

**CHEMICAL RESISTANCE CHART FOR
 PROTECTOWIRE EPC & EPN
 JACKET MATERIAL**

Ratings-chemical effect:

A - No effect - Excellent. **C** - Moderate effect - Fair.
B - Minor effect - Good. **D** - Severe effect - Not recommended.

	PVC	NYLON		PVC	NYLON
Acetaldehyde	D	A	Ammonia, liquid	A2	B1
Acetamide	D	A	Ammonia Nitrate	B	D
Acetate Solvent	D	A	Ammonium Bifluoride	A2	-
Acetic Acid, Glacial	D	D	Ammonium Carbonate	A2	A
Acetic Acid 20%	D	B	Ammonium Casenite	-	-
Acetic Acid 80%	D	D	Ammonium Chloride	A2	C
Acetic Acid	D	D	Ammonium Hydroxide	A	A
Acetic Anhydride	D	A1	Ammonium Nitrate	A2	B
Acetone	D	A	Ammonium Oxalate	A	-
Acetyl Chloride (dry)	C	D	Ammonium Persulfate	A2	C1
Acetylene	A1	A	Ammonium Phosphate, Dibasic	A2	C1
Acrylonitrile	-	A	Ammonium Phosphate, Monobasic	A	B
Alcohols:			Ammonium Phosphate, Tribasic	A	B
Amyl	A2	A1	Ammonium Sulfate	A2	A1
Benzyl	D	D	Ammonium Thiosulfate	-	-
Butyl	A2	A	Amyl Acetate	C1	C2
Diacetone	B2	A	Amyl Alcohol	A2	A1
Ethyl	C	A	Amyl Chloride	D	C1
Hexyl	A2	A	Aniline	C1	C1
Isobutyl	A1	A1	Anti-Freeze	A	D
Isopropyl	A1	B1	Antimony Trichloride	A2	D
Methyl	A1	A	Aqua Regia (80% HCl, 20% HNO3)	C1	D
Octyl	-	A	Arochlor 1248	-	A1
Propyl	A1	B	Aromatic Hydrocarbons	D	-
Aluminum Chloride 20%	A1	D	Arsenic Acid	A1	C1
Aluminum Chloride	A2	D	Asphalt	A2	A
Aluminum Fluoride	A2	A1	Barium Carbonate	A2	A1
Aluminum Hydroxide	A2	A1	Barium Chloride	A1	A2
Aluminum Potassium Sulfate 10%	A2	D	Barium Cyanide	D	-
Aluminum Potassium Sulfate 100%	A2	D	Barium Hydroxide	A2	A1
Aluminum Sulfate	A2	A2	Barium Nitrate	A	A1
Amines	D	D	Barium Sulfate	B1	A1
Ammonia 10%	B1	A	Barium Sulfide	A2	A1
Ammonia, anhydrous	A2	A1	Benzaldehyde	D	C1

Explanation of footnotes:

- 1** - Satisfactory to 72°F.
- 2** - Satisfactory to 120°F.

