

Chemical Compatibility Guide for: Polypropylene

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Chemical Compatibility Guide

Check the chemical compatibility of Polypropylene with various chemicals, solvents, alcohols and other products.

Explanation of Footnotes

- Satisfactory to 72°F (22°C)
- Satisfactory to 120°F (48°C)

Ratings: Chemical Effect

- A = Excellent.
 B = Good, Minor Effect, slight corrosion or discoloration
 C = Fair, Moderate Effect, not recommended for continuous use. Softening, loss of strength, or swelling may occur.
 D = Severe Effect, not recommended for ANY use. N/A = Information not available.

"Please note that these charts are for general reference only. We have aggregated this data from dozens of original sources and any single piece of data cannot be guaranteed.

Additionally, many factors affect the chemical resistance of a given plastic product including the concentration/purity of the chemical, working temperature, wall thickness and condition of the container, etc. It is your responsibility to test a container and chemical together ensure compatibility under your unique circumstances.

Visit www.cplabsafety.com/chemical-compatibility-charts for up to date information."

Chemical Name	Compatibility
Acetaldehyde	A ¹ -Excellent
Acetamide	A ¹ -Excellent
Acetate Solvent	B ¹ -Good
Acetic Acid	B-Good
Acetic Acid 20%	A-Excellent
Acetic Acid 80%	A-Excellent
Acetic Acid, Glacial	A ¹ -Excellent
Acetic Anhydride	B ¹ -Good
Acetone	A-Excellent
Acetyl Bromide	N/A
Acetyl Chloride (dry)	D-Severe Effect
Acetylene	A ¹ -Excellent
Acrylonitrile	A ¹ -Excellent
Adipic Acid	B ² -Good
Alcohols: Amyl	B ¹ -Good
Alcohols: Benzyl	A-Excellent
Alcohols: Butyl	A-Excellent
Alcohols: Diacetone	B ² -Good
Alcohols: Ethyl	A-Excellent
Alcohols: Hexyl	N/A
Alcohols: Isobutyl	A ¹ -Excellent
Alcohols: Isopropyl	A ² -Excellent
Alcohols: Methyl	A ² -Excellent
Alcohols: Octyl	N/A
Alcohols: Propyl	A-Excellent
Aluminum Chloride	A-Excellent
Aluminum Chloride 20%	A-Excellent
Aluminum Fluoride	A-Excellent
Aluminum Hydroxide	A-Excellent
Aluminum Nitrate	A ² -Excellent
Aluminum Potassium Sulfate 10%	A-Excellent
Aluminum Potassium Sulfate 100%	A-Excellent
Aluminum Sulfate	A-Excellent
Alums	A-Excellent
Amines	B ² -Good

Chemical Name	Compatibility
Ammonia 10%	A ² -Excellent
Ammonia Nitrate	A-Excellent
Ammonia, anhydrous	A-Excellent
Ammonia, liquid	A ² -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 ² -Excellent
Ammonium Thiosulfate	N/A
Amyl Acetate	B ¹ -Good
Amyl Alcohol	B ¹ -Good
Amyl Chloride	D-Severe Effect
Aniline	A ¹ -Excellent
Aniline Hydrochloride	D-Severe Effect
Antifreeze	D-Severe Effect
Antimony Trichloride	A-Excellent
Aqua Regia (80% HCl, 20% HNO ₃)	B ¹ -Good
Arochlor 1248	D-Severe Effect
Aromatic Hydrocarbons	D-Severe Effect
Arsenic Acid	A-Excellent
Arsenic Salts	N/A
Asphalt	B ¹ -Good
Barium Carbonate	A-Excellent
Barium Chloride	A-Excellent
Barium Cyanide	D-Severe Effect
Barium Hydroxide	B-Good

