HIGH QUALITY AND PERFORMANCE VACUUM

CHEMICAL COMPATIBILITY GUIDE

This chemical compatibility guide shows different materials used in various elements of our pump's and rates their chemical resistance to different operating mediums.

It's very important to assure the correct choice of the materials that are part of the pump and remain in direct contact with the medium to pump, because the lifetime of the device and the maintenance are highly dependent of the use that we make and how the application affects to plastic and rubber parts.

The heads of our pumps are generally identified by a letter (N, P or L) that provides information about the head's configuration:

Head configuration	Description
N	The material of the head is PA (Polyamide, Nylon). It is indicated to pump air (polyamides absorb water) and not recommended for pumping gases.
P	The material of the head is PPS (Ryton, Primef). PPS tolerates the pumping of technical gases, steams and condensations. It is a ceramic material that does not absorb humidity.
L	The material of the head is PPS and therefore complies with the same characteristics listed above. This configuration of the head and pump is specific for liquids.

EAD Diaphragm vacuum pumps

The following data is based on tests and information provided by our suppliers at ambient temperature and also based on our own research, experience during the years on different fields, etc. Due to the extensive range of application conditions, composition and temperature of the mediums used, this data must only be regarded as a guide. The data is non-binding and must be checked on a case-by-case basis.

The symbols used through the table to rate the chemical effects are as follow:

Symbol	Description
A	Elastomers suffer 0-5% volume swelling. Material shows none to small swelling. Excellent resistance.
B	Elastomers suffer 5-10% volume swelling. Material shows small to moderate swelling. Good resistance.
C	Elastomers suffer 10-20% volume swelling. Material shows moderate to strong swelling. Limited resistance.
D	Material shows severe effects and should not be considered. Not resistant.
E	Information not available.

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Acetaldehyde	A	D	D	A	A	A	A
Acetamide	A	A	B	B	A	A	E
Acetate Solvent	A	C	D	C	A	A	A
Acetic Acid	A	C	B	C	D	A	E
Acetic Acid 20%	A	B	B	B	D	A	E
Acetic Acid 80%	A	C	B	B	D	A	E
Acetic Acid, Glacial	B	C	D	B	B	A	E
Acetic Anhydride	B	D	D	C	A	A	B
Acetone	A	D	D	D	A	A	A
Acetyl Bromide	E	E	E	E	D	E	E
Acetyl Chloride (dry)	D	D	A	C	B	A	A
Acetylene	A	B	A	B	A	A	A
Acrylonitrile	D	D	D	D	A	E	A
Adipic Acid	A	C	A	E	E	E	E
Alcohols: Amyl	A	B	A	D	A	A	E
Alcohols: Benzyl	B	D	A	E	B	A	E
Alcohols: Butyl	A	C	A	B	D	A	A
Alcohols: Diacetone	A	D	D	D	A	E	E
Alcohols: Ethyl	A	C	A	B	A	E	E
Alcohols: Hexyl	C	A	C	B	A	E	E
Alcohols: Isobutyl	A	B	A	A	A	E	E
Alcohols: Isopropyl	A	B	A	A	D	E	E
Alcohols: Methyl	A	A	C	A	B	A	E
Alcohols: Octyl	A	B	B	B	A	E	E
Alcohols: Propyl	A	A	A	A	D	A	E
Aluminum Chloride	A	A	A	B	B	A	C
Aluminum Chloride 20%	A	A	A	B	D	A	E
Aluminum Fluoride	A	A	A	B	A	A	E
Aluminum Hydroxide	A	A	A	E	A	E	E
Aluminum Nitrate	A	A	A	B	A	E	E
Aluminum Potassium Sulfate 10%	A	A	A	A	D	E	E
Aluminum Potassium Sulfate 100%	A	A	A	A	D	E	E
Aluminum Sulfate	A	A	A	A	A	A	E
Alums	A	A	A	A	A	E	E
Amines	B	D	D	B	D	B	A
Ammonia 10%	A	A	D	E	A	A	E
Ammonia Nitrate	A	C	D	E	D	A	E
Ammonia, Anhydrous	A	B	D	C	A	A	A
Ammonia, liquid	A	C	D	E	B	A	E
Ammonium Acetate	A	B	A	E	A	E	E
Ammonium Bifluoride	A	B	A	E	E	E	E
Ammonium Carbonate	A	B	A	C	A	A	B
Ammonium Caseinate	E	E	E	E	E	E	E
Ammonium Chloride	A	B	A	C	B	A	C
Ammonium Hydroxide	A	D	B	A	A	A	A

