

## Chemical Resistance

Many factors combine to determine the suitability of a wiring duct material and chemical exposure is important among them. Various chemicals will have different effects on plastics depending on such variables as chemical concentrations, temperature, stress and ultraviolet light. The information in this chart has been supplied to Panduit® by other reputable sources and is to be used ONLY as a guide in selecting equipment for appropriate chemical compatibility. Before permanent installation, test the equipment with the chemicals and under the specific conditions of your application. Ratings of chemical behavior listed in this chart apply to a 48 hour exposure period; Panduit® has no knowledge of possible effects beyond this period. Panduit® does not warrant (neither express or implied) that the information in this chart is accurate or complete or that any material is suitable for any purpose.

### Resistance of *Panduit*® Wiring Duct materials to Chemical Exposure at 72°F (22°C)

- A = Excellent
- B = Good – Minor effect, slight discoloration
- C = Fair – Moderate Effect, not recommended for continuous use.
- D = Severe Effect – Not recommended.
- = Information Not Available

Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Acetaldehyde	D	A	—
Acetamide	D	A	—
Acetate Solvent	D	B	D
Acetic Acid	D	B	A
Acetic Acid 20%	D	A	A
Acetic Acid 80%	C	A	A
Acetic Acid, Glacial	D	A	A
Acetic Anhydride	D	B	D
Acetone	D	A	D
Acetyl Bromide	D	—	—
Acetyl Chloride (dry)	C	D	D
Acetylene	A	A	—
Acrylonitrile	B	A	—
Adipic Acid	A	B	—
Alcohols:Amyl	A	B	C
Alcohols:Benzyl	D	A	D
Alcohols:Butyl	A	A	A
Alcohols:Diacetone	B	B	A
Alcohols:Ethyl	C	A	A
Alcohols:Hexyl	A	—	A
Alcohols:Isobutyl	A	A	A
Alcohols:Isopropyl	A	A	A
Alcohols:Methyl	A	A	A
Alcohols:Octyl	—	—	A
Alcohols:Propyl	A	A	A
Aluminum Chloride	A	A	A
Aluminum Chloride 20%	A	A	A
Aluminum Fluoride	A	A	A
Aluminum Hydroxide	A	A	A
Aluminum Nitrate	B	A	—

\*\*Refer to Safe and Acceptable Lubricants chart on [www.panduit.com](http://www.panduit.com) for mPPO and PPE + HIPS materials

Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Aluminum Potassium Sulfate 10%	A	A	A
Aluminum Potassium Sulfate 100%	A	A	A
Aluminum Sulfate	A	A	A
Alums	—	A	—
Amines	D	B	D
Ammonia 10%	B	A	A
Ammonia Nitrate	B	A	A
Ammonia, anhydrous	A	A	B
Ammonia, liquid	A	A	—
Ammonium Acetate	A	A	—
Ammonium Bifluoride	A	A	A
Ammonium Carbonate	A	A	A
Ammonium Caseinate	—	—	A
Ammonium Chloride	A	A	A
Ammonium Hydroxide	A	A	A
Ammonium Nitrate	A	A	A
Ammonium Oxalate	A	A	—
Ammonium Persulfate	A	A	A
Ammonium Phosphate, Dibasic	A	A	A
Ammonium Phosphate, Monobasic	A	A	A
Ammonium Phosphate, Tribasic	A	A	A
Ammonium Sulfate	A	A	A
Ammonium Sulfite	A	A	A
Ammonium Thiosulfate	—	—	—
Amyl Acetate	D	B	D
Amyl Alcohol	A	B	C
Amyl Chloride	D	D	D
Aniline	C	A	D
Aniline Hydrochloride	B	D	—
Antifreeze	A	D	A
Antimony Trichloride	A	A	A
Aqua Regia (80% HCl, 20% HNO3)	C	B	D
Arochlor 1248	—	D	—
Aromatic Hydrocarbons	D	D	D
Arsenic Acid	A	A	A
Arsenic Salts	A	—	—
Asphalt	A	B	—
Barium Carbonate	A	A	A
Barium Chloride	A	A	A
Barium Cyanide	D	D	—
Barium Hydroxide	A	B	A
Barium Nitrate	A	A	A
Barium Sulfate	B	B	A
Barium Sulfide	A	B	A
Beer	A	A	A