Chemical Name	Compatibilty
Barium Nitrate	A-Excellent
Barium Sulfate	B ¹ -Good
Barium Sulfide	B-Good
Beer	A ¹ -Excellent
Beet Sugar Liquids	A ¹ -Excellent
Benzaldehyde	D-Severe Effect
Benzene	D-Severe Effect
Benzene Sulfonic Acid	D-Severe Effect
Benzoic Acid	B ¹ -Good
Benzol	B-Good
Benzonitrile	N/A
Benzyl Chloride	C ¹ -Fair
Bleaching Liquors	A ¹ -Excellent
Borax (Sodium Borate)	B-Good
Boric Acid	A-Excellent
Brewery Slop	N/A
Bromine	D-Severe Effect
Butadiene	C-Fair
Butane	A ¹ -Excellent
Butanol (Butyl Alcohol)	A ¹ -Excellent
Butter	N/A
Buttermilk	A ¹ -Excellent
Butyl Amine	B ¹ -Good
Butyl Ether	D-Severe Effect
Butyl Phthalate	B ² -Good
Butylacetate	B ¹ -Good
Butylene	N/A
Butyric Acid	B ¹ -Good
Calcium Bisulfide	A-Excellent
Calcium Bisulfite	A-Excellent
Calcium Carbonate	A-Excellent
Calcium Chlorate	N/A
Calcium Chloride	A ² -Excellent
Calcium Hydroxide	A ² -Excellent
Calcium Hypochlorite	A ¹ -Excellent
Calcium Nitrate	A ² -Excellent
Calcium Oxide	A-Excellent
Calcium Sulfate	A-Excellent
Calgon	A-Excellent
Cane Juice	C ¹ -Fair
Carbolic Acid (Phenol)	B-Good
Carbon Bisulfide	D-Severe Effect
Carbon Dioxide (dry)	A ² -Excellent
Carbon Dioxide (wet)	A ² -Excellent
Carbon Disulfide	D-Severe Effect
Carbon Monoxide	A-Excellent
Carbon Tetrachloride	D-Severe Effect
Carbon Tetrachloride (dry)	D-Severe Effect
Carbon Tetrachloride (wet)	D-Severe Effect
Carbonated Water	B-Good
Carbonic Acid	A-Excellent
Catsup	A-Excellent

Chemical Name	Compatibilty
Chlorine (dry)	D-Severe Effect
Chlorine Water	D-Severe Effect
Chlorine, Anhydrous Liquid	D-Severe Effect
Chloroacetic Acid	C ¹ -Fair
Chlorobenzene (Mono)	C ¹ -Fair
Chlorobromomethane	A-Excellent
Chloroform	C ¹ -Fair
Chlorosulfonic Acid	D-Severe Effect
Chocolate Syrup	A ² -Excellent
Chromic Acid 10%	D-Severe Effect
Chromic Acid 30%	D-Severe Effect
Chromic Acid 5%	D-Severe Effect
Chromic Acid 50%	D-Severe Effect
Chromium Salts	N/A
Cider	A-Excellent
Citric Acid	A-Excellent
Citric Oils	A-Excellent
Clorox (Bleach)	A-Excellent
Coffee	A-Excellent
Copper Chloride	A-Excellent
Copper Cyanide	A-Excellent
Copper Fluoborate	N/A
Copper Nitrate	A-Excellent
Copper Sulfate>5%	A-Excellent
Copper Sulfate 5%	A-Excellent
Cream	A-Excellent
Cresols	D-Severe Effect
Cresylic Acid	A ¹ -Excellent
Cupric Acid	A ² -Excellent
Cyanic Acid	N/A
Cyclohexane	D-Severe Effect
Cyclohexanone	D-Severe Effect
Detergents	A-Excellent
Diacetone Alcohol	A ¹ -Excellent
Dichlorobenzene	C ¹ -Fair
Dichloroethane	D-Severe Effect
Diesel Fuel	A ¹ -Excellent
Diethyl Ether	A ¹ -Excellent
Diethylamine	A ¹ -Excellent
Diethylene Glycol	A ² -Excellent
Dimethyl Aniline	D-Severe Effect
Dimethyl Formamide	A-Excellent
Diphenyl	D-Severe Effect
Diphenyl Oxide	D-Severe Effect
Dyes	N/A
Epsom Salts (Magnesium Sulfate)	A-Excellent
Ethane	D-Severe Effect
Ethanol	A-Excellent
Ethanolamine	D-Severe Effect
Ether	D-Severe Effect
Ethyl Acetate	A ¹ -Excellent
Ethyl Benzoate	B ¹ -Good

Chemical Name	Compatibilty
Ethyl Chloride	D-Severe Effect
Ethyl Ether	D-Severe Effect
Ethyl Sulfate	N/A
Ethylene Bromide	D-Severe Effect
Ethylene Chloride	C ¹ -Fair
Ethylene Chlorohydrin	D-Severe Effect
Ethylene Diamine	N/A
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	A-Excellent
Formaldehyde 100%	C-Fair
Formaldehyde 40%	A-Excellent
Formic Acid	A ¹ -Excellent
Freon 113	D-Severe Effect
Freon 12	A ² -Excellent
Freon 22	B-Good
Freon TF	D-Severe Effect
Freonr 11	A-Excellent
Fruit Juice	B-Good
Fuel Oils	A-Excellent
Furan Resin	D-Severe Effect
Furfural	D-Severe Effect
Gallic Acid	A-Excellent
Gasoline (high-aromatic)	A-Excellent
Gasoline, leaded, ref.	B-Good
Gasoline, unleaded	C ¹ -Fair
Gelatin	A-Excellent
Glucose	A-Excellent
Glue, P.V.A.	N/A
Glycerin	A-Excellent
Glycolic Acid	A-Excellent
Heptane	C ² -Fair
Hexane	B ¹ -Good
Honey	A-Excellent
Hydraulic Oil (Petro)	D-Severe Effect
Hydraulic Oil (Synthetic)	D-Severe Effect
Hydrazine	C-Fair
Hydrobromic Acid 100%	C ¹ -Fair
Hydrobromic Acid 20%	A ² -Excellent
Hydrochloric Acid 100%	B ¹ -Good
Hydrochloric Acid 20%	B ² -Good
Hydrochloric Acid 37%	C-Fair
Hydrochloric Acid, Dry Gas	B-Good

