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Chemical Resistance of VR® and PolyWear® Products[1]

S = satisfactory (no attack), O = slight attack, U = unsatisfactory, 70˚F = 21˚C, 140˚F = 60˚C

Chemical or Solvent	Concentration	70°F	140°F
Acetaldehyde	100%	O	U
Acetic Acid (Glacial)	Concentrate	O	U
Acetic Anhydride	–	U	U
Acetic Acid	1-10%	S	S
Acetic Acid	10-60%	S	O
Acetic Acid	80-100%	O	U
Acetone	–	S	S
Acetone	100%	U	U
Acrylic Emulsions	–	S	S
Allyl Alcohol	–	U	U
Allyl Chloride	–	U	U
Aluminum Chloride	Dilute	S	S
Aluminum Chloride	Concentrate	S	S
Aluminum Fluoride	Concentrate	S	S
Aluminum Hydroxide	Concentrate	S	S
Aluminum Sulfate	Concentrate	S	S
Alums (all types)	Concentrate	S	S
Ammonia	100% Dry Gas	S	S
Ammonium Carbonate	–	S	S
Ammonium Chloride	Saturated	S	S
Ammonium Carbonate	Concentrate	S	S
Ammonium Chloride	Saturated	S	S
Ammonium Fluoride	20%	S	S
Ammonium Hydroxide	–	S	S
Ammonium Hydroxide	35%	S	S
Ammonium Metaphosphate	Saturated	S	S
Ammonium Nitrate	Saturated	S	S
Ammonium Persullitt	Saturated	S	S
Ammonium Persulfate	Saturated	S	S
Ammonium Sulfate	Saturated	S	S
Ammonium Sulfide	Saturated	S	S
Ammonium Thiocyanate	Saturated	S	S
Ammonium Thiocyanst	Saturated	S	S

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Chemical or Solvent	Concentration	70°F	140°F
Amyl Acetate	100%	U	U
Amyl Alcohol	100%	S	S
Amyl Chloride	100%	U	U
Aniline	100%	S	U
Aniline Hydrochloride	Saturated	–	U
Antimony Chloride	–	U	U
Aqua Acid	–	U	U
Aqua Regis	–	O	U
Arsenic Acid	100%	S	S
Barium Carbonate	Saturated	S	S
Barium Chloride	Saturated	S	S
Barium Hydroxide	Saturated	S	S
Barium Sulfide	Saturated	S	S
Beer	–	S	S
Benzene	–	U	U
Benzene Sulfonic Acid	–	S	S
Benzoic Acid Saturated	–	O	O
Benzoic Acid All	Concentrate	S	S
Benzene Sulfonic Acid	–	S	S
Bismuth Carbonate	Saturated	S	S
Black Liquor	–	S	S
Bleach Lye	10%	S	S
Borax	Saturated	S	S
Borax Cold	Saturated	S	S
Boric Acid	Concentrate	S	S
Boric Acid	Dilute	S	S
Bromic Acid	10%	S	S
Bromic Acid	100%	U	U
Borax Cold	Saturated	S	S
Bromic Acid	10%	S	S
Bromine Liquid	100%	U	U
Bromine Water	–	U	U
Butanediol	100%	S	S

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Chemical or Solvent	Concentration	70°F	140°F
Butanediol	60%	S	S
Butanediol	10%	S	S
Butyl Alcohol	100%	S	S
Butyric Acid	Concentrate	U	U
Calcium Bisulfide	–	S	S
Calcium Carbonate	Saturated	S	S
Calcium Chlorate	Saturated	S	S
Calcium Chloride	Saturated	S	S
Calcium Hydroxide	Saturated	S	S
Calcium Hydroxide	–	S	S
Calcium Hypochlorite	Bleach Solution	S	S
Calcium Nitrate	Saturated	S	S
Calcium Nitrate	50%	S	S
Calcium Sulfate	–	S	S
Camphor Oil	–	U	U
Carbon Dioxide	100% Dry	S	S
Carbon Dioxide	100% Wet	S	S
Carbon Dioxide	Cold Saturated	S	S
Carbon Disulfide	–	U	U
Carbon Disulphide	–	U	U
Carbon Monoxide	–	S	S
Carbon Tetrachloride	–	U	U
Carbonic Acid	–	S	S
Caster Oil	Concentrate	S	S
Chloracetic Acid	100%	U	U
Chlorine Moist Gas	–	O	U
Chlorine Liquid	–	U	U
Chlorine Water	2% Solution	U	U
Chlorobenzene	–	U	U
Chloroform	100%	U	U
Chlorosulfonic Acid	–	U	U
Chrome Alum	Saturated	S	S
Chromic Acid	10-20%	S	O