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Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Beet Sugar Liquids	A	A	A
Benzaldehyde	D	D	B
Benzene	C	D	D
Benzene Sulfonic Acid	A	D	A
Benzoic Acid	A	B	B
Benzol	—	B	B
Benzonitrile	—	—	—
Benzyl Chloride	—	C	D
Bleaching Liquors	A	A	—
Borax (Sodium Borate)	A	B	A
Boric Acid	A	A	A
Brewery Slop	—	—	—
Bromine	C	D	A
Butadiene	C	C	D
Butane	C	A	D
Butanol (Butyl Alcohol)	C	A	A
Butter	—	—	B
Buttermilk	A	A	A
Butyl Amine	D	B	D
Butyl Ether	A	D	D
Butyl Phthalate	—	B	A
Butylacetate	D	B	B
Butylene	A	—	—
Butyric Acid	B	B	D
Calcium Bisulfate	—	—	—
Calcium Bisulfide	A	A	A
Calcium Bisulfite	B	A	A
Calcium Carbonate	A	A	A
Calcium Chlorate	B	—	—
Calcium Chloride	C	A	A
Calcium Hydroxide	B	A	A
Calcium Hypochlorite	B	A	A
Calcium Nitrate	A	A	A
Calcium Oxide	B	A	A
Calcium Sulfate	B	A	A
Calgon	—	A	A
Cane Juice	A	C	—
Carbolic Acid (Phenol)	D	B	D
Carbon Bisulfide	D	D	—
Carbon Dioxide (dry)	A	A	A
Carbon Dioxide (wet)	A	A	A
Carbon Disulfide	D	D	D
Carbon Monoxide	A	A	A
Carbon Tetrachloride	D	D	D
Carbon Tetrachloride (dry)	—	D	D

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Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Carbon Tetrachloride (wet)	—	D	D
Carbonated Water	A	B	A
Carbonic Acid	A	A	A
Catsup	A	A	A
Chloric Acid	A	—	D
Chlorinated Glue	—	—	—
Chlorine (dry)	D	D	B
Chlorine Water	A	D	C
Chlorine, Anhydrous Liquid	D	D	B
Chloroacetic Acid	B	C	—
Chlorobenzene (Mono)	D	C	D
Chlorobromomethane	D	A	—
Chloroform	D	C	D
Chlorosulfonic Acid	D	D	D
Chocolate Syrup	—	A	A
Chromic Acid 10%	A	D	A
Chromic Acid 30%	A	D	D
Chromic Acid 5%	A	D	A
Chromic Acid 50%	D	D	D
Chromium Salts	A	—	—
Cider	A	A	A
Citric Acid	B	A	A
Citric Oils	—	A	A
Clorox® (Bleach)	A	D	A
Coffee	—	A	A
Copper Chloride	A	A	A
Copper Cyanide	A	A	A
Copper Fluoborate	A	—	—
Copper Nitrate	A	A	A
Copper Sulfate >5%	A	A	A
Copper Sulfate 5%	A	A	A
Cream	—	A	A
Cresols	D	D	D
Cresylic Acid	D	A	—
Cupric Acid	A	A	A
Cyanic Acid	—	—	—
Cyclohexane	D	D	D
Cyclohexanone	D	D	D
Detergents	A	A	A
Diacetone Alcohol	D	A	—
Dichlorobenzene	D	C	—
Dichloroethane	D	D	A
Diesel Fuel	A	A	D
Diethyl Ether	D	A	—
Diethylamine	D	A	—

\*\*Refer to Safe and Acceptable Lubricants chart on [www.panduit.com](http://www.panduit.com) for mPPO and PPE + HIPS materials

Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Diethylene Glycol	C	A	A
Dimethyl Aniline	D	D	D
Dimethyl Formamide	D	A	D
Diphenyl	—	D	—
Diphenyl Oxide	D	D	—
Dyes	B	—	A
Epsom Salts (Magnesium Sulfate)	A	A	A
Ethane	A	D	—
Ethanol	C	A	A
Ethanolamine	D	D	A
Ether	D	D	D
Ethyl Acetate	D	A	A
Ethyl Benzoate	D	B	A
Ethyl Chloride	D	D	D
Ethyl Ether	D	D	D
Ethyl Sulfate	—	—	—
Ethylene Bromide	D	D	—
Ethylene Chloride	D	C	D
Ethylene Chlorohydrin	D	D	—
Ethylene Diamine	D	—	D
Ethylene Dichloride	D	D	D
Ethylene Glycol	A	A	A
Ethylene Oxide	D	D	A
Fatty Acids	A	A	A
Ferric Chloride	A	A	A
Ferric Nitrate	A	A	A
Ferric Sulfate	A	A	A
Ferrous Chloride	A	A	A
Ferrous Sulfate	A	A	A
Fluoboric Acid	A	A	A
Fluorine	D	D	—
Fluosilicic Acid	D	A	A
Formaldehyde 100%	A	C	A
Formaldehyde 40%	A	A	A
Formic Acid	A	A	A
Freon 113	B	D	D
Freon 12	A	A	D
Freon 22	A	B	B
Freon TF	B	D	—
Freonr 11	A	A	B
Fruit Juice	A	B	B
Fuel Oils	A	A	B
Furan Resin	A	D	—
Furfural	D	D	D
Gallic Acid	B	A	A

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Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Gasoline (high-aromatic)	A	A	B
Gasoline, leaded, ref.	B	B	B
Gasoline, unleaded	C	C	D
Gelatin	B	A	A
Glucose	A	A	A
Glue, P.V.A.	C	—	—
Glycerin	A	A	A
Glycolic Acid	B	A	—
Gold Monocyanide	—	—	—
Grape Juice	A	—	—
Grease	A	—	—
Heptane	C	C	B
Hexane	B	B	B
Honey	A	A	—
Hydraulic Oil (Petro)	A	D	—
Hydraulic Oil (Synthetic)	A	D	—
Hydrazine	—	C	—
Hydrobromic Acid 100%	A	C	B
Hydrobromic Acid 20%	B	A	B
Hydrochloric Acid 100%	D	B	A
Hydrochloric Acid 20%	A	B	A
Hydrochloric Acid 37%	B	C	A
Hydrochloric Acid, Dry Gas	A	B	A
Hydrocyanic Acid	B	A	A
Hydrocyanic Acid (Gas 10%)	A	A	C
Hydrofluoric Acid 100%	C	C	D
Hydrofluoric Acid 20%	B	A	C
Hydrofluoric Acid 50%	B	A	D
Hydrofluoric Acid 75%	C	C	D
Hydrofluosilicic Acid 100%	B	A	B
Hydrofluosilicic Acid 20%	A	A	B
Hydrogen Gas	A	A	A
Hydrogen Peroxide 10%	A	A	A
Hydrogen Peroxide 100%	A	B	A
Hydrogen Peroxide 30%	A	B	A
Hydrogen Peroxide 50%	A	B	—
Hydrogen Sulfide (aqua)	B	A	A
Hydrogen Sulfide (dry)	A	A	—
Hydroquinone	B	A	—
Hydroxyacetic Acid 70%	D	—	—
Ink	C	—	—
Iodine	A	C	C
Iodine (in alcohol)	A	—	—
Iodoform	A	—	—
Isooctane	A	A	D

\*\*Refer to Safe and Acceptable Lubricants chart on [www.panduit.com](http://www.panduit.com) for mPPO and PPE + HIPS materials

Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Isopropyl Acetate	D	B	—
Isopropyl Ether	B	B	—
Isotane	A	D	—
Jet Fuel (JP3, JP4, JP5)	C	A	D
Kerosene	A	B	D
Ketones	D	C	D
Lacquer Thinners	D	D	D
Lacquers	D	D	D
Lactic Acid	B	B	A
Lard	A	B	A
Latex	—	A	—
Lead Acetate	B	A	A
Lead Nitrate	A	A	A
Lead Sulfamate	B	A	—
Ligroin	—	A	—
Lime	B	—	—
Linoleic Acid	A	B	—
Lithium Chloride	D	A	—
Lithium Hydroxide	—	—	—
Lubricants	B	A	C
Lye: Ca(OH) <sub>2</sub> Calcium Hydroxide	B	A	A
Lye: KOH Potassium Hydroxide	B	A	A
Lye: NaOH Sodium Hydroxide	A	A	A
Magnesium Bisulfate	A	A	—
Magnesium Carbonate	B	A	A
Magnesium Chloride	B	A	A
Magnesium Hydroxide	A	A	A
Magnesium Nitrate	A	A	A
Magnesium Oxide	—	—	—
Magnesium Sulfate (Epsom Salts)	A	A	A
Maleic Acid	A	A	A
Maleic Anhydride	—	D	—
Malic Acid	A	A	—
Manganese Sulfate	C	—	A
Mash	—	—	—
Mayonnaise	D	—	—
Melamine	D	A	—
Mercuric Chloride (dilute)	A	B	A
Mercuric Cyanide	A	B	—
Mercurous Nitrate	A	A	A
Mercury	A	B	A
Methane	B	A	—
Methanol (Methyl Alcohol)	A	A	A
Methyl Acetate	D	D	—
Methyl Acetone	D	—	—

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Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Methyl Acrylate	—	D	—
Methyl Alcohol 10%	A	A	A
Methyl Bromide	D	C	—
Methyl Butyl Ketone	A	D	—
Methyl Cellosolve	D	B	—
Methyl Chloride	D	D	D
Methyl Dichloride	A	D	—
Methyl Ethyl Ketone	D	B	D
Methyl Ethyl Ketone Peroxide	—	—	—
Methyl Isobutyl Ketone	D	A	D
Methyl Isopropyl Ketone	D	—	D
Methyl Methacrylate	A	D	—
Methylamine	D	A	—
Methylene Chloride	D	B	D
Milk	A	B	A
Mineral Spirits	A	B	A
Molasses	A	B	A
Monochloroacetic acid	—	—	—
Monoethanolamine	D	B	A
Morpholine	—	B	D
Motor oil	B	A	A
Mustard	B	A	A
Naphtha	A	B	D
Naphthalene	D	B	D
Natural Gas	A	A	—
Nickel Chloride	A	A	A
Nickel Nitrate	A	A	A
Nickel Sulfate	A	A	A
Nitrating Acid (<15% HNO3)	D	C	—
Nitrating Acid (>15% H2SO4)	D	C	—
Nitrating Acid (S1% Acid)	D	C	—
Nitrating Acid (S15% H2SO4)	D	C	—
Nitric Acid (20%)	A	A	B
Nitric Acid (50%)	B	B	B
Nitric Acid (5-10%)	A	A	A
Nitric Acid (Concentrated)	B	D	B
Nitrobenzene	D	B	D
Nitrogen Fertilizer	—	—	—
Nitromethane	B	B	D
Nitrous Acid	A	A	—
Nitrous Oxide	A	D	—
Oils:Aniline	D	A	D
Oils:Anise	—	—	—
Oils:Bay	—	—	—
Oils:Bone	—	A	—

