

TUBING CHEMICAL RESISTANCE CHARACTERISTICS

/// POLYETHYLENE

/// VINYL OR PVC

The information contained in these lists is to be used as a guide for the selection and use of Sioux Chief's tubing products. It is recommended that chemical resistance be checked with a sample of the product as compounds and additives frequently change.

The list is not intended to be fully comprehensive and exclusion does not necessarily imply that the particular chemical would not be suitable for use with certain tubing products. Certain corrosives that would be destructive to tubing or hose with prolonged exposure can be satisfactorily handled for short periods of time if flushed with water after use.

All information should be used as an indication only and Sioux Chief Manufacturing accepts no liability as to its accuracy.



Chemical Resistance Characteristics of Polyethylene | Milky White

/// Excellent Resistance

Acetamide	Calcium Hypochloride	Formaldehyde (40%)	Oxalic Acid (Sat.)	Sodium Benzoate (35%)
Acetic Acid (100%)	Calcium Nitrate (50%)	Formic Acid (100%)	Palmitic Acid	Sodium Bicarbonate (Sat.)
Acrylic Emulsions	Calcium Sulfate	Fructose (Sat.)	Perchloric Acid (10%)	Sodium Bisulfate (Sat.)
Adipic Acid	Carbazole	Fruit Pulp	Phenol (50%)	Sodium Bisulfite (Sat.)
Alanine	Carbon Dioxide Wet/Dry (100%)	Gallic Acid (Sat.)	Phosphorous Pentoxide (100%)	Sodium Bromide (Conc.)
Allyl Alcohol	Carbone Monoxide	Gin	Phosphorous Trichloride (100%)	Sodium Carbonate
Aluminum Chloride (Cons.)	Carbonic Acid	Glucose	Photographic Solutions	Sodium Chlorate (Sat.)
Aluminum Fluoride (Conc.)	Castor Oil	Glycerine	Pickling Baths:	Sodium Chloride (Sat.)
Aluminum Hydroxide	Cellosolve Acetate	Glycols	Sulfuric Acid, Hydrochloric Acid	Sodium Cyanide
Aluminum Sulfate (Conc.)	Cesium Salts	Glycolic Acid (30%)	Sulfuric-Nitric	Sodium Dichromate (Sat.)
Alums (All Types Conc.)	Chloride Water (Sat.)	Grape Sugar (Sat.)	Picric Acid (1%)	Sodium Ferricyanide (Sat.)
Amino Acids	Chromic Acid (50%)	Hydrobromic Acid (50%)	Plating Solutions:	Sodium Ferrocyanide (Sat.)
Ammonia Dry Gas (100%)	Chrome Alum (Sat.)	Hydrochloric Acid (40%)	Brass, Cadmium, Chromium, Copper	Sodium Fluoride (Sat.)
Ammonium Acetate (Sat.)	Cider	Hydrocyanic Acid (Sat.)	Gold, Indium, Lead, Nickel, Rhodium	Sodium Hexametaphosphate
Ammonium Carbonate	Citric Acid	Hydrofluoric Acid (60%)	Silver, Tin, Zinc	Sodium Hydroxide
Ammonium Chloride (Sat.)	Coconut Oil	Hydrogen (100%)	Potassium Bicarbonate (Sat.)	Sodium Hypochlorite
Ammonium Fluoride (Sat.)	Cottonseed Oil	Hydrogen Chloride Gas (Dry)	Potassium Borate (1%)	Sodium Nitrate
Ammonium Hydroxide (Conc.)	Cupric Chloride (Sat.)	Hydrogen Peroxide (30%)	Potassium Bromate (10%)	Sodium Sulfate
Ammonium Metaphosphate (Sat.)	Cupric Cyanide (Sat.)	Hydrogen Phosphide (100%)	Potassium Bromide (Sat.)	Sodium Sulfide (Sat.)