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Ammonium Nitrate	A	A	A	C	A	A	A
Ammonium Oxalate	A	D	E	E	E	E	E
Ammonium Persulfate	B	A	A	D	D	E	E
Ammonium Phosphate, Dibasic	A	A	A	A	C	A	B
Ammonium Phosphate, Monobasic	A	A	A	A	B	E	E
Ammonium Phosphate, Tribasic	A	A	A	A	B	E	B
Ammonium Sulfate	A	A	A	A	A	A	C
Ammonium Sulfite	A	A	D	E	A	E	E
Ammonium Thiosulfate	A	A	E	E	E	E	E
Amyl Acetate	A	D	D	D	B	A	B
Amyl Alcohol	A	B	A	D	A	A	E
Amyl Chloride	D	D	B	D	C	E	E
Aniline	B	D	A	B	A	A	B
Aniline Hydrochloride	B	D	A	D	D	E	E
Antifreeze	A	A	A	C	D	E	E
Antimony Trichloride	B	B	A	E	D	E	E
Aqua Regia (80% HCl & 20% HNO3)	C	D	B	D	D	D	E
Arochlor 1248	B	C	A	B	A	E	E
Aromatic Hydrocarbons	D	D	A	D	E	E	E
Arsenic Acid	A	A	A	A	C	A	B
Arsenic Salts	E	E	A	E	A	E	E
Asphalt	D	B	A	D	A	A	E
Barium Carbonate	A	A	A	E	A	A	B
Barium Chloride	A	A	A	A	A	A	C
Barium Cyanide	A	C	A	E	A	E	E
Barium Hydroxide	A	A	A	A	A	A	B
Barium Nitrate	A	A	A	B	A	E	E
Barium Sulfate	A	A	A	A	A	A	B
Barium Sulfide	A	A	A	A	A	E	B
Beer	A	A	A	A	A	A	A
Beet Sugar Liquids	A	A	A	A	A	E	A
Benzaldehyde	A	D	D	D	A	A	A
Benzene	D	D	A	D	A	A	B
Benzene Sulfonic Acid	D	D	A	D	D	A	E
Benzoic Acid	D	D	A	B	D	A	B
Benzol	D	D	A	D	D	A	E
Benzonitrile	E	E	E	A	E	E	E
Benzyl Chloride	D	D	A	D	A	E	E
Bleaching Liquors	A	D	A	B	C	E	E
Borax (Sodium Borate)	A	B	A	B	A	A	E
Boric Acid	A	A	A	A	B	A	B
Brewery Slop	E	A	A	E	E	E	E
Bromine	D	D	A	D	D	D	D
Butadiene	C	D	B	D	C	A	A
Butane	D	A	A	D	A	A	A

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Butanol (Butyl Alcohol)	A	A	A	B	B	A	E
Butter	A	A	A	B	E	E	E
Buttermilk	A	A	A	A	B	E	A
Butyl Amine	E	E	D	B	A	D	E
Butyl Ether	D	B	D	D	A	A	E
Butyl Phthalate	B	D	C	A	A	A	E
Butylacetate	B	D	D	D	A	A	E
Butylene	D	A	A	D	B	A	A
Butyric Acid	B	D	B	D	C	A	B
Calcium Bisulfate	A	A	E	C	E	E	C
Calcium Bisulfide	C	A	A	C	A	E	E
Calcium Bisulfite	D	A	A	A	A	A	E
Calcium Carbonate	A	A	A	A	A	E	B
Calcium Chlorate	A	A	A	E	E	E	E
Calcium Chloride	A	A	A	A	A	A	C
Calcium Hydroxide	A	A	A	A	A	A	B
Calcium Hypochlorite	B	C	A	B	D	A	D
Calcium Nitrate	A	A	A	B	A	A	E
Calcium Oxide	A	A	B	A	B	A	E
Calcium Sulfate	A	A	A	E	D	A	B
Calgon	A	A	A	A	A	E	E
Cane Juice	A	A	A	A	A	E	E
Carbolic Acid (Phenol)	B	D	A	D	D	A	E
Carbon Bisulfide	D	C	A	E	A	E	B
Carbon Dioxide (dry)	B	A	B	B	A	A	E
Carbon Dioxide (wet)	B	A	B	B	A	A	E
Carbon Disulfide	D	D	A	E	B	A	E
Carbon Monoxide	A	A	A	A	A	E	E
Carbon Tetrachloride	D	D	A	D	D	A	B
Carbon Tetrachloride (dry)	B	C	A	D	E	A	E
Carbon Tetrachloride (wet)	D	D	E	D	E	A	E
Carbonated Water	E	A	A	E	A	E	B
Carbonic Acid	B	D	A	A	A	A	B
Catsup	A	A	A	E	A	E	E
Chloric Acid	E	E	E	E	D	E	E
Chlorinated Glue	B	B	A	E	E	E	E
Chlorine (dry)	A	B	A	D	D	D	B
Chlorine Water	C	D	A	D	C	D	D
Chlorine, Anhydrous Liquid	B	D	A	D	D	D	E
Chloroacetic Acid	B	D	D	D	D	A	B
Chlorobenzene (Mono)	D	D	A	D	D	A	A
Chlorobromomethane	B	D	A	D	C	E	E
Chloroform	D	D	A	D	A	A	A
Chlorosulfonic Acid	D	D	D	D	D	D	D
Chocolate Syrup	A	A	A	E	A	E	E