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Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Oils:Castor	A	A	—
Oils:Cinnamon	D	D	—
Oils:Citric	B	A	A
Oils:Clove	—	—	—
Oils:Coconut	A	A	—
Oils:Cod Liver	A	A	—
Oils:Corn	B	A	A
Oils:Cottonseed	B	A	A
Oils:Creosote	C	C	D
Oils:Diesel Fuel (20, 30, 40, 50)	B	A	D
Oils:Fuel (1, 2, 3, 5A, 5B, 6)	A	B	A
Oils:Ginger	—	—	—
Oils:Hydraulic Oil (Petro)	A	D	—
Oils:Hydraulic Oil (Synthetic)	A	D	—
Oils:Lemon	—	—	—
Oils:Linseed	A	A	A
Oils:Mineral	B	A	A
Oils:Olive	C	A	A
Oils:Orange	C	A	—
Oils:Palm	A	—	—
Oils:Peanut	A	D	—
Oils:Peppermint	—	—	—
Oils:Pine	D	B	—
Oils:Rapeseed	—	D	—
Oils:Rosin	C	A	—
Oils:Sesame Seed	A	A	—
Oils:Silicone	A	A	A
Oils:Soybean	A	A	—
Oils:Sperm (whale)	—	—	—
Oils:Tanning	—	—	—
Oils:Transformer	B	B	—
Oils:Turbine	A	B	—
Oleic Acid	C	B	A
Oleum 100%	D	D	A
Oleum 25%	D	D	—
Oxalic Acid (cold)	B	A	A
Ozone	B	B	—
Palmitic Acid	B	B	—
Paraffin	B	A	A
Pentane	A	D	—
Perchloric Acid	C	C	—
Perchloroethylene	C	D	D
Petrolatum	B	D	—
Petroleum	—	B	D
Phenol (10%)	C	B	D

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Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Phenol (Carbolic Acid)	D	B	D
Phosphoric Acid (>40%)	B	A	A
Phosphoric Acid (crude)	B	B	A
Phosphoric Acid (molten)	D	D	—
Phosphoric Acid (S40%)	B	A	A
Phosphoric Acid Anhydride	—	A	—
Phosphorus	A	A	—
Phosphorus Trichloride	D	—	—
Photographic Developer	A	A	A
Photographic Solutions	A	A	A
Phthalic Acid	—	A	—
Phthalic Anhydride	D	D	—
Picric Acid	D	B	—
Plating Solutions, Antimony Plating 130°F	A	A	A
Plating Solutions, Arsenic Plating 110°F	A	A	—
Plating Solutions, Brass Plating: High-Speed Brass Bath 110°F	A	A	A
Plating Solutions, Brass Plating: Regular Brass Bath 100°F	A	A	A
Plating Solutions, Bronze Plating: Cu-Cd Bronze Bath R.T.	A	A	A
Plating Solutions, Bronze Plating: Cu-Sn Bronze Bath 160°F	D	A	A
Plating Solutions, Bronze Plating: Cu-Zn Bronze Bath 100°F	A	A	A
Plating Solutions, Cadmium Plating: Cyanide Bath 90°F	A	A	A
Plating Solutions, Cadmium Plating: Fluoborate Bath 100°F	A	A	A
Plating Solutions, Chromium Plating: Barrel Chrome Bath 95°F	A	A	D
Plating Solutions, Chromium Plating: Black Chrome Bath 115°F	A	A	D
Plating Solutions, Chromium Plating: Chromic-Sulfuric Bath 130°F	A	A	D
Plating Solutions, Chromium Plating: Fluoride Bath 130°F	A	A	D
Plating Solutions, Chromium Plating: Fluosilicate Bath 95°F	A	D	D
Plating Solutions, Copper Plating (Acid): Copper Fluoborate Bath 120°F	A	A	A
Plating Solutions, Copper Plating (Acid): Copper Sulfate Bath R.T.	A	A	A
Plating Solutions, Copper Plating (Cyanide): Copper Strike Bath 120°F	A	A	A
Plating Solutions, Copper Plating (Cyanide): High-Speed Bath 180°F	D	A	A
Plating Solutions, Copper Plating (Cyanide): Rochelle Salt Bath 150°F	D	A	A
Plating Solutions, Copper Plating (Misc): Copper (Electroless)	A	A	A
Plating Solutions, Copper Plating (Misc): Copper Pyrophosphate	A	A	A
Plating Solutions, Gold Plating: Acid 75°F	A	A	A
Plating Solutions, Gold Plating: Cyanide 150°F	D	A	A
Plating Solutions, Gold Plating: Neutral 75°F	A	A	A
Plating Solutions, Indium Sulfamate Plating R.T.	A	A	A
Plating Solutions, Iron Plating: Ferrous Am Sulfate Bath 150°F	D	A	A
Plating Solutions, Iron Plating: Ferrous Chloride Bath 190°F	D	C	A
Plating Solutions, Iron Plating: Ferrous Sulfate Bath 150°F	D	A	A
Plating Solutions, Iron Plating: Fluoborate Bath 145°F	D	A	A
Plating Solutions, Iron Plating: Sulfamate 140°F	A	A	A