Chemical Name	Compatibilty
Hydrocyanic Acid	A-Excellent
Hydrocyanic Acid (Gas 10%)	A-Excellent
Hydrofluoric Acid 100%	C ¹ -Fair
Hydrofluoric Acid 20%	A ² -Excellent
Hydrofluoric Acid 50%	A ² -Excellent
Hydrofluoric Acid 75%	C ¹ -Fair
Hydrofluosilicic Acid 100%	A-Excellent
Hydrofluosilicic Acid 20%	A-Excellent
Hydrogen Gas	A-Excellent
Hydrogen Peroxide 10%	A-Excellent
Hydrogen Peroxide 100%	B ¹ -Good
Hydrogen Peroxide 30%	B ¹ -Good
Hydrogen Peroxide 50%	B ¹ -Good
Hydrogen Sulfide (aqua)	A ¹ -Excellent
Hydrogen Sulfide (dry)	A ¹ -Excellent
Hydroquinone	A-Excellent
Iodine	C-Fair
Iodine (in alcohol)	N/A
Iodoform	N/A
Isooctane	A ² -Excellent
Isopropyl Acetate	B ¹ -Good
Isopropyl Ether	B-Good
Isotane	D-Severe Effect
Jet Fuel (JP3, JP4, JP5)	A ¹ -Excellent
Kerosene	B-Good
Ketones	C-Fair
Lacquer Thinners	D-Severe Effect
Lacquers	D-Severe Effect
Lactic Acid	B-Good
Lard	B ¹ -Good
Latex	A ² -Excellent
Lead Acetate	A ¹ -Excellent
Lead Nitrate	A ² -Excellent
Lead Sulfamate	A ² -Excellent
Ligroin	A ² -Excellent
Lime	N/A
Linoleic Acid	B ¹ -Good
Lithium Chloride	A ² -Excellent
Lithium Hydroxide	N/A
Lubricants	A ¹ -Excellent
Lye: Ca(OH) ₂ Calcium Hydroxide	A ² -Excellent
Lye: KOH Potassium Hydroxide	A-Excellent
Lye: NaOH Sodium Hydroxide	A-Excellent
Magnesium Bisulfate	A ² -Excellent
Magnesium Carbonate	A-Excellent
Magnesium Chloride	A ² -Excellent
Magnesium Hydroxide	A-Excellent
Magnesium Nitrate	A-Excellent
Magnesium Oxide	N/A
Magnesium Sulfate (Epsom Salts)	A-Excellent
Maleic Acid	A-Excellent
Maleic Anhydride	D-Severe Effect

Chemical Name	Compatibilty
Malic Acid	A ¹ -Excellent
Melamine	A-Excellent
Mercuric Chloride (dilute)	B-Good
Mercuric Cyanide	B-Good
Mercurous Nitrate	A-Excellent
Mercury	B-Good
Methane	A-Excellent
Methanol (Methyl Alcohol)	A ² -Excellent
Methyl Acetate	D-Severe Effect
Methyl Acetone	N/A
Methyl Acrylate	D-Severe Effect
Methyl Alcohol 10%	A ² -Excellent
Methyl Bromide	C-Fair
Methyl Butyl Ketone	D-Severe Effect
Methyl Cellosolve	B-Good
Methyl Chloride	D-Severe Effect
Methyl Dichloride	D-Severe Effect
Methyl Ethyl Ketone	B-Good
Methyl Ethyl Ketone Peroxide	N/A
Methyl Isobutyl Ketone	A-Excellent
Methyl Isopropyl Ketone	N/A
Methyl Methacrylate	D-Severe Effect
Methylamine	A ² -Excellent
Methylene Chloride	B ¹ -Good
Milk	B-Good
Mineral Spirits	B-Good
Molasses	B-Good
Monochloroacetic acid	N/A
Monoethanolamine	B-Good
Morpholine	B ² -Good
Motor oil	A ¹ -Excellent
Mustard	A-Excellent
Naphtha	B-Good
Naphthalene	B-Good
Natural Gas	A-Excellent
Nickel Chloride	A-Excellent
Nickel Nitrate	A ² -Excellent
Nickel Sulfate	A-Excellent
Nitrating Acid (<15% HNO3)	C-Fair
Nitrating Acid (>15% H2SO4)	C-Fair
Nitrating Acid (51% Acid)	C-Fair
Nitrating Acid (515% H2SO4)	C-Fair
Nitric Acid (20%)	A ² -Excellent
Nitric Acid (50%)	B-Good
Nitric Acid (5-10%)	A-Excellent
Nitric Acid (Concentrated)	D-Severe Effect
Nitrobenzene	B ¹ -Good
Nitrogen Fertilizer	N/A
Nitromethane	B ² -Good
Nitrous Acid	A-Excellent
Nitrous Oxide	D-Severe Effect
Oils: Aniline	A-Excellent