Ammonium Nitrate (Sat.)	Cupric Fluoride (Sat.)	Hydroquinone	Potassium Carbonate	Sodium Sulfite
Ammonium Oxalate	Cupric Nitrate (Sat.)	Hydrogen Sulfide	Potassium Chlorate (Sat.)	Sour Crude
Ammonium Sulfate (Sat.)	Cupric Sulfate	Hypochlorous Acid (Conc.)	Potassium Chloride (Sat.)	Stannous Chloride (Sat.)
Ammonium Sulfide (Sat.)	Cuprous Chloride (Sat.)	Inks	Potassium Chromate (40%)	Stannic Chloride (Sat.)
Aniline	Cyclohexane	Isopropyl Acetate	Potassium Dichromate (Sat.)	Starch Solution (Sat.)
Antimony Salts	Detergents, Synthetic	Isopropyl Alcohol	Potassium Cyanide (Sat.)	Stearic Acid (100%)
Arsenic Acid (80%)	Developers, Photographic	Lactic Acid	Potassium Ferri/Ferro Cyanide (Sat.)	Sulfur
Arsenic Salts	Dextrin	Latex	Potassium Fluoride	Sulfuric Acid To 70%
Barium Carbonate (Sat.)	Dextrose	Lead Salts	Potassium Hydroxide	Sulfur Dioxide
Barium Chloride (Sat.)	Diethyl Ketone	Lithium Salts	Potassium Nitrate (Sat.)	Sulfur Salts
Barium Hydroxide	Dimethyl Formamide	Magnesium Carbonate (Sat.)	Potassium Perborate (Sat.)	Sulfurous Acid
Sulfate (Sat.)	Dimethyl Sulfoxide	Magnesium Chloride (Sat.)	Potassium Perchlorate (10%)	Tallow
Barium Sulfide (Sat.)	Dipropylene Glycol	Magnesium Hydroxide (Sat.)	Potassium Permanganate (20%)	Tannic Acid (Conc.)
Beer	Disodium Phosphate	Magnesium Nitrate (Sat.)	Potassium Sulfate (Conc.)	Tartaric Acid (Sat.)
Benzenesulfonic Acid (10%)	Diazo Salts	Malic Acid (10%)	Potassium Sulfide (Conc.)	Triethylene Glycol
Benzoic Acid (Sat.)	Emulsions, Photographic	Mercuric Chloride (Sat.)	Potassium Sulfite (Conc.)	Tripropylene Glycol
Benzyl Acetate	Ethyl Acetate (100%)	Mercuric Cyanide (Sat.)	Potassium Persulfate (Sat.)	Trisodium Phosphate
Bismuth Salts	Ethyl Alcohol (100%)	Mercurous Nitrate (Sat.)	Propargyl Alcohol	Turkey Red Oil
Bleach Lye (10%)	Ethyl Benzoate	Mercury	Propyl Alcohol	Undacyl Alcohol
Boric Acid	Ethyl Cyanoacetate	Methyl Alcohol (100%)	Propylene Glycol	Urea
Boron Salts	Ethyl Lactate	Methyl Isobutyl Ketone	Resorcinol	Urine
Brine	Ethylene Glycol	Methyl Propyl Ketone	Salicylaldehyde	Vinegar
N-Butyl Acetate (100%)	Fatty Acids	Methyl Sulfuric Acid	Salicylic Acid	Vanilla Extract
N-Butyl Alcohol (100%)	Ferric Chloride (Sat.)	Milk	Salt Solutions	Wetting Agents
Iso-Butyl Alcohol (100%)	Ferric Nitrate (Sat.)	Molasses	Sea Water	Whiskey
Butanediol	Ferrous Chloride (Sat.)	Nickel Chloride (Sat.)	Selinic Acid	Wines
Cadmium Salts	Ferrous Sulfate	Nickel Nitrate (Conc.)	Shortening	Yeast
Calcium Hydroxide	Fish Solubles	Nickel Sulfate (Sat.)	Silver Acetate	Zinc Chloride (Sat.)
Calcium Bisulfide	Fluoboric Acid	Nicotine (Dilute)	Silver Nitrate	Zinc Stearate
Calcium Carbonate (Sat.)	Fluosilicic Acid (Conc.)	Nicotinic Acid (55%)	Silver Salts	Zinc Sulfate (Sat.)
Calcium Chlorate (Sat.)	Fluorides	N-Octane	Soap Solution	
Calcium Chloride (Sat.)	Freon 12	Orange Extract	Sodium Acetate (Sat.)	