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Chromic Acid 5%	A	D	A	C	D	A	E
Chromic Acid 10%	C	D	B	C	D	A	E
Chromic Acid 30%	B	D	A	C	D	B	E
Chromic Acid 50%	B	D	A	C	D	A	C
Chromium Salts	E	E	E	E	B	E	E
Cider	A	A	A	B	A	E	E
Citric Acid	A	A	A	A	A	A	E
Citric Oils	B	A	A	E	E	E	E
Cloroxr (Bleach)	B	D	A	E	A	D	E
Coffee	A	A	A	A	A	E	A
Copper Chloride	A	A	A	A	D	A	C
Copper Cyanide	A	A	A	A	D	A	E
Copper Fluoborate	E	B	A	E	E	E	E
Copper Nitrate	E	A	A	E	D	A	B
Copper Sulfate >5%	A	A	A	A	D	A	B
Copper Sulfate 5%	A	A	A	A	D	A	E
Cream	E	A	A	E	A	E	E
Cresols	D	D	A	D	D	A	E
Cresylic Acid	D	D	A	D	D	E	B
Cupric Acid	A	B	A	A	D	A	E
Cyanic Acid	E	C	A	A	E	E	E
Cyclohexane	D	B	A	D	A	A	E
Cyclohexanone	B	D	D	D	A	A	E
Detergents	A	A	A	A	A	A	E
Diacetone Alcohol	A	D	D	D	A	E	E
Dichlorobenzene	D	D	C	D	D	E	E
Dichloroethane	E	D	C	E	A	E	E
Diesel Fuel	D	A	A	D	A	A	A
Diethyl Ether	D	D	D	D	A	A	E
Diethylamine	B	C	A	B	A	E	A
Diethylene Glycol	A	A	A	B	A	E	E
Dimethyl Aniline	B	D	D	D	A	A	E
Dimethyl Formamide	B	D	C	C	A	A	E
Diphenyl	D	D	A	D	E	E	E
Diphenyl Oxide	D	A	A	C	E	A	E
Dyes	E	E	A	E	A	E	E
Epsom Salts (Magnesium Sulfate)	A	A	A	A	A	A	B
Ethane	D	A	A	D	D	E	A
Ethanol	A	C	A	B	A	E	E
Ethanolamine	B	B	D	B	A	A	E
Ether	C	D	C	D	A	A	A
Ethyl Acetate	B	D	D	B	A	A	E
Ethyl Benzoate	E	D	A	D	E	E	E
Ethyl Chloride	A	A	A	D	A	A	E
Ethyl Ether	D	D	D	D	A	A	E

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Ethyl Sulfate	E	A	A	E	E	E	E
Ethylene Bromide	C	D	A	D	E	E	E
Ethylene Chloride	D	D	B	D	A	A	E
Ethylene Chlorohydrin	B	D	A	C	D	E	E
Ethylene Diamine	A	A	B	A	D	A	E
Ethylene Dichloride	C	D	A	D	A	A	E
Ethylene Glycol	A	A	A	A	A	A	E
Ethylene Oxide	C	D	D	D	A	D	E
Fatty Acids	D	B	A	C	A	E	E
Ferric Chloride	A	A	A	B	A	A	E
Ferric Nitrate	A	A	A	C	A	A	E
Ferric Sulfate	A	A	A	B	A	A	E
Ferrous Chloride	E	A	A	E	D	A	E
Ferrous Sulfate	A	A	B	E	D	A	B
Fluoboric Acid	A	A	B	E	D	A	E
Fluorine	A	D	C	D	D	D	D
Fluosilicic Acid	A	A	B	E	D	A	E
Formaldehyde 100%	A	C	D	B	D	B	A
Formaldehyde 40%	A	B	A	E	A	A	E
Formic Acid	A	C	C	B	D	A	C
Freon 113	D	A	B	D	E	A	E
Freon 12	B	A	B	D	A	A	E
Freon 22	A	D	D	D	B	A	E
Freon TF	D	A	B	D	D	D	E
Freonr 11	D	B	B	D	D	A	E
Fruit Juice	E	A	A	E	A	E	A
Fuel Oils	D	A	A	D	A	A	A
Furan Resin	C	D	D	D	E	A	E
Furfural	D	D	D	D	B	A	A
Gallic Acid	B	B	A	D	A	A	B
Gasoline (high aromatic)	D	A	A	D	A	A	A
Gasoline, leaded, ref.	D	A	A	D	A	A	E
Gasoline, unleaded	D	A	A	D	A	A	E
Gelatin	A	A	A	A	A	E	A
Glucose	A	A	A	A	A	B	E
Glue, P.V.A.	A	A	B	A	A	E	B
Glycerin	A	A	A	A	A	A	A
Glycolic Acid	A	A	A	A	E	A	E
Gold Monocyanide	E	A	A	E	E	E	E
Grape Juice	A	A	A	A	A	E	E
Grease	D	A	A	D	E	E	A
Heptane	D	A	A	D	A	A	A
Hexane	D	A	A	D	B	A	A
Honey	A	A	A	A	A	E	E
Hydraulic Oil (Petroleum)	D	A	A	B	A	D	A