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Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Plating Solutions, Iron Plating: Sulfate-Chloride Bath 160°F	D	A	A
Plating Solutions, Lead Fluoborate Plating	A	A	A
Plating Solutions, Nickel Plating: Electroless 200°F	D	D	D
Plating Solutions, Nickel Plating: Fluoborate 100-170°F	A	A	A
Plating Solutions, Nickel Plating: High-Chloride 130-160°F	D	A	A
Plating Solutions, Nickel Plating: Sulfamate 100-140°F	A	A	A
Plating Solutions, Nickel Plating: Watts Type 115-160°F	D	A	A
Plating Solutions, Rhodium Plating 120°F	A	A	A
Plating Solutions, Silver Plating 80-120°F	A	A	A
Plating Solutions, Tin-Fluoborate Plating 100°F	A	A	A
Plating Solutions, Tin-Lead Plating 100°F	A	A	A
Plating Solutions, Zinc Plating: Acid Chloride 140°F	A	A	A
Plating Solutions, Zinc Plating: Acid Fluoborate Bath R.T.	A	A	A
Plating Solutions, Zinc Plating: Acid Sulfate Bath 150°F	D	A	A
Plating Solutions, Zinc Plating: Alkaline Cyanide Bath R.T.	A	A	A
Potash (Potassium Carbonate)	A	A	A
Potassium Bicarbonate	A	A	A
Potassium Bromide	A	A	A
Potassium Chlorate	A	A	A
Potassium Chloride	A	A	A
Potassium Chromate	A	A	A
Potassium Cyanide Solutions	A	A	A
Potassium Dichromate	A	A	A
Potassium Ferricyanide	A	A	A
Potassium Ferrocyanide	A	A	A
Potassium Hydroxide (Caustic Potash)	A	A	A
Potassium Hypochlorite	B	—	—
Potassium Iodide	A	A	—
Potassium Nitrate	A	A	A
Potassium Oxalate	—	—	—
Potassium Permanganate	A	A	A
Potassium Sulfate	A	A	A
Potassium Sulfide	A	A	A
Propane (Liquefied)	A	A	A
Propylene	B	—	—
Propylene Glycol	C	A	—
Pyridine	D	A	B
Pyrogallic Acid	A	A	—
Resorcinal	C	A	—
Rosins	C	A	—
Rum	A	A	A
Rust Inhibitors	—	A	—
Salad Dressings	—	A	A
Salicylic Acid	B	A	—
Salt Brine (NaCl saturated)	A	A	A