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	PVC	NYLON		PVC	NYLON
Benzene	C1	A	Chloroform	D	D
Benzoic Acid	A	C	Chlorosulfonic Acid	C	D
Benzol	-	D	Chromic Acid 5%	A	D
Borax (Sodium Borate)	B1	A	Chromic Acid 10%	A2	D
Boric Acid	A2	B	Chromic Acid 30%	B2	D
Bromine	C1	D	Chromic Acid 50%	C2	D
Butadiene	C1	A1	Citric Acid	B2	A1
Butane	C1	A2	Citric Oils	-	-
Butanol(Butyl Alcohol)	B1	B1	Clorox (Bleach)	A	A
Butylene	C1	B1	Copper Chloride	A	A
Butylacetate	D	A	Copper Cyanide	A2	A1
Butyric Acid	B1	B1	Copper Fluoborate	A	-
Calcium Bisulfate	-	-	Copper Nitrate	B2	D
Calcium Bisulfide	A2	A	Copper Sulfate 5%	A2	C2
Calcium Bisulfite	B	A2	Copper Sulfate > 5%	A2	C2
Calcium Carbonate	A2	A	Cresols	D	D
Calcium Chlorate	A2	-	Cresylic Acid	C1	D
Calcium Chloride	A2	A1	Cyanic Acid	-	-
Calcium Hydroxide	A2	A2	Cyclohexane	D	A
Calcium Hypochlorite	B1	C1	Detergents	A	A1
Calcium Sulfate	A2	D	Dichlorethane	D	C1
Calgon	-	A	Diesel Fuel	A2	A
Carbolic Acid (see Phenol)	C	D	Diethylamine	D	A
Carbon Bisulfide	D	A	Diethylene Glycol	A	A1
Carbon Dioxide	A	A1	Diphenyl Oxide	D	-
Carbon Dioxide (Dry)	A	A1	Dyes	B	A
Carbon Dioxide (Wet)	A	A1	Epsom Salts (Magnesium Sulfate)	A2	A1
Carbon Disulfide	D	B1	Ethane	D	D
Carbon Monoxide	A2	A1	Ethanolamine	D	A
Carbon Tetrachloride	B1	D	Ether	D	A
Carbonated Water	A	A	Ethyl Acetate	C1	A2
Carbonic Acid	A2	A1	Ethyl Chloride	D	A1
Chloroacetic Acid	B1	D	Ethyl Sulfate	-	-
Chloric Acid	A2	D	Ethylene Chloride	D	B1
Chlorinated Glue	-	-	Ethylene Dichloride	D	B1
Chlorine, anhydrous liquid	C1	D	Ethylene Glycol	A1	B1
Chlorine, dry	A2	D	Ethylene Oxide	C1	A1
Chlorine Water	A2	C1	Fatty Acids	B1	A1
Chlorobenzene (Mono)	D	B1	Ferric Chloride	A2	C1
			Ferric Nitrate	A2	A1

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	PVC	NYLON		PVC	NYLON
Ferric Sulfate	A2	A1	Hydrofluoric Acid	C	D
Ferrous Chloride	A2	C1	75%		
Ferrous Sulfate	A2	C1	Hydrofluoric Acid	C	D
Fluoboric Acid	A2	D	100%		
Fluorine	D	D	Hydrofluosilicic	A2	D
Fluosilicic Acid	A1	D	Acid 20%		
Formaldehyde 40%	A1	C1	Hydrofluosilicic	B1	D
Formaldehyde 100%	A	D	Acid 100%		
Formic Acid	A1	C1	Hydrogen Gas	A2	A2
Freon 11	A2	D	Hydrogen Peroxide	A1	C1
Freon 12	A2	D	10%		
Freon 22	B	B	Hydrogen Peroxide	A1	D
Freon 113	B	-	30%		
Freon TF	B	D	Hydrogen Peroxide	A1	D
Fuel Oils	A2	A1	50%		
Furan Resin	A	-	Hydrogen Peroxide	C2	D
Furfural	D	B	100%		
Gallic Acid	A2	B1	Hydrogen Sulfide	B1	C1
Gasoline	C1	A	(aqua)		
Glycerin	A1	A1	Hydrogen Sulfide	A2	C1
Glycolic Acid	A2	-	(dry)		
Gold Monocyanide	-	-	Hydroxyacetic Acid	D	-
Grease	A	-	70%		
Heptane	C1	A	Ink	C	C
Hexane	B1	A1	Iodine	D	D
Hydraulic Oil (Petro)	A	A1	Iodine (in alcohol)	-	C
Hydraulic Oil (Synthetic)	A	A1	Iodoform	A	-
Hydrazine	-	-	Isotane	A	D
Hydrobromic Acid 20%	B2	D	Isopropyl Acetate	D	B1
Hydrobromic Acid 100%	A1	D	Isopropyl Ether	B	A1
Hydrochloric Acid, Dry Gas	A2	A1	Jet Fuel (JP3,-4,-5)	A1	A1
Hydrochloric Acid 20%	A2	D	Kerosene	A2	A
Hydrochloric Acid 37%	B	D	Ketones	B	A2
Hydrochloric Acid 100%	B2	D	Lacquers	C	A1
Hydrocyanic Acid	A1	C1	Lacquer Thinners	C	A1
Hydrocyanic Acid (Gas 10%)	A	-	Lactic Acid	B1	C1
Hydrofluoric Acid 20%	B	C1	Lead Acetate	A2	B1
Hydrofluoric Acid 50%	B1	D	Lead Sulfamate	A2	B1
			Ligroin	-	D
			Lime	A1	A1
			Lubricants	B2	A1