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Hydraulic Oil (Synthetic)	A	D	A	B	A	E	E
Hydrazine	A	B	A	B	E	E	E
Hydrobromic Acid 100%	A	D	A	D	D	A	A
Hydrobromic Acid 20%	A	D	A	D	D	E	E
Hydrochloric Acid 100%	D	D	A	D	D	D	E
Hydrochloric Acid 20%	A	E	A	D	D	D	E
Hydrochloric Acid 37%	C	B	A	B	D	D	E
Hydrochloric Acid, Dry Gas	E	E	E	E	A	A	E
Hydrocyanic Acid	B	B	A	C	B	B	A
Hydrocyanic Acid (Gas 10%)	A	B	A	D	E	E	E
Hydrofluoric Acid 100%	D	D	B	D	D	D	D
Hydrofluoric Acid 20%	D	D	A	D	C	A	E
Hydrofluoric Acid 50%	D	D	B	D	D	A	E
Hydrofluoric Acid 75%	C	D	B	D	D	B	E
Hydrofluosilicic Acid 100%	A	B	A	D	D	A	E
Hydrofluosilicic Acid 20%	A	A	A	D	D	A	E
Hydrogen Gas	A	A	A	C	A	A	A
Hydrogen Peroxide 10%	A	D	A	A	C	A	E
Hydrogen Peroxide 100%	D	D	A	B	D	C	E
Hydrogen Peroxide 30%	B	D	A	B	D	A	E
Hydrogen Peroxide 50%	B	D	A	B	D	E	E
Hydrogen Sulfide (aqua)	B	D	D	C	C	A	E
Hydrogen Sulfide (dry)	B	D	D	C	C	A	A
Hydroquinone	D	D	B	E	D	E	E
Hydroxyacetic Acid 70%	A	A	A	E	E	E	E
Ink	E	A	A	E	C	E	A
Iodine	B	B	A	E	A	D	E
Iodine (in alcohol)	A	E	E	E	C	E	E
Iodoform	A	D	E	E	E	E	B
Isooctane	D	A	A	D	A	A	E
Isopropyl Acetate	B	D	D	D	B	E	E
Isopropyl Ether	D	B	D	D	A	E	A
Isotane	E	A	A	E	D	E	E
Jet Fuel (JP3, JP4, JP5)	D	A	A	D	C	A	A
Kerosene	D	A	A	D	A	A	A
Ketone	A	D	D	E	A	A	A
Lacquer Thinners	D	D	D	D	A	E	E
Lacquers	D	D	D	D	A	E	A
Lactic Acid	A	A	A	A	B	A	A
Lard	D	A	A	B	A	E	B
Latex	A	A	A	A	A	E	E
Lead Acetate	A	B	D	A	A	A	B
Lead Nitrate	A	A	A	B	E	A	E
Lead Sulfamate	A	B	A	B	B	E	E
Ligroin	D	A	A	D	D	E	E

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Lime	D	A	A	E	A	E	E
Linoleic Acid	D	B	B	B	E	E	E
Lithium Chloride	A	A	A	A	E	E	E
Lithium Hydroxide	E	C	E	E	E	E	E
Lubricants	D	A	A	D	A	A	E
Lye: $Ca(OH)_2$ Calcium Hydroxide	A	A	B	A	A	A	E
Lye: KOH Potassium Hydroxide	A	B	B	C	C	A	E
Lye: NaOH Sodium Hydroxide	B	A	B	A	A	A	E
Magnesium Bisulfate	E	B	E	E	A	E	E
Magnesium Carvonate	A	A	A	E	E	E	E
Magnesium Chloride	A	A	A	A	A	A	B
Magnesium Hydroxide	A	A	A	A	B	A	A
Magnesium Nitrate	A	A	A	E	A	A	E
Magnesium Oxide	E	A	C	E	E	E	E
Magnesium Sulfate (Epsom Salts)	A	A	A	A	A	A	B
Maleic Acid	D	D	A	E	A	B	E
Maleic Anhydride	D	D	A	E	E	E	E
Malic Acid	D	A	A	B	A	E	C
Manganese Sulfate	A	A	A	A	A	A	E
Mash	A	A	A	E	A	E	E
Mayonnaise	E	C	A	E	A	E	A
Melamine	A	C	A	C	A	E	E
Mercuric Chloride (dilute)	A	A	A	E	D	A	D
Mercuric Cyanide	A	A	A	A	A	A	A
Mercuric Nitrate	A	B	A	E	E	E	E
Mercury	A	A	A	E	A	E	A
Methane	D	A	A	D	A	E	E
Methanol (Methyl Alcohol)	A	A	C	A	B	A	E
Methyl Acetate	B	D	D	D	A	E	A
Methyl Acetone	A	D	D	E	A	E	A
Methyl Acrylate	B	D	D	D	E	E	E
Methyl Alcohol 10%	A	A	C	A	B	A	A
Methyl Bromide	D	B	A	E	B	E	E
Methyl Butyl Ketone	A	D	D	D	D	E	E
Methyl Cellosolve	B	A	D	D	C	E	E
Methyl Chloride	D	D	A	D	B	B	E
Methyl Dichloride	D	D	A	E	C	E	E
Methyl Ethyl Ketone	A	D	D	D	A	A	E
Methyl Ethyl Ketone Peroxide	D	D	D	B	E	E	E
Methyl Isovutyl Ketone	B	D	D	D	B	A	E
Methyl Isopropyl Ketone	C	D	D	C	A	E	E
Methyl Methacrylate	D	D	D	C	E	E	E
Methylamine	A	B	D	E	E	E	A
Methylene Chloride	C	D	B	E	C	A	A
Milk	A	A	A	A	A	E	A