Chemical Name	Compatibilty
Oils: Anise	N/A
Oils: Bay	N/A
Oils: Bone	A-Excellent
Oils: Castor	A-Excellent
Oils: Cinnamon	D-Severe Effect
Oils: Citric	A-Excellent
Oils: Clove	N/A
Oils: Coconut	A ¹ -Excellent
Oils: Cod Liver	A ¹ -Excellent
Oils: Corn	A ² -Excellent
Oils: Cottonseed	A-Excellent
Oils: Creosote	C-Fair
Oils: Diesel Fuel (20, 30, 40, 50)	A ¹ -Excellent
Oils: Fuel (1, 2, 3, 5A, 5B, 6)	B-Good
Oils: Ginger	N/A
Oils: Hydraulic Oil (Petro)	D-Severe Effect
Oils: Hydraulic Oil (Synthetic)	D-Severe Effect
Oils: Lemon	N/A
Oils: Linseed	A-Excellent
Oils: Mineral	A-Excellent
Oils: Olive	A-Excellent
Oils: Orange	A-Excellent
Oils: Palm	N/A
Oils: Peanut	D-Severe Effect
Oils: Peppermint	N/A
Oils: Pine	B-Good
Oils: Rapeseed	D-Severe Effect
Oils: Rosin	A ² -Excellent
Oils: Sesame Seed	A-Excellent
Oils: Silicone	A-Excellent
Oils: Soybean	A ¹ -Excellent
Oils: Sperm (whale)	N/A
Oils: Tanning	N/A
Oils: Transformer	B-Good
Oils: Turbine	B ¹ -Good
Oleic Acid	B ¹ -Good
Oleum 100%	D-Severe Effect
Oleum 25%	D-Severe Effect
Oxalic Acid (cold)	A ² -Excellent
Ozone	B-Good
Palmitic Acid	B ¹ -Good
Paraffin	A ¹ -Excellent
Pentane	D-Severe Effect
Perchloric Acid	C-Fair
Perchloroethylene	D-Severe Effect
Petrolatum	D-Severe Effect
Petroleum	B ¹ -Good
Phenol (10%)	B ¹ -Good
Phenol (Carbolic Acid)	B-Good
Phosphoric Acid (>40%)	A ² -Excellent
Phosphoric Acid (crude)	B ² -Good
Phosphoric Acid (molten)	D-Severe Effect

