



CHEMICAL COMPATIBILITY CHART

PVC

Our products can be exposed to a huge variety of chemicals. The data table below is an application guide, and indicates the resistance of the specific thermoplastics we use in the construction of our products, to common chemicals.

The data given should be used cautiously, and as a guide only. Various factors such as concentration, additives, exposure time, temperature and internal mechanical stress levels will all impact on the working life of our plastic parts.

Use the table conservatively and if any doubt exists, do not proceed with the application.

In the table below there are four ratings:

- **A-Excellent** indicates that at ambient temperature and pressure, the material should not be affected.
- **B-Good** indicates that the material is slightly affected but not to the point of being unsuitable.
- **C-Fair** indicates a degree of reaction that is generally considered unsuitable and should not be used.
- **D-Severe Effect** indicates that the material should not be used under any circumstances

All ratings are taken from data measured at ambient temperature and pressure.

CHEMICAL	COMPATIBILITY
Acetaldehyde	D-Severe Effect
Acetamide	D-Severe Effect
Acetate Solvent	D-Severe Effect
Acetic Acid	D-Severe Effect
Acetic Acid 20%	D-Severe Effect
Acetic Acid 80%	C-Fair
Acetic Acid, Glacial	D-Severe Effect
Acetic Anhydride	D-Severe Effect
Acetone	D-Severe Effect
Acetyl Bromide	D-Severe Effect
Acetyl Chloride (dry)	C-Fair
Acetylene	A-Excellent
Acrylonitrile	B-Good
Adipic Acid	A-Excellent
Alcohols:Amyl	A-Excellent
Alcohols:Benzyl	D-Severe Effect
Alcohols:Butyl	A-Excellent
Alcohols:Diacetone	B-Good
Alcohols:Ethyl	C-Fair
Alcohols:Hexyl	A-Excellent
Alcohols:Isobutyl	A-Excellent
Alcohols:Isopropyl	A-Excellent
Alcohols:Methyl	A-Excellent
Alcohols:Propyl	A-Excellent
Aluminum Chloride	A-Excellent
Aluminum Chloride 20%	A-Excellent
Aluminum Fluoride	A-Excellent
Aluminum Hydroxide	A-Excellent
Aluminum Nitrate	B-Good
Aluminum Potassium Sulfate 10%	A-Excellent
Aluminum Potassium Sulfate 100%	A-Excellent
Aluminum Sulfate	A-Excellent
Amines	D-Severe Effect
Ammonia 10%	B-Good
Ammonia Nitrate	B-Good
Ammonia, anhydrous	A-Excellent
Ammonia, liquid	A-Excellent
Ammonium Acetate	A-Excellent
Ammonium Bifluoride	A-Excellent
Ammonium Carbonate	A-Excellent

Ammonium Chloride	A-Excellent
Ammonium Hydroxide	A-Excellent
Ammonium Nitrate	A-Excellent
Ammonium Oxalate	A-Excellent
Ammonium Persulfate	A-Excellent
Ammonium Phosphate, Dibasic	A-Excellent
Ammonium Phosphate, Monobasic	A-Excellent
Ammonium Phosphate, Tribasic	A-Excellent
Ammonium Sulfate	A-Excellent
Ammonium Sulfite	A-Excellent
Amyl Acetate	D-Severe Effect
Amyl Alcohol	A-Excellent
Amyl Chloride	D-Severe Effect
Aniline	C-Fair
Aniline Hydrochloride	B-Good
Antifreeze	A-Excellent
Antimony Trichloride	A-Excellent
Aqua Regia (80% HCl, 20% HNO ₃)	C-Fair
Aromatic Hydrocarbons	D-Severe Effect
Arsenic Acid	A-Excellent
Arsenic Salts	A-Excellent
Asphalt	A-Excellent
Barium Carbonate	A-Excellent
Barium Chloride	A-Excellent
Barium Cyanide	D-Severe Effect
Barium Hydroxide	A-Excellent
Barium Nitrate	A-Excellent
Barium Sulfate	B-Good
Barium Sulfide	A-Excellent
Beer	A-Excellent
Beet Sugar Liquids	A-Excellent
Benzaldehyde	D-Severe Effect
Benzene	C-Fair
Benzene Sulfonic Acid	A-Excellent
Benzoic Acid	A-Excellent
Bleaching Liquors	A-Excellent
Borax (Sodium Borate)	A-Excellent
Boric Acid	A-Excellent
Bromine	C-Fair
Butadiene	C-Fair
Butane	C-Fair