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Chemical or Solvent	Concentration	70°F	140°F
Chromic Acid	20%	S	S
Chromic Acid & Sulfuric Acid	–	S	O
Chromic Acid	50%	S	O
Cider	–	S	S
Citric Acid	Saturated	S	S
Coconut Oil Alcohols	–	S	S
Cola	Concentrates	S	S
Copper Chloride	Saturated	S	S
Copper Cyanide	Saturated	S	S
Copper Fluoride	2%	S	S
Copper Nitrate	Saturated	S	S
Copper Sulfate	Dilute	S	S
Copper Sulfate	Saturated	S	S
Cottonseed Oil	100%	S	S
Cottonseed Oil	–	S	S
Cresol	100%	U	U
Cresylic Acid	50%	S	S
Cuprous Chloride	Saturated	S	S
Cyclohexane	100%	U	U
Cyclohexanone	–	U	U
Cyclohexanol	100%	S	S
Detergents, Synthetic	–	S	S
Developers Photographic	–	S	S
Dextrin	Saturated	S	S
Dextrose	Saturated	S	S
Diazo Salts	–	S	S
Dibutylphthalate	–	O	O
Diethylene Glycol	100%	O	U
Diethylene Glycol	–	S	S
Diglycolic Acid	–	S	S
Dimethylamine	–	U	U
Dioctyl Phthalate	–	O	U
Disodium Phosphate	Saturated	S	S

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Chemical or Solvent	Concentration	70°F	140°F
Emulsions, Photographic	–	S	S
Ethyl Acetate	100%	O	O
Ethyl Alcohol	35%	S	S
Ethyl Alcohol	100%	S	S
Ethyl Butyrate	100%	O	U
Ethyl Chloride	–	U	U
Ethyl Ether	100%	U	U
Ethylene Chloride	–	U	U
Ethylene Chlorohydrin	–	U	U
Ethylene Dichloride	–	U	U
Ethylene Glycol	–	S	S
Ferric Chloride	Saturated	S	S
Ferric Nitrate	Saturated	S	S
Ferric Sulfate	Saturated	S	S
Ferrous Chloride	Saturated	S	S
Ferrous Sulfate	–	S	S
Fish Solubles	–	S	S
Fluoboric Acid	–	S	S
Fluorine	–	S	U
Fluosilicic Acid	32%	S	S
Fluosilicic Acid	Concentrate	S	O
Fluoboric Acid	–	S	S
Fluorine	–	S	U
Fluosilicic Acid	32%	S	S
Fluosilicic Acid	Concentrate	S	O
Formaldehyde	40%	S	S
Formic Acid	20%	S	S
Formic Acid	50%	S	S
Formic Acid	100%	S	S
Fructose	Saturated	S	S
Fruit Pulp	–	S	S
Fuel Oil	–	O	U
Furfural	100%	UU	

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Chemical or Solvent	Concentration	70°F	140°F
Furfuryl Alcohol	–	U	U
Gallic Acid	Saturated	S	S
Gasoline	–	U	S
Gin	–	U	U
Glucose	–	S	S
Glycerine	–	S	S
Glycol	–	S	S
Glycolic Acid	30%	S	S
Grape Sugar	Saturated Aqueous	S	S
Heptane	100%	U	U
Hydrobromic Acid	50%	S	S
Hydrocyanic Acid	Saturated	S	S
Hydrochloric Acid	10%	S	S
Hydrochloric Acid	30%	S	S
Hydrochloric Acid	35%	S	S
Hydrochloric Acid	Concentrate	S	S
Hydrofluoric Acid	40%	S	S
Hydrofluoric Acid	60%	S	S
Hydrofl uoric Acid	75%	S	O
Hydroflurosllicic	31.1%	S	S
Hydrogen	100%	S	S
Hydrogen Bromide	10%	S	S
Hydrogen Chloride Gas	Dry	S	S
Hydrogen Peroxide	30%	S	O
Hydrogen Peroxide	90%	S	U
Hydrogen Phosphide	100%	S	S
Hydrogen Sulfide	–	S	S
Hydroquinone	–	S	S
Hypochlotous Acid	Concentrate	S	S
Inks	–	S	S
Iodine (in KI Solution)	–	O	U
Lactic Acid	10%	S	S
Lactic Acid	90%	S	S