Chemical Name	Compatibility
Phosphoric Acid (S40%)	A ² -Excellent
Phosphoric Acid Anhydride	A-Excellent
Phosphorus	A-Excellent
Phosphorus Trichloride	N/A
Photographic Developer	A-Excellent
Photographic Solutions	A ² -Excellent
Phthalic Acid	A-Excellent
Phthalic Anhydride	D-Severe Effect
Picric Acid	B ¹ -Good
Plating Solutions, Antimony Plating 130°F	A-Excellent
Plating Solutions, Arsenic Plating 110°F	A-Excellent
Plating Solutions (Brass): High-Speed Brass Bath 110°F	A-Excellent
Plating Solutions (Brass): Regular Brass Bath 100°F	A-Excellent
Plating Solutions (Bronze): Cu-Cd Bronze Bath R.T.	A-Excellent
Plating Solutions (Bronze): Cu-Sn Bronze Bath 160°F	A-Excellent
Plating Solutions (Bronze): Cu-Zn Bronze Bath 100°F	A-Excellent
Plating Solutions (Cadmium): Cyanide Bath 90°F	A-Excellent
Plating Solutions (Cadmium): Fluoborate Bath 100°F	A-Excellent
Plating Solutions, (Chromium): Barrel Chrome Bath 95°F	A-Excellent
Plating Solutions, (Chromium): Black Chrome Bath 115°F	A-Excellent
Plating Solutions, (Chromium): Chromic-Sulfuric Bath 130°F	A-Excellent
Plating Solutions, (Chromium): Fluoride Bath 130°F	A-Excellent
Plating Solutions, (Chromium): Fluosilicate Bath 95°F	D-Severe Effect
Plating Solutions (Copper) (Acid): Copper Fluoborate Bath 120°F	A-Excellent
Plating Solutions (Copper) (Acid): Copper Sulfate Bath R.T.	A-Excellent
Plating Solutions (Copper) (Cyanide): Copper Strike Bath 120°F	A-Excellent
Plating Solutions (Copper) (Cyanide): High-Speed Bath 180°F	A-Excellent
Plating Solutions (Copper) (Cyanide): Rochelle Salt Bath 150°F	A-Excellent
Plating Solutions (Copper) (Misc): Copper (Electroless)	A-Excellent
Plating Solutions (Copper) (Misc): Copper Pyrophosphate	A-Excellent
Plating Solutions (Gold): Acid 75°F	A-Excellent
Plating Solutions (Gold): Cyanide 150°F	A-Excellent
Plating Solutions (Gold): Neutral 75°F	A-Excellent
Plating Solutions, Indium Sulfamate Plating R.T.	A-Excellent
Plating Solutions (Iron): Ferrous Am Sulfate Bath 150°F	A-Excellent
Plating Solutions (Iron): Ferrous Chloride Bath 190°F	C-Fair
Plating Solutions (Iron): Ferrous Sulfate Bath 150°F	A-Excellent
Plating Solutions (Iron): Fluoborate Bath 145°F	A-Excellent
Plating Solutions (Iron): Sulfamate 140°F	A-Excellent
Plating Solutions (Iron): Sulfate-Chloride Bath 160°F	A-Excellent
Plating Solutions, Lead Fluoborate Plating	A-Excellent
Plating Solutions, (Nickel): Electroless 200°F	D-Severe Effect
Plating Solutions, (Nickel): Fluoborate 100-170°F	A-Excellent
Plating Solutions, (Nickel): High-Chloride 130-160°F	A-Excellent
Plating Solutions, (Nickel): Sulfamate 100-140°F	A-Excellent
Plating Solutions, (Nickel): Watts Type 115-160°F	A-Excellent
Plating Solutions (Rhodium) 120°F	A-Excellent
Plating Solutions, (Silver) 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): Acid Chloride 140°F	A-Excellent
Plating Solutions (Zinc): Acid Fluoborate Bath R.T.	A-Excellent

Chemical Name	Compatibility
Plating Solutions (Zinc): Acid Sulfate Bath 150°F	A-Excellent
Plating Solutions (Zinc): 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 ² -Excellent
Potassium Ferrocyanide	A-Excellent
Potassium Hydroxide (Caustic Potash)	A-Excellent
Potassium Hypochlorite	N/A
Potassium Iodide	A ² -Excellent
Potassium Nitrate	A-Excellent
Potassium Oxalate	N/A
Potassium Permanganate	A ¹ -Excellent
Potassium Sulfate	A-Excellent
Potassium Sulfide	A-Excellent
Propane (liquefied)	A-Excellent
Propylene	N/A
Propylene Glycol	A ² -Excellent
Pyridine	A ² -Excellent
Pyrogalllic Acid	A-Excellent
Resorcinol	A ² -Excellent
Rosins	A ² -Excellent
Rum	A-Excellent
Rust Inhibitors	A-Excellent
Salad Dressings	A-Excellent
Salicylic Acid	A ¹ -Excellent
Salt Brine (NaCl saturated)	A-Excellent
Sea Water	A-Excellent
Shellac (Bleached)	A-Excellent
Shellac (Orange)	A-Excellent
Silicone	A-Excellent
Silver Bromide	N/A
Silver Nitrate	A ¹ -Excellent
Soap Solutions	A-Excellent
Soda Ash (see Sodium Carbonate)	A-Excellent
Sodium Acetate	A-Excellent
Sodium Aluminate	N/A
Sodium Benzoate	A ² -Excellent
Sodium Bicarbonate	A-Excellent
Sodium Bisulfate	A-Excellent
Sodium Bisulfite	A-Excellent
Sodium Borate (Borax)	A ² -Excellent
Sodium Bromide	N/A
Sodium Carbonate	A-Excellent
Sodium Chlorate	A-Excellent