Butanol (Butyl Alcohol)	C-Fair
Buttermilk	A-Excellent
Butyl Amine	D-Severe Effect
Butyl Ether	A-Excellent
Butylacetate	D-Severe Effect
Butylene	A-Excellent
Butyric Acid	B-Good
Calcium Bisulfide	A-Excellent
Calcium Bisulfite	B-Good
Calcium Carbonate	A-Excellent
Calcium Chlorate	B-Good
Calcium Chloride	C-Fair
Calcium Hydroxide	B-Good
Calcium Hypochlorite	B-Good
Calcium Nitrate	A-Excellent
Calcium Oxide	B-Good
Calcium Sulfate	B-Good
Cane Juice	A-Excellent
Carbolic Acid (Phenol)	D-Severe Effect
Carbon Bisulfide	D-Severe Effect
Carbon Dioxide (dry)	A-Excellent
Carbon Dioxide (wet)	A-Excellent
Carbon Disulfide	D-Severe Effect
Carbon Monoxide	A-Excellent
Carbon Tetrachloride	D-Severe Effect
Carbonated Water	A-Excellent
Carbonic Acid	A-Excellent
Catsup	A-Excellent
Chloric Acid	A-Excellent
Chlorine (dry)	D-Severe Effect
Chlorine Water	A-Excellent
Chlorine, Anhydrous Liquid	D-Severe Effect
Chloroacetic Acid	B-Good
Chlorobenzene (Mono)	D-Severe Effect
Chlorobromomethane	D-Severe Effect
Chloroform	D-Severe Effect
Chlorosulfonic Acid	D-Severe Effect
Chromic Acid 10%	A-Excellent
Chromic Acid 30%	A-Excellent
Chromic Acid 5%	A-Excellent
Chromic Acid 50%	D-Severe Effect

Chromium Salts	A-Excellent
Cider	A-Excellent
Citric Acid	B-Good
Cloroxr (Bleach)	A-Excellent
Copper Chloride	A-Excellent
Copper Cyanide	A-Excellent
Copper Fluoborate	A-Excellent
Copper Nitrate	A-Excellent
Copper Sulfate >5%	A-Excellent
Copper Sulfate 5%	A-Excellent
Cresols	D-Severe Effect
Cresylic Acid	D-Severe Effect
Cupric Acid	A-Excellent
Cyclohexane	D-Severe Effect
Cyclohexanone	D-Severe Effect
Detergents	A-Excellent
Diacetone Alcohol	D-Severe Effect
Dichlorobenzene	D-Severe Effect
Dichloroethane	D-Severe Effect
Diesel Fuel	A-Excellent
Diethyl Ether	D-Severe Effect
Diethylamine	D-Severe Effect
Diethylene Glycol	C-Fair
Dimethyl Aniline	D-Severe Effect
Dimethyl Formamide	D-Severe Effect
Diphenyl Oxide	D-Severe Effect
Dyes	B-Good
Epsom Salts (Magnesium Sulfate)	A-Excellent
Ethane	A-Excellent
Ethanol	C-Fair
Ethanolamine	D-Severe Effect
Ether	D-Severe Effect
Ethyl Acetate	D-Severe Effect
Ethyl Benzoate	D-Severe Effect
Ethyl Chloride	D-Severe Effect
Ethyl Ether	D-Severe Effect
Ethylene Bromide	D-Severe Effect
Ethylene Chloride	D-Severe Effect
Ethylene Chlorohydrin	D-Severe Effect
Ethylene Diamine	D-Severe Effect
Ethylene Dichloride	D-Severe Effect