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Mineral Spirits	D	A	A	D	A	A	E
Molasses	A	A	A	E	A	E	A
Monochloroacetic acid	C	D	C	E	D	E	E
Monoethanolamine	B	B	D	B	A	A	E
Morpholine	D	D	E	E	A	C	E
Motor oil	D	A	E	E	A	A	E
Mustard	A	B	D	E	A	E	A
Naphtha	D	A	A	D	A	A	A
Naphthalene	D	D	A	D	A	A	B
Natural Gas	D	A	A	A	E	E	E
Nickel Chloride	A	A	A	A	C	A	E
Nickel Nitrate	A	A	A	E	A	E	E
Nickel Sulfate	A	A	A	A	A	A	B
Nitrating Acid (<15% HNO3)	E	E	E	E	E	C	E
Nitrating Acid (>15% H2SO4)	A	D	E	E	E	D	E
Nitrating Acid (S1% Acid)	E	E	E	E	E	C	E
Nitrating Acid (S15% H2SO4)	E	E	E	E	E	C	E
Nitric Acid (20%)	A	D	A	D	D	C	E
Nitric Acid (50%)	D	D	A	D	D	C	E
Nitric Acid (5-10%)	A	D	A	C	D	B	A
Nitric Acid (Concentrated)	D	D	A	D	D	C	E
Nitrovenzene	B	D	B	D	B	A	B
Nitrogen Fertilizer	E	E	E	E	E	E	E
Nitromethane	B	D	D	D	B	A	E
Nitrous Acid	A	E	B	E	E	E	E
Nitrous Oxide	A	E	B	E	C	E	E
Oils: Aniline	B	D	C	D	A	E	E
Oils: Anise	E	E	E	E	E	E	E
Oils: Bay	E	E	A	E	E	E	E
Oils: Bone	E	A	A	E	E	E	E
Oils: Castor	B	B	A	A	A	E	E
Oils: Cinnamon	E	E	A	E	E	E	E
Oils: Citric	B	D	A	E	A	E	E
Oils: Clove	E	A	A	E	E	E	E
Oils: Coconut	D	A	A	A	E	E	E
Oils: Cod Liver	A	A	A	B	E	E	E
Oils: Corn	C	D	B	A	A	E	E
Oils: Cotton Seed	D	A	A	A	B	A	B
Oils: Creosote	D	D	A	D	D	E	E
Oils: Diesel Fuel (20, 30, 40, 50)	D	A	A	D	A	A	E
Oils: Fuel (1, 2, 3, 5A, 5B, 6)	D	B	B	C	A	A	E
Oils: Ginger	A	A	A	E	E	E	E
Oils: Hydraulic Oil (Petro)	D	A	A	B	A	D	E
Oils: Hydraulic Oil (Synthetic)	A	D	A	B	A	E	E
Oils: Lemon	D	E	A	E	E	E	E