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Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Sea Water	A	A	A
Shellac (Bleached)	—	A	—
Shellac (Orange)	—	A	—
Silicone	A	A	A
Silver Bromide	—	—	A
Silver Nitrate	A	A	A
Soap Solutions	A	A	A
Soda Ash (see Sodium Carbonate)	A	A	A
Sodium Acetate	B	A	A
Sodium Aluminate	—	—	A
Sodium Benzoate	B	A	—
Sodium Bicarbonate	A	A	A
Sodium Bisulfate	A	A	A
Sodium Bisulfite	A	A	A
Sodium Borate (Borax)	A	A	A
Sodium Bromide	B	—	A
Sodium Carbonate	A	A	A
Sodium Chlorate	A	A	A
Sodium Chloride	A	A	A
Sodium Chromate	—	—	A
Sodium Cyanide	A	A	A
Sodium Ferrocyanide	A	A	A
Sodium Fluoride	A	A	A
Sodium Hydrosulfite	C	—	—
Sodium Hydroxide (20%)	A	A	A
Sodium Hydroxide (50%)	A	A	A
Sodium Hydroxide (80%)	A	A	A
Sodium Hypochlorite (<20%)	A	A	A
Sodium Hypochlorite (100%)	B	B	A
Sodium Hyposulfate	—	—	—
Sodium Metaphosphate	A	A	—
Sodium Metasilicate	A	A	—
Sodium Nitrate	A	A	A
Sodium Perborate	A	A	A
Sodium Peroxide	B	B	—
Sodium Polyphosphate	A	A	A
Sodium Silicate	A	A	A
Sodium Sulfate	A	A	A
Sodium Sulfide	A	A	A
Sodium Sulfite	A	A	A
Sodium Tetraborate	A	—	A
Sodium Thiosulfate (hypo)	A	A	A
Sorghum	—	—	—
Soy Sauce	—	—	A
Stannic Chloride	A	A	A

\*\*Refer to Safe and Acceptable Lubricants chart on [www.panduit.com](http://www.panduit.com) for mPPO and PPE + HIPS materials

Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Stannic Fluoborate	—	—	A
Stannous Chloride	A	A	A
Starch	A	A	A
Stearic Acid	B	A	A
Stoddard Solvent	C	C	D
Styrene	D	—	A
Sugar (Liquids)	—	A	A
Sulfate (Liquors)	B	A	—
Sulfur Chloride	C	C	A
Sulfur Dioxide	A	A	A
Sulfur Dioxide (dry)	A	A	A
Sulfur Hexafluoride	B	—	—
Sulfur Trioxide	A	C	D
Sulfur Trioxide (dry)	A	D	D
Sulfuric Acid (<10%)	A	A	A
Sulfuric Acid (10-75%)	A	A	A
Sulfuric Acid (75-100%)	D	C	A
Sulfuric Acid (cold concentrated)	D	A	A
Sulfuric Acid (hot concentrated)	D	D	D
Sulfurous Acid	A	A	A
Sulfuryl Chloride	—	—	—
Tallow	—	A	A
Tannic Acid	A	A	A
Tanning Liquors	A	A	A
Tartaric Acid	A	A	A
Tetrachloroethane	C	C	D
Tetrachloroethylene	D	D	D
Tetrahydrofuran	D	C	D
Tin Salts	A	A	—
Toluene (Toluol)	D	C	D
Tomato Juice	A	A	A
Trichloroacetic Acid	B	A	—
Trichloroethane	C	C	D
Trichloroethylene	D	C	D
Trichloropropane	—	—	D
Tricresylphosphate	D	A	A
Triethylamine	B	D	B
Trisodium Phosphate	A	A	A
Turpentine	D	D	D
Urea	D	A	A
Uric Acid	A	—	—
Urine	A	A	A
Varnish	D	A	D
Vegetable Juice	—	—	A
Vinegar	B	A	A

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Agent	PVC	Polypropylene	Modified PPO/PPE + HIPS **
Vinyl Acetate	D	B	—
Vinyl Chloride	D	—	—
Water, Acid, Mine	B	A	—
Water, Deionized	A	A	A
Water, Distilled	A	A	A
Water, Fresh	B	A	A
Water, Salt	B	A	A
Weed Killers	—	—	—
Whey	—	—	—
Whiskey & Wines	A	A	A
White Liquor (Pulp Mill)	A	A	A
White Water (Paper Mill)	A	A	D
Xylene	D	B	B
Zinc Chloride	B	A	A
Zinc Hydrosulfite	—	—	A
Zinc Sulfate	A	A	A

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