Ethylene Glycol	A-Excellent
Ethylene Oxide	D-Severe Effect
Fatty Acids	A-Excellent
Ferric Chloride	A-Excellent
Ferric Nitrate	A-Excellent
Ferric Sulfate	A-Excellent
Ferrous Chloride	A-Excellent
Ferrous Sulfate	A-Excellent
Fluoboric Acid	A-Excellent
Fluorine	D-Severe Effect
Fluosilicic Acid	D-Severe Effect
Formaldehyde 100%	A-Excellent
Formaldehyde 40%	A-Excellent
Formic Acid	A-Excellent
Freon 113	B-Good
Freon 12	A-Excellent
Freon 22	A-Excellent
Freon TF	B-Good
Freonr 11	A-Excellent
Fruit Juice	A-Excellent
Fuel Oils	A-Excellent
Furan Resin	A-Excellent
Furfural	D-Severe Effect
Gallic Acid	B-Good
Gasoline (high-aromatic)	A-Excellent
Gasoline, leaded, ref.	B-Good
Gasoline, unleaded	C-Fair
Gelatin	B-Good
Glucose	A-Excellent
Glue, P.V.A.	C-Fair
Glycerin	A-Excellent
Glycolic Acid	B-Good
Grape Juice	A-Excellent
Grease	A-Excellent
Heptane	C-Fair
Hexane	B-Good
Honey	A-Excellent
Hydraulic Oil (Petro)	A-Excellent
Hydraulic Oil (Synthetic)	A-Excellent
Hydrobromic Acid 100%	A-Excellent
Hydrobromic Acid 20%	B-Good

Hydrochloric Acid 100%	D-Severe Effect
Hydrochloric Acid 20%	A-Excellent
Hydrochloric Acid 37%	B-Good
Hydrochloric Acid, Dry Gas	A-Excellent
Hydrocyanic Acid	B-Good
Hydrocyanic Acid (Gas 10%)	A-Excellent
Hydrofluoric Acid 100%	C-Fair
Hydrofluoric Acid 20%	B-Good
Hydrofluoric Acid 50%	B-Good
Hydrofluoric Acid 75%	C-Fair
Hydrofluosilicic Acid 100%	B-Good
Hydrofluosilicic Acid 20%	A-Excellent
Hydrogen Gas	A-Excellent
Hydrogen Peroxide 10%	A-Excellent
Hydrogen Peroxide 100%	A-Excellent
Hydrogen Peroxide 30%	A-Excellent
Hydrogen Peroxide 50%	A-Excellent
Hydrogen Sulfide (aqua)	B-Good
Hydrogen Sulfide (dry)	A-Excellent
Hydroquinone	B-Good
Hydroxyacetic Acid 70%	D-Severe Effect
Ink	C-Fair
Iodine	A-Excellent
Iodine (in alcohol)	A-Excellent
Iodoform	A-Excellent
Isooctane	A-Excellent
Isopropyl Acetate	D-Severe Effect
Isopropyl Ether	B-Good
Isotane	A-Excellent
Jet Fuel (JP3, JP4, JP5)	C-Fair
Kerosene	A-Excellent
Ketones	D-Severe Effect
Lacquer Thinners	D-Severe Effect
Lacquers	D-Severe Effect
Lactic Acid	B-Good
Lard	A-Excellent
Lead Nitrate	A-Excellent
Lead Sulfamate	B-Good
Lime	B-Good
Lithium Chloride	D-Severe Effect
Lubricants	B-Good

Lye: Ca(OH) ₂ Calcium Hydroxide	B-Good
Lye: NaOH Sodium Hydroxide	A-Excellent
Magnesium Bisulfate	A-Excellent
Magnesium Carbonate	B-Good
Magnesium Chloride	B-Good
Magnesium Hydroxide	A-Excellent
Magnesium Nitrate	A-Excellent
Magnesium Sulfate (Epsom Salts)	A-Excellent
Maleic Acid	A-Excellent
Malic Acid	A-Excellent
Mayonnaise	D-Severe Effect
Mercuric Chloride (dilute)	A-Excellent
Mercuric Cyanide	A-Excellent
Mercurous Nitrate	A-Excellent
Mercury	A-Excellent
Methane	B-Good
Methanol (Methyl Alcohol)	A-Excellent
Methyl Acetate	D-Severe Effect
Methyl Acetone	D-Severe Effect
Methyl Alcohol 10%	A-Excellent
Methyl Bromide	D-Severe Effect
Methyl Butyl Ketone	A-Excellent
Methyl Cellosolve	D-Severe Effect
Methyl Chloride	D-Severe Effect
Methyl Dichloride	A-Excellent
Methyl Ethyl Ketone	D-Severe Effect
Methyl Isobutyl Ketone	D-Severe Effect
Methyl Isopropyl Ketone	D-Severe Effect
Methyl Methacrylate	A-Excellent
Methylamine	D-Severe Effect
Methylene Chloride	D-Severe Effect
Milk	A-Excellent
Mineral Spirits	A-Excellent
Molasses	A-Excellent
Monoethanolamine	D-Severe Effect
Motor oil	B-Good
Mustard	B-Good
Naphtha	A-Excellent
Naphthalene	D-Severe Effect
Natural Gas	A-Excellent
Nickel Chloride	A-Excellent