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Oils: Linseed	D	A	A	A	A	B	E
Oils: Mineral	D	A	A	C	A	A	A
Oils: Olive	D	D	A	D	A	E	A
Oils: Orange	E	A	A	D	E	E	E
Oils: Palm	A	A	A	E	E	E	E
Oils: Peanut	D	A	A	A	E	E	E
Oils: Peppermint	E	D	A	E	E	E	E
Oils: Pine	D	D	A	D	A	E	A
Oils: Rapeseed	A	D	A	D	E	E	E
Oils: Rosin	E	A	A	E	A	E	E
Oils: Sesame Seed	E	A	A	E	E	E	E
Oils: Silicone	A	A	A	C	A	A	E
Oils: Soybean	C	A	A	A	A	E	E
Oils: Sperm (whale)	E	A	A	E	E	E	E
Oils: Tanning	E	A	A	E	E	E	E
Oils: Transformer	D	A	A	B	A	E	E
Oils: Turbine	A	B	A	D	A	E	E
Oleic Acid	B	B	B	D	A	A	B
Oleum 100%	D	D	A	D	D	A	B
Oleum 25%	D	D	A	D	D	A	E
Oxalic Acid (cold)	A	D	A	B	B	A	C
Ozone	A	D	A	A	D	E	E
Palmitic Acid	B	A	A	D	A	E	E
Paraffin	D	B	B	E	A	E	A
Pentane	D	A	A	D	A	E	A
Perchloric Acid	B	D	A	D	D	E	E
Perchloroethylene	D	C	A	D	C	A	B
Petrolatum	A	A	A	D	D	E	A
Petroleum	D	A	A	D	A	E	E
Phenol (10%)	B	D	A	D	D	A	B
Phenol (Carbolic Acid)	B	D	A	D	D	A	B
Phosphoric Acid (>40%)	B	D	A	D	B	A	E
Phosphoric Acid (crude)	B	D	A	D	B	A	E
Phosphoric Acid (molten)	E	E	E	E	E	E	E
Phosphoric Acid (S40%)	B	D	A	C	B	A	E
Phosphoric Acid Anhydride	E	D	E	E	E	D	E
Phosphorus	E	E	E	E	E	E	E
Phosphorus Trichloride	A	D	A	E	E	A	E
Photographic Developer	B	A	A	B	E	E	E
Photographic Solutions	A	B	B	A	A	A	E
Phthalic Acid	A	D	A	B	B	E	E
Phthalic Anhydride	A	D	A	E	E	E	B
Picric Acid	B	C	A	D	C	A	B
Plating Sol., Antimony Plating 130°F	E	A	A	E	D	E	E
Plating Sol., Arsenic Plating 110°F	E	A	A	E	A	E	E

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Plating Sol., Brass Plating: High-Speed Brass Bath 110°F	E	A	A	E	A	E	E
Plating Sol., Brass Plating: Regular Brass Bath 100°F	E	A	A	E	A	E	E
Plating Sol., Bronze Plating: Cu-Cd Bronze Bath R.T.	A	A	A	E	A	E	E
Plating Sol., Bronze Plating: Cu-Sn Bronze Bath 160°F	A	A	A	E	A	E	E
Plating Sol., Bronze Plating: Cu-Zn Bronze Bath 100°F	E	A	A	E	A	E	E
Plating Sol., Cadmium Plating: Cyanide Bath 90°F	E	A	A	E	A	E	E
Plating Sol., Cadmium Plating: Fluoborate Bath 100°F	E	B	A	E	D	E	E
Plating Sol., Chromium Plating: Barrel Chrome Bath 95°F	E	D	C	E	D	E	E
Plating Sol., Chromium Plating: Black Chrome Bath 115°F	E	C	C	E	D	E	E
Plating Sol., Chromium Plating: Chromic-Sulfuric Bath 130°F	E	D	C	E	D	E	E
Plating Sol., Chromium Plating: Fluoride Bath 130°F	E	D	C	E	D	E	E
Plating Sol., Chromium Plating: Fluosilicate Bath 95°F	E	D	C	E	D	E	E
Plating Sol., Copper Plating: Copper Fluoborate Bath 120°F	E	B	A	E	D	E	E
Plating Sol., Copper Plating (Acid): Copper Sulfate Bath R.T.	E	A	A	E	D	E	E
Plating Sol., Copper Plating (Cyanide): Copper Strike Bath 120°F	E	A	A	E	A	E	E
Plating Sol., Copper Plating (Cyanide): High-Speed Bath 180°F	E	A	A	E	A	E	E
Plating Sol., Copper Plating (Cyanide): Rochelle Salt Bath 150°F	E	A	A	E	A	E	E
Plating Sol., Copper Plating (Misc): Copper (Electroless)	E	D	A	E	A	E	E
Plating Sol., Copper Plating (Misc): Copper Pyrophosphate	E	A	A	E	A	E	E
Plating Solutions, Gold Plating: Acid 75°F	E	A	A	E	A	E	E
Plating Solutions, Gold Plating: Cyanide 150°F	E	A	A	E	A	E	E
Plating Solutions, Gold Plating: Neutral 75°F	E	A	A	E	A	E	E
Plating Solutions, Indium Sulfamate Plating R.T.	E	A	A	E	D	E	E