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Chemical or Solvent	Concentration	70°F	140°F
Lead Acetate	Saturated	S	S
Latex	100%	S	S
Lead Acetate	Saturated	S	S
Lead Tetra-Ethyle	100%	S	–
Linseed Oil	–	O	U
Lube Oil	–	O	U
Magnesium Carbonate	Saturated	S	S
Magnesium Chloride	Saturated	S	S
Magnesium Hydroxide	Saturated	S	S
Magnesium Nitrate	Saturated	S	S
Magnesium Sulfate	Saturated	S	S
Maleic Acid	Saturated	S	S
Mercuric Chloride	Saturated	S	S
Mercuric Cyanide	Saturated	S	S
Mercurous Nitrate	Saturated	S	S
Mercury	–	S	S
Methyl Alcohol	100%	S	S
Methyl Bromide	–	O	U
Methyl Chloride	–	O	U
Methyl Ethyl Ketone	100%	U	U
Methylene Chloride	100%	U	U
Methylsufuric Acid	–	S	S
Milk	–	S	S
Mineral Oils	–	O	U
Molasses	Common	S	S
Naphtha	100%	S	U
Naphthalene	–	U	U
Nickel Chloride	Saturated	S	S
Nickel Nitrate	Concentrate	S	S
Nickel Nitrate	Concentrate	S	S
Nickel Sulfate	Saturated	S	S
Nicotinic Acid	100%	S	S
Nitric Acid	0–30%	S	S

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Chemical or Solvent	Concentration	70°F	140°F
Nitric Acid	30–50%	S	O
Nitric Acid	70%	S	O
Nitric Acid	95-98%	U	U
Nitrobenzene	100%	U	U
Octyl Cresol	–	O	U
Oils and Fats	–	O	U
Oleic Acid	Concentrate	O	U
Oleum	Concentrate	U	U
Orange Extract	Dilute	S	S
Oxalic Acid	Dilute	S	S
Oxalic Acid	Saturated	S	S
Oxygen	100%	S	–
Ozone	100%	O	U
Perchloric Acid	10%	S	S
Petroleum Ether	–	U	U
Phenol	90%	U	U
Phosphoric Acid	0-30%	S	S
Phosphoric Acid	Over 30%	S	S
Phosphoric Acid	90%	S	U
Phosphorus (Yellow)	100%	S	–
Phosphorus Pentoxide	100%	S	S
Phosphorus Trichloride	–	S	–
Photographic Solutions	–	S	S
Pickling Baths			
Hydrochloric Acid	–	S	S
Sulfuric Acid	–	S	S
Sulfuric-Nitric	–	S	–
Picric Acid	1%	S	O

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Chemical or Solvent	Concentration	70°F	140°F
Plating Solutions			
Brass	–	S	S
Cadmium	–	U	U
Chromium	–	U	U
Copper	–	S	S
Gold	–	S	S
Indium	–	S	S
Lead	–	S	S
Nickel	–	S	S
Rhodium	–	S	S
Silver	–	S	S
Tin	–	S	S
Zinc	–	S	S
Potassium Bicarbonate	Saturated	S	S
Potassium Borate	1%	S	S
Potassium Bromate	10%	S	S
Potassium Bromide	Saturated	S	S
Potassium Carbonate	–	S	S
Potassium Chlorate	Saturated	S	S
Potassium Chloride	Saturated	S	S
Potassium Chromate	40%	S	S
Potassium Cyanide	Saturated	S	S
Potassium Dichromate	40%	S	S
Potassium Ferricyanide	Saturated	S	S
Potassium Ferri/Ferro Cyanide	–	S	S
Potassium Fluoride	–	S	S
Potassium Hydroxide	20% Concentrate	S	S
Potassium Nitrate	Saturated	S	S
Potassium Petborate	Saturated	S	S
Potassium Perchlorate	Saturated	S	S
Potassium Perchlorate	10%	S	S
Potassium Permanganate	20%	O	U
Potassium Persulfate	Saturated	S	S