Nickel Nitrate	A-Excellent
Nickel Sulfate	A-Excellent
Nitrating Acid (<15% HNO3)	D-Severe Effect
Nitrating Acid (>15% H2SO4)	D-Severe Effect
Nitrating Acid (S1% Acid)	D-Severe Effect
Nitrating Acid (S15% H2SO4)	D-Severe Effect
Nitric Acid (20%)	A-Excellent
Nitric Acid (50%)	B-Good
Nitric Acid (5-10%)	A-Excellent
Nitric Acid (Concentrated)	B-Good
Nitrobenzene	D-Severe Effect
Nitromethane	B-Good
Nitrous Acid	A-Excellent
Nitrous Oxide	A-Excellent
Oils:Aniline	D-Severe Effect
Oils:Castor	A-Excellent
Oils:Cinnamon	D-Severe Effect
Oils:Citric	B-Good
Oils:Coconut	A-Excellent
Oils:Cod Liver	A-Excellent
Oils:Corn	B-Good
Oils:Cottonseed	B-Good
Oils:Creosote	C-Fair
Oils:Diesel Fuel (20, 30, 40, 50)	B-Good
Oils:Fuel (1, 2, 3, 5A, 5B, 6)	A-Excellent
Oils:Hydraulic Oil (Petro)	A-Excellent
Oils:Hydraulic Oil (Synthetic)	A-Excellent
Oils:Linseed	A-Excellent
Oils:Mineral	B-Good
Oils:Olive	C-Fair
Oils:Orange	C-Fair
Oils:Palm	A-Excellent
Oils:Peanut	A-Excellent
Oils:Pine	D-Severe Effect
Oils:Rosin	C-Fair
Oils:Sesame Seed	A-Excellent
Oils:Silicone	A-Excellent
Oils:Soybean	A-Excellent
Oils:Transformer	B-Good
Oils:Turbine	A-Excellent
Oleum 100%	D-Severe Effect

Oleum 25%	D-Severe Effect
Oxalic Acid (cold)	B-Good
Ozone	B-Good
Palmitic Acid	B-Good
Paraffin	B-Good
Pentane	A-Excellent
Perchloric Acid	C-Fair
Perchloroethylene	C-Fair
Petrolatum	B-Good
Phenol (10%)	C-Fair
Phenol (Carbolic Acid)	D-Severe Effect
Phosphoric Acid (>40%)	B-Good
Phosphoric Acid (crude)	B-Good
Phosphoric Acid (molten)	D-Severe Effect
Phosphoric Acid (S40%)	B-Good
Phosphorus	A-Excellent
Phosphorus Trichloride	D-Severe Effect
Photographic Developer	A-Excellent
Photographic Solutions	A-Excellent
Phthalic Anhydride	D-Severe Effect
Picric Acid	D-Severe Effect
Plating Solutions, Antimony Plating 130°F	A-Excellent
Plating Solutions, Arsenic Plating 110°F	A-Excellent
Plating Solutions, Brass Plating: High-Speed Brass Bath 110°F	A-Excellent
Plating Solutions, Brass Plating: Regular Brass Bath 100°F	A-Excellent
Plating Solutions, Bronze Plating: Cu-Cd Bronze Bath R.T.	A-Excellent
Plating Solutions, Bronze Plating: Cu-Sn Bronze Bath 160°F	D-Severe Effect
Plating Solutions, Bronze Plating: Cu-Zn Bronze Bath 100°F	A-Excellent
Plating Solutions, Cadmium Plating: Cyanide Bath 90°F	A-Excellent
Plating Solutions, Cadmium Plating: Fluoborate Bath 100°F	A-Excellent
Plating Solutions, Chromium Plating: Barrel Chrome Bath 95°F	A-Excellent
Plating Solutions, Chromium Plating: Black Chrome Bath 115°F	A-Excellent
Plating Solutions, Chromium Plating: Chromic-Sulfuric Bath 130°F	A-Excellent
Plating Solutions, Chromium Plating: Fluoride Bath 130°F	A-Excellent
Plating Solutions, Chromium Plating: Fluosilicate Bath 95°F	A-Excellent
Plating Solutions, Copper Plating (Acid): Copper Fluoborate Bath 120°F	A-Excellent
Plating Solutions, Copper Plating (Acid): Copper Sulfate Bath R.T.	A-Excellent
Plating Solutions, Copper Plating (Cyanide): Copper Strike Bath 120°F	A-Excellent
Plating Solutions, Copper Plating (Cyanide): High-Speed Bath 180°F	D-Severe Effect
Plating Solutions, Copper Plating (Cyanide): Rochelle Salt Bath 150°F	D-Severe Effect
Plating Solutions, Copper Plating (Misc): Copper (Electroless)	A-Excellent