/// Fair to Good Resistance

Acetaldehyde	Chlorine Gas (100%)	Fluorine	Methyl Ethyl Ketone (100%)	Ozone
Acetone	Chloroform (100%)	Fuel Oil	Methylene Chloride (100%)	Petroleum Ether
Ammonia Liquid	Cyclohexanone	Furfural (100%)	Mineral Oils	Propylene Dichloride
Amyl Acetate (100%)	Decalin	Furfural Alcohol	Naptha	Sulfuric Acid (80%)
Benzene	Diethyl Phthalate	Heptane	Naphthalene	Tetrahydrofuran
Bromine Water	Ethyl Bromide	Iodine	Nitric Acid (70%)	Transformer Oil
Camphor Oil	Ethyl Chloride	Linseed Oil	Oils And Fats	Trichloroethylene
Chloroacetic Acid (100%)	Ethylene Oxide	Methyl Bromide	Oleic Acid	

/// Poor Resistance

Amyl Chloride (100%)	Carbon Disulfide	O-Dichlorobenzene	Hexane	Thionyl Chloride
Aqua Regia	Carbon Tetrachloride	P-Dichlorobenzene	Nitrobenzene (100%)	Trichloroethane
Benzaldehyde	Cedarwood Oil	Diethyl Benzene	Lube Oil	Trichloroethylene
Benzyl Alcohol	Chlorine Liquid	Ether	Perchloric Acid	Vinylidene Chloride
Bromine Gas/Liquid	Chlorobenzene	Ethyl Benzene	Perchloroethylene	
Bromobenzene	Chlorosulfonic Acid	Ethyl Butyrate	Sulfur Dioxide (40 Psi)	
Butadiene	Cinnamon Oil	Ethyl Chloride	Sulfuric Acid (96%)	
Butyric Acid	Cresol	Ethylene Chloride	Sulfuric Acid, Fuming	

Chemical Resistance Characteristics of Vinyl or PVC | Clear Tubing

/// Excellent Resistance

Acetic Acid	Essential Oils	Oil
Air	Ethyl Alcohol	Oxalic Acid
Alcohols	Ethyl Chloride	Oxygen
Aluminum Chloride	Ethylene Glycol	Palmitic Acid
Aluminum Sulfate	Fatty Acid	Picric Acid
Alums	Ferric Chloride	Phosphoric Acid
Ammonia Gas	Ferric Sulfate	Potassium Chloride
Ammonium Chloride	Fluoboric Acid	Potassium Sulfate
Ammonium Nitrate	Fluosilicic Acid	Propane
Ammonium Phosphate	Formic Acid	Pyrethrum
Ammonium Sulfate	Formaldehyde	Sodium Bisulfite
Amyl Alcohol	Freon	Sodium Bicarbonate
Animal Oils	Gallic Acid	Sodium Borate
Antimony Salts	Gas (Natural)	Sodium Carbonate
Arsenic Salts	Gasoline (Non-Aromatic)	Sodium Chloride
Barium Salts	Gelatin	Sodium Cyanide
Basic Copper Arsenate	Glue (Depending On Type)	Sodium Hydroxide
Beer	Glucose	Sodium Hypochlorite
Benzoic Acid	Glycerine	Sodium Nitrate
Benzyl Alcohol	Hydrochloric Acid	Sodium Phosphate
Boric Acid	Hydrocyanic Acid	Sodium Silicate
Boric Copper Sulfate	Hydrofluoric Acid	Sodium Sulfide
Bordeaux Mixture	Hydraulic Oil	Sodium Sulfate
Butanol	Hydrogen Gas	Sodium Thiosulfate
Butter	Hydrogen Peroxide (Dil.)	Stearic Acid
Calcium Hydroxide	Hydrogen Sulfide	Stannous Chloride
Calcium Hypochlorite	Lactic Acid	Sulphur Dioxide
Calcium Salts	Lard	Sulfuric Acid (Dil.)
Carbolic Acid	Lead Arsenate	Sulfurous Acid
Carbon Monoxide	Lead Sulfate	Tannic Acid
Corn Oil	Lime	Tartaric Acid
Cottonseed Oil	Linseed Oil	Tar Oil
Caustic Potash (-20%)	Magnesium Chloride	Turpentine
Caustic Soda (-20%)	Magnesium Hydroxide	Urea
Chloroform	Magnesium Sulfate	Uric Acid
Chromic Acid	Maleic Acid	Vinegar
Chlorine (Dry)	Milk	Water
Chlorine (Water)	Mineral Oil	Whiskey
Chromium Salts	Molasses	Wine
Copper Chloride	Nickel Chloride	Wool Oil
Copper Sulfate	Nicotine	Zinc Chloride
Citric Acid	Nitric Acid 20%	Zinc Hydrate
Cresylic Acid	Nitrogen Oxide	Zinc Sulfate
Cupric Sulfate	Nitrous Acid	

/// Fair to Good Resistance

Aniline	Caustic Soda (+20%)	Pentane
Benzine	Chlordane	Perchloric Acid
Benzol	Creosote	Perchloroethylene
Borax	Ether	Phenolates
Butane	Gasoline (Aromatic)	Phenols
Bromine	Hydrogen Peroxide (Conc.)	Stoddard Solvent
Calcium Bisulfide	Kerosene	Sulfuric Acid (Conc.)
Calcium Chloride	Mercuric Chloride	Trichloroethylene
Carbon Tetrachloride	Oleic Acid	Trichloroacetic Acid
Caustic Potash (+20%)		

/// Poor Resistance

Acetic Anhydride	Chloroacetic Acid	Lacquer Solvents
Acetone	Cresols	Naphtha
Acetyl Bromide	Cyclohexanone	Nitrobenzene
Acetyl Chloride	Ethyl Acetate	Paint Solvents
Ammonium Hydroxide	Ethylene Dichloride	Pyridine
Amyl Acetate	Fuel Oil (Aromatic Gas)	Toluene
Aromatic Hydrocarbons	Fuel Oil (Aromatic Gas)	Toluol
Butyl Acetate	Isopropyl Acetate	Xylol
Carbon Bisulfide	Ketones	Xylene

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