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Chemical or Solvent	Concentration	70°F	140°F
Potassium Sulfate	Concentrate	S	S
Potassium Sulfide	Concentrate	S	S
Potassium Sulfite	Concentrate	S	S
Potassium Persullate	Saturated	S	S
Propargyl Alcohol	–	S	S
Propyl Alcohol	–	S	S
Propylene Dichloride	100%	U	U
Propylene Glycol	–	S	S
Rayon Coagulating Bath	–	S	S
Sea Water	–	S	S
Selenic Acid	–	S	S
Shortening	–	S	S
Silicic Acid	–	S	S
Silver Nitrate Solution	–	S	S
Soap Solution	Concentrate	S	S
Sodium Acetate	Saturated	S	S
Sodium Benzoate	35%	S	S
Sodium Bicarbonate	Saturated	S	S
Sodium Bisulfite	Saturated	S	S
Sodium Borate	–	S	S
Sodium Bromide Oil Solution	–	S	S
Sodium Carbonate	Concentrate	S	S
Sodium Chlorate	Saturated	S	S
Sodium Chloride	Saturated	S	S
Sodium Cyanide	–	S	S
Sodium Dichromate	Saturated	S	S
Sodium Ferricyanide	Saturated	S	S
Sodium Fluoride	Saturated	S	S
Sodium Hydroxide	Concentrate	S	S
Sodium Hypochlorite	–	S	S
Sodium Nitrate	–	S	S
Sodium Sulfate	–	S	S
Sodium Sulfide	25%	S	S

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Chemical or Solvent	Concentration	70°F	140°F
Sodium Sulfide	Saturated Solution	S	S
Sodium Sulfide	25% to Saturated	S	S
Sodium Sulfite	Saturated	S	S
Stannic Chloride	Saturated	S	S
Stannous Chloride	Saturated	S	S
Starch Solution	Saturated	S	S
Stearic Acid	100%	S	S
Sulfur	Colloidal	S	–
Sulfur Dioxide	Dry, 100%	S	S
Sulfur Dioxide	Wet, 100%	S	–
Sulfur Trioxide	–	S	S
Sulfuric Acid	0-50%	S	S
Sulfuric Acid	70%	S	O
Sulfuric Acid	80%	S	U
Sulfuric Acid	96%	O	U
Sulfuric Acid	98% Concentrate	O	U
Sulfuric Acid Fuming	–	U	U
Sulfurous Acid	–	S	S
Tallow	–	S	O
Tannic Acid	10%	S	S
Tanning Extracts	Common	S	S
Tartaric Acid	10%	S	S
Tartaric Acid	Saturated	U	U
Tetralin	–	U	U
Tetrahydrofuran	100%	U	U
Toluene	–	U	U
Tetrachloroethylene	100%	U	U
Tetrahydrofurane	–	O	O
Transformer Oil	–	O	U
Trichloroacetic Acid	10%	–	–
Trichloroethylene	–	U	U
Triethanolamine	100%	S	U
Trisodium Phosphate	Saturated	S	S

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Chemical or Solvent	Concentration	70°F	140°F
Turpentine	–	S	U
Urea	Up to 30%	S	S
Urea	–	S	S
Urine	–	S	S
Vinegar Common	–	S	S
Vanilla Extract	–	S	S
Wetting Agents	–	S	S
Whiskey	–	S	S
Wines	–	S	S
Xylene	–	U	U
Yeast	–	S	S
Zinc Chloride	Saturated	S	S
Zinc Sulfate	Saturated	S	S

[1] The information on this document is, to the best of our knowledge, true and accurate. However, since the particular uses and the actual conditions of use of our products are beyond our control, establishing satisfactory performance of our products for the intended application is the customer's sole responsibility. All uses of PolyCo products and any written or oral information, suggestions or technical advice from PolyCo are without warranty, express or implied, and are not an inducement to use any process or product in conflict with any patent.

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