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Plating Solutions, Iron Plating: Ferrous Am Sulfate Bath 150°F	E	A	A	E	D	E	E
Plating Solutions, Iron Plating: Ferrous Chloride Bath 190°F	E	B	A	E	D	E	E
Plating Solutions, Iron Plating: Ferrous Sulfate Bath 150°F	E	A	A	E	D	E	E
Plating Solutions, Iron Plating: FluoBorate Bath 145°F	E	B	A	E	D	E	E
Plating Solutions, Iron Plating: Sulfamate 140°F	E	A	A	E	D	E	E
Plating Solutions, Iron Plating: Sulfate-Chloride Bath 160°F	E	B	A	E	D	E	E
Plating Solutions, Lead Fluoborate Plating	E	B	A	E	D	E	E
Plating Solutions, Nickel Plating: Electroless 200°F	E	D	A	E	D	E	E
Plating Solutions, Nickel Plating: Fluoborate 100-170°F	E	B	A	E	D	E	E
Plating Solutions, Nickel Plating: High-Chloride 130-160°F	E	A	A	E	D	E	E
Plating Solutions, Nickel Plating: Sulfamate 100-140°F	E	A	A	E	A	E	E
Plating Solutions, Nickel Plating: Watts Type 115-160°F	E	A	A	E	A	E	E
Plating Solutions, Rhodium Plating 120°F	A	A	A	E	D	E	E
Plating Solutions, Silver Plating 80-120°F	A	A	A	E	A	E	E
Plating Solutions, Tin-Fluoborate Plating 100°F	E	B	A	E	D	E	E
Plating Solutions, Tin-Lead Plating 100°F	E	B	A	E	D	E	E
Plating Solutions, Zinc Plating: Acid Chloride 140°F	E	A	A	E	D	E	E
Plating Solutions, Zinc Plating: Acid Fluoborate Bath R.T.	E	B	A	E	D	E	E
Plating Solutions, Zinc Plating: Acid Sulfate Bath 150°F	E	A	A	E	D	E	E
Plating Solutions, Zinc Plating: Alkaline Cyanide Bath R.T.	E	A	A	E	A	E	E
Potash (Potassium Carbonate)	A	A	A	E	A	E	B
Potassium Bicarbonate	A	A	A	A	A	A	E
Potassium Bromide	A	A	A	A	A	A	A
Potassium Chlorate	A	A	A	B	C	A	B
Potassium Chlorate	A	A	A	B	C	A	B
Potassium Chromate	A	A	A	E	B	E	E

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Potassium Cyanide Solutions	A	A	A	A	A	A	B
Potassium Dichromate	A	A	A	A	B	A	B
Potassium Ferricyanide	A	D	A	E	B	E	E
Potassium Ferrocyanide	A	D	A	E	B	E	B
Potassium Hydroxide (Caustic Potash)	A	B	B	C	C	A	A
Potassium Hypochlorite	A	A	E	E	B	A	E
Potassium Iodide	A	A	A	E	A	A	E
Potassium Nitrate	A	A	A	A	B	A	B
Potassium Oxalate	E	E	E	E	E	E	E
Potassium Permanganate	A	C	A	E	D	A	B
Potassium Sulfate	A	A	A	A	A	A	B
Potassium Sulfide	A	A	A	A	A	A	A
Propane (liquefied)	D	A	A	D	A	E	A
Propylene	D	D	A	D	E	E	E
Propylene Glycol	A	A	A	A	A	E	B
Pyridine	B	D	D	D	C	A	E
Pyrogallic Acid	B	E	A	E	E	E	B
Resorcinal	B	E	A	E	D	E	E
Rosins	E	A	A	A	A	E	A
Rum	A	A	A	A	A	E	E
Rust Inhibitors	E	A	A	E	E	E	E
Salad Dressings	E	A	A	E	A	E	E
Salicylic Acid	A	B	A	E	A	E	E
Salt Brine (NaCl saturated)	A	A	A	A	A	A	E
Sea Water	A	A	A	A	A	A	A
Shellac (Bleached)	A	A	A	E	A	E	A
Shellac (Orange)	A	A	A	E	A	E	A
Silicone	A	A	A	C	A	A	E
Silver Bromide	E	E	E	E	E	E	E
Silver Nitrate	A	B	A	A	A	A	B
Soap Solutions	A	A	A	A	A	A	A
Soda Ash (see Sodium Carbonate)	A	A	A	A	B	A	E
Sodium Acetate	A	B	D	D	B	A	B
Sodium Aluminate	A	A	A	E	A	A	B
Sodium Benzoate	A	B	A	E	B	E	E
Sodium Bicarbonate	A	A	A	A	A	A	B
Sodium Bisulfate	A	B	A	A	A	A	A
Sodium Bisulfite	A	A	A	A	C	A	E
Sodium Borate (Borax)	A	A	A	A	A	A	B
Sodium Bromide	A	E	A	E	B	E	E
Sodium Carbonate	A	A	A	A	B	A	B
Sodium Chlorate	A	B	A	C	D	A	B
Sodium Chloride	A	A	A	A	A	A	B
Sodium Chromate	E	A	A	E	C	A	A
Sodium Cyanide	A	A	A	A	A	A	B