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	PVC	NYLON		PVC	NYLON
Magnesium Carbonate	A2	-	Nitrating Acid	D	-
Magnesium Chloride	A2	A1	(<15%HNO3)		
Magnesium Hydroxide	A2	B1	Nitric Acid (5-10%)	A1	C1
Magnesium Nitrate	A2	A1	Nitric Acid (20%)	A1	D
Magnesium Oxide	-	-	Nitric Acid (50%)	B1	D
Magnesium Sulfate	A2	A1	Nitric Acid	D	D
Maleic Acid	A2	B1	(Concentrated)		
Maleic Anhydride	-	-	Nitrous Acid	A	-
Malic Acid	A2	C1	Nitrobenzene	D	B1
Melamine	A2	A	Oils:		
Mercuric Chloride	A2	D	Aniline	D	A
(Dilute)			Castor	A	A
Mercuric Cyanide	B2	A	Cod Liver	A1	-
Mercury	B	A2	Corn	B	-
Methanol	A1	C1	Cotton Seed	B2	A
(Methyl Alcohol)			Creosote	C	D
Methyl Acetate	D	A2	Diesel Fuel	A2	A
Methyl Acrylate	-	-	(20,30,40,50)		
Methyl Acetone	D	A	Fuel (1,2,3,5A,	A2	A1
Methyl Alcohol 10%	A1	C1	5B,6)		
Methyl Bromide	D	C	Hydraulic (see Hydraulic Oil)		
Methyl Butyl Ketone	A	D	Linseed	A2	A1
Methyl Cellosolve	B2	C	Mineral	A1	A
Methyl Chloride	D	C	Olive	C	A1
Methyl Dichloride	A	C	Peanut	A1	-
Methyl Ethyl Ketone	D	A1	Rosin	C1	A1
Methyl Isobutyl Ketone	D	A1	Silicone	A	A1
Methyl Isopropyl	-	D	Soybean	A1	B1
Ketone			Turbine	A1	-
Methyl Methacrylate	-	-	Oleic Acid	C2	B2
Methylamine	A	-	Oleum 25%	D	D
Methylene Chloride	D	C1	Oleum 100%	D	D
Naphtha	C	A1	Oxalic Acid (cold)	A1	B2
Naphthalene	D	A1	Paraffin	A1	A1
Nickel Chloride	A2	C1	Pentane	A	A1
Nickel Sulfate	A2	A1	Perchloroethylene	C1	C1
Nitrating Acid	D	-	Petrolatum	B	D
(<15%H2SO4)			Phenol (10%)	C1	D
Nitrating Acid	D	-	Phenol (Carbolic Acid)	C1	C
(>15%H2SO4)			Phosphoric Acid (<40%)	B2	D
Nitrating Acid	D	-	Phosphoric Acid (>40%)	B2	B1
(<1% Acid)			Phosphoric Acid	B2	B1
			(crude)		

