~	B	D	D	D	A	C	A	~
Triethylamine	A	A	~	A	A	D	~	A	A	B	A	~	~	A	A
Turpentine	B	A	A	C	~	C	B	A	A	D	A	D	D	A	A
Urine	A	A	A	C	A	D	~	A1	A1	D	A1	A1	~	A	A
Varnish	A	A	A	A	C	~	~	A	B	D	B	D	D	A	~
Vegetable Juice	A	C	A	C	D	~	~	A	C	C	C	~	~	~	~
Vinegar	A	A	A	C	C	D	~	A	B	B	B	A	A	A	A
Water - Acid: Mine	A	A	A	C	C	~	~	A	A	C	A	A	B	A	~
Water - Distilled	A	A	A	D	D	~	~	A	A	A	A	A	~	A	~
Water - Fresh	A	A	A	A	A	C	A	A	A	A	A	A	B	A	A
Water - Salt	A	B	B	D	A	D	A	A	A	A	A	A	~	A	A
Weed Killers	A	A	A	C	~	~	~	A	A	C	A	~	~	~	~
Whey	A	A	A	~	~	~	~	A	A	~	A	~	~	~	~
Whiskey & Wines	B	A	A	C	D	D	~	A	A	A	A	A	A	A	A
White Liquor (Pulp Mill)	A	A	B	D	C	~	~	A	A	A	A	~	~	A	~
White Water (Paper Mill)	A	A	A	A	A	~	~	A	~	A	~	~	~	~	~
Xylene	A	A	A	A	A	C	B	A	D	D	D	D	D	A	A
Zinc Chloride	A	D	D	D	D	D	D	A	A	A	A	A	~	A	A
Zinc Hydrosulfite	A	A	A	D	D	~	~	~	A	A	A	A	~	~	~
Zinc Sulfate	A	B	B1	C	C	B	C	A	A	A	A	A	A	A	A