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Sodium Ferrocyanide	A	A	A	E	E	E	E
Sodium Fluoride	A	A	A	E	B	E	B
Sodium Hydrosulfite	B	C	A	C	A	E	E
Sodium Hydroxide (20%)	B	A	C	A	A	A	E
Sodium Hydroxide (50%)	B	A	D	A	A	A	E
Sodium Hydroxide (80%)	B	D	D	A	C	A	E
Sodium Hypochlorite (<20%)	B	B	A	B	D	A	E
Sodium Hypochlorite (100%)	B	D	A	B	D	A	E
Sodium Hyposulfate	E	E	E	E	E	E	E
Sodium Metaphosphate	A	A	A	A	A	E	A
Sodium Metasilicate	A	A	A	E	E	E	A
Sodium Nitrate	A	A	A	D	A	A	B
Sodium Perborate	A	B	A	B	B	E	B
Sodium Peroxide	A	B	A	D	A	E	B
Sodium Polyphosphate	A	A	A	D	A	E	E
Sodium Silicate	A	A	A	A	A	A	B
Sodium Sulfate	A	A	A	A	A	A	B
Sodium Sulfide	A	A	A	A	A	A	B
Sodium Sulfite	A	A	A	A	D	E	E
Sodium Tetraborate	A	A	A	A	A	E	E
Sodium Thiosulfate (Hypo)	A	B	A	A	B	A	A
Sorghum	E	A	A	E	A	E	E
Soy Sauce	E	A	A	E	A	E	E
Stannic Chloride	A	A	A	B	B	A	D
Stannic Fluoborate	E	A	A	E	E	E	E
Stannous Chloride	C	A	A	B	C	A	D
Starch	A	A	A	E	A	E	B
Stearic Acid	B	B	A	B	A	E	B
Stoddard Solvent	D	A	A	D	A	A	A
Styrene	D	D	B	D	A	E	A
Sugar (Liquids)	A	A	A	A	A	E	A
Sulfate (Liquors)	A	A	A	B	B	E	E
Sulfur Chloride	D	D	A	C	A	E	E
Sulfur Dioxide	A	D	A	B	C	A	E
Sulfur Dioxide (dry)	A	D	A	B	B	A	A
Sulfur Hexafluoride	B	B	E	B	B	E	E
Sulfur Trioxide	C	D	A	B	D	E	E
Sulfur Trioxide (dry)	C	D	A	B	A	E	A
Sulfuric Acid (<10%)	A	A	A	C	C	A	E
Sulfuric Acid (10-75%)	B	B	A	D	D	A	E
Sulfuric Acid (75-100%)	B	C	A	D	D	A	E
Sulfuric Acid (cold concentrated)	C	D	B	D	D	A	E
Sulfuric Acid (hot concentrated)	D	D	A	D	D	D	E
Sulfurous Acid	B	B	A	D	D	A	C
Sulfuryl Chloride	E	E	E	E	E	E	E

Medium	EPDM	NBR	FPM	VQM	PA	PPS	Stainless steel 302
Tallow	A	A	A	E	A	E	E
Tannic Acid	A	A	A	B	C	A	B
Tanning Liquors	B	B	A	B	A	E	E
Tartaric Acid	B	A	A	A	B	A	B
Tetrachloroethane	D	D	A	D	C	E	E
Tetrachloroethylene	D	D	A	D	A	E	E
Tetrahydrofuran	D	D	D	D	A	A	E
Tin Salts	B	A	A	B	E	E	E
Toluene (Toluol)	D	D	C	D	A	A	A
Tomato Juice	A	A	A	E	A	A	A
Trichloroacetic Acid	B	E	C	D	C	A	E
Trichloroethane	D	D	A	D	C	E	E
Trichloroethylene	D	D	A	D	C	A	B
Trichloropropane	E	D	A	E	E	E	E
Tricresylphosphate	A	D	A	C	A	E	E
Triethylamine	A	C	D	E	A	E	E
Trisodium Phosphate	A	A	A	A	A	A	E
Turpentine	D	E	A	D	B	A	B
Urea	A	B	A	B	A	A	E
Uric Acid	E	E	E	E	A	E	E
Urine	A	A	A	E	B	E	E
Varnish	D	B	A	D	A	E	A
Vegetable Juice	A	A	A	B	A	E	E
Vinegar	A	B	A	A	A	A	A
Vinyl Acetate	B	D	A	D	E	E	E
Vinyl Chloride	C	D	A	E	A	E	E
Water, Acid, Mine	A	A	A	B	A	A	E
Water, Deionized	A	A	A	E	A	A	E
Water, Distilled	A	A	A	C	A	A	E
Water, Fresh	A	A	A	B	A	A	A
Water, Salt	A	A	A	B	A	A	E
Weed Killers	E	A	A	A	A	E	E
Whey	E	A	A	E	E	E	E
Whiskey & Wines	A	A	A	A	A	E	A
White Liquor (Pulp Mill)	E	A	A	A	A	E	E
White Water (Paper Mill)	E	E	A	E	A	E	E
Xylene	D	D	B	D	A	A	A
Zinc Chloride	A	A	A	B	A	A	D
Zinc Hydrosulfite	A	E	E	E	A	A	E

EAD Diaphragm vacuum pumps