Plating Solutions, Copper Plating (Misc): Copper Pyrophosphate	A-Excellent
Plating Solutions, Gold Plating: Acid 75°F	A-Excellent
Plating Solutions, Gold Plating: Cyanide 150°F	D-Severe Effect
Plating Solutions, Gold Plating: Neutral 75°F	A-Excellent
Plating Solutions, Indium Sulfamate Plating R.T.	A-Excellent
Plating Solutions, Iron Plating: Ferrous Am Sulfate Bath 150°F	D-Severe Effect
Plating Solutions, Iron Plating: Ferrous Chloride Bath 190°F	D-Severe Effect
Plating Solutions, Iron Plating: Ferrous Sulfate Bath 150°F	D-Severe Effect
Plating Solutions, Iron Plating: Fluoborate Bath 145°F	D-Severe Effect
Plating Solutions, Iron Plating: Sulfamate 140°F	A-Excellent
Plating Solutions, Iron Plating: Sulfate-Chloride Bath 160°F	D-Severe Effect
Plating Solutions, Lead Fluoborate Plating	A-Excellent
Plating Solutions, Nickel Plating: Electroless 200°F	D-Severe Effect
Plating Solutions, Nickel Plating: Fluoborate 100-170°F	A-Excellent
Plating Solutions, Nickel Plating: High-Chloride 130-160°F	D-Severe Effect
Plating Solutions, Nickel Plating: Sulfamate 100-140°F	A-Excellent
Plating Solutions, Nickel Plating: Watts Type 115-160°F	D-Severe Effect
Plating Solutions, Rhodium Plating 120°F	A-Excellent
Plating Solutions, Silver Plating 80-120°F	A-Excellent
Plating Solutions, Tin-Fluoborate Plating 100°F	A-Excellent
Plating Solutions, Tin-Lead Plating 100°F	A-Excellent
Plating Solutions, Zinc Plating: Acid Chloride 140°F	A-Excellent
Plating Solutions, Zinc Plating: Acid Fluoborate Bath R.T.	A-Excellent
Plating Solutions, Zinc Plating: Acid Sulfate Bath 150°F	D-Severe Effect
Plating Solutions, Zinc Plating: Alkaline Cyanide Bath R.T.	A-Excellent
Potash (Potassium Carbonate)	A-Excellent
Potassium Bicarbonate	A-Excellent
Potassium Bromide	A-Excellent
Potassium Chlorate	A-Excellent
Potassium Chloride	A-Excellent
Potassium Chromate	A-Excellent
Potassium Cyanide Solutions	A-Excellent
Potassium Dichromate	A-Excellent
Potassium Ferricyanide	A-Excellent
Potassium Ferrocyanide	A-Excellent
Potassium Hydroxide (Caustic Potash)	A-Excellent
Potassium Hypochlorite	B-Good
Potassium Iodide	A-Excellent
Potassium Nitrate	A-Excellent
Potassium Permanganate	A-Excellent
Potassium Sulfate	A-Excellent