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	PVC	NYLON		PVC	NYLON
Phosphoric Acid Anhydride	-	-	High Speed Bath 180°F	D	A
Phosphoric Acid (molten)	D	-	Copper Plating (Acid):		
Photographic Developer	A	-	Copper Sulfate Bath R.T.	A	D
Phthalic Anhydride	D	-	Copper Fluoborate Bath 120°F	A	D
Picric Acid	D	C1	Copper Plating (Misc):		
Plating Solutions:			Copper	A	A
Antimony Plating 130°F	A	D	Pyrophosphate		
Arsenic Plating 110°F	A	A	Copper (Electroless)	A	A
Brass Plating:			Gold Plating:		
Regular Brass Bath 100°F	A	A	Cyanide 150°F	D	A
High Speed Brass Bath 110°F	A	A	Neutral 75°F	A	A
Bronze Plating:			Acid 75°F	A	A
Cu-Cd Bronze Bath R.T.	A	A	Indium Sulfamate Plating R.T.	A	D
Cu-Sn Bronze Bath 160°F	D	A	Iron Plating:		
Cu-Zn Bronze Bath 100°F	A	A	Ferrous Chloride Bath 190°F	D	D
Cadmium Plating:			Ferrous Sulfate Bath 150°F	D	D
Cyanide Bath 90°F	A	A	Ferrous Am Sulfate Bath 150°F	D	D
Fluoborate Bath 100°F	A	D	Sulfate-Chloride Bath 160°F	D	D
Chromium Plating:			Fluoborate Bath 145°F	D	D
Chromic-Sulfuric Bath 130°F	A	D	Sulfamate 140°F	A	D
Fluosilicate Bath 95°F	A	D	Lead Fluoborate Plating	A	D
Fluoride Bath 130°F	A	D	Nickel Plating:		
Black Chrome Bath 115°F	A	D	Watts Type 115-160°F	D	A
Barrel Chrome Bath 95°F	A	D	High Chloride 130-160°F	D	D
Copper Plating (Cyanide):			Fluoborate 100-170°F	A	D
Copper Strike Bath 120°F	A	A	Sulfamate 100-140°F	A	A
Rochelle Salt Bath 150°F	D	A	Electroless 200°F	D	D

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	PVC	NYLON		PVC	NYLON
Rhodium Plating	A	D	Silicone	A	A1
120°F			Silver Bromide	-	-
Silver Plating	A	A	Silver Nitrate	A1	A1
80-120°F			Soap Solutions	A	A1
Tin-Fluoborate Plating	A	D	Soda Ash (see Sodium Carbonate)		
100°F			Sodium Acetate	B2	B1
Tin-Lead Plating 100°F	A	D	Sodium Aluminate	-	A1
Zinc Plating:			Sodium Bicarbonate	A2	A
Acid Chloride 140°F	A	D	Sodium Bisulfate	A2	A1
Acid Sulfate Bath	D	D	Sodium Bisulfite	A2	C1
150°F			Sodium Borate	A2	A1
Acid Fluoborate Bath	A	D	Sodium Carbonate	A2	B1
R.T.			Sodium Chlorate	A1	D
Alkaline Cyanide Bath	A	A	Sodium Chloride	A2	A1
R.T.			Sodium Chromate	-	D
Potash	C	A	Sodium Cyanide	A2	A1
Potassium Bicarbonate	A	A1	Sodium Fluoride	A2	B
Potassium Bromide	A	A1	Sodium Hydrosulfite	C	A
Potassium Carbonate	A	A1	Sodium Hydroxide (20%)	A	A
Potassium Chlorate	A	C1	Sodium Hydroxide (50%)	A	A
Potassium Chloride	A	B1	Sodium Hydroxide (80%)	A	C
Potassium Chromate	A	A	Sodium Hypochlorite	A	D
Potassium Cyanide	A	A1	(<20%)		
Solutions			Sodium Hypochlorite	C2	D
Potassium Dichromate	A	D	(100%)		
Potassium Ferrocyanide	B	B1	Sodium Hyposulfate	-	-
Potassium Hydroxide	A1	C1	Sodium Metaphosphate	B2	A1
(Caustic Potash)			Sodium Metasilicate	A	-
Potassium Nitrate	A	B1	Sodium Nitrate	A2	A1
Potassium Permanganate	A1	D	Sodium Perborate