Potassium Sulfide	A-Excellent
Propane (liquefied)	A-Excellent
Propylene	B-Good
Propylene Glycol	C-Fair
Pyridine	D-Severe Effect
Pyrogallic Acid	A-Excellent
Resorcinal	C-Fair
Rosins	C-Fair
Rum	A-Excellent
Salicylic Acid	B-Good
Salt Brine (NaCl saturated)	A-Excellent
Sea Water	A-Excellent
Silicone	A-Excellent
Silver Nitrate	A-Excellent
Soap Solutions	A-Excellent
Soda Ash (see Sodium Carbonate)	A-Excellent
Sodium Acetate	B-Good
Sodium Benzoate	B-Good
Sodium Bicarbonate	A-Excellent
Sodium Bisulfate	A-Excellent
Sodium Bisulfite	A-Excellent
Sodium Borate (Borax)	A-Excellent
Sodium Bromide	B-Good
Sodium Carbonate	A-Excellent
Sodium Chlorate	A-Excellent
Sodium Chloride	A-Excellent
Sodium Cyanide	A-Excellent
Sodium Ferrocyanide	A-Excellent
Sodium Fluoride	A-Excellent
Sodium Hydrosulfite	C-Fair
Sodium Hydroxide (20%)	A-Excellent
Sodium Hydroxide (50%)	A-Excellent
Sodium Hydroxide (80%)	A-Excellent
Sodium Hypochlorite (<20%)	A-Excellent
Sodium Hypochlorite (100%)	B-Good
Sodium Metaphosphate	A-Excellent
Sodium Metasilicate	A-Excellent
Sodium Nitrate	A-Excellent
Sodium Perborate	A-Excellent
Sodium Peroxide	B-Good
Sodium Polyphosphate	A-Excellent

Sodium Silicate	A-Excellent
Sodium Sulfate	A-Excellent
Sodium Sulfide	A-Excellent
Sodium Sulfite	A-Excellent
Sodium Tetraborate	A-Excellent
Sodium Thiosulfate (hypo)	A-Excellent
Stannic Chloride	A-Excellent
Stannous Chloride	A-Excellent
Starch	A-Excellent
Stearic Acid	B-Good
Stoddard Solvent	C-Fair
Styrene	D-Severe Effect
Sulfate (Liquors)	B-Good
Sulfur Chloride	C-Fair
Sulfur Dioxide	A-Excellent
Sulfur Dioxide (dry)	A-Excellent
Sulfur Hexafluoride	B-Good
Sulfur Trioxide	A-Excellent
Sulfur Trioxide (dry)	A-Excellent
Sulfuric Acid (<10%)	A-Excellent
Sulfuric Acid (10-75%)	A-Excellent
Sulfuric Acid (75-100%)	D-Severe Effect
Sulfuric Acid (cold concentrated)	D-Severe Effect
Sulfuric Acid (hot concentrated)	D-Severe Effect
Sulfurous Acid	A-Excellent
Tannic Acid	A-Excellent
Tanning Liquors	A-Excellent
Tartaric Acid	A-Excellent
Tetrachloroethane	C-Fair
Tetrachloroethylene	D-Severe Effect
Tetrahydrofuran	D-Severe Effect
Tin Salts	A-Excellent
Toluene (Toluol)	D-Severe Effect
Tomato Juice	A-Excellent
Trichloroacetic Acid	B-Good
Trichloroethane	C-Fair
Trichloroethylene	D-Severe Effect
Tricresylphosphate	D-Severe Effect
Triethylamine	B-Good
Trisodium Phosphate	A-Excellent
Turpentine	D-Severe Effect

Urea	D-Severe Effect
Uric Acid	A-Excellent
Urine	A-Excellent
Varnish	D-Severe Effect
Vinegar	B-Good
Vinyl Acetate	D-Severe Effect
Vinyl Chloride	D-Severe Effect
Water, Acid, Mine	B-Good
Water, Deionized	A-Excellent
Water, Distilled	A-Excellent
Water, Fresh	B-Good
Water, Salt	B-Good
Whiskey & Wines	A-Excellent
White Liquor (Pulp Mill)	A-Excellent
White Water (Paper Mill)	A-Excellent
Xylene	D-Severe Effect
Zinc Chloride	B-Good
Zinc Sulfate	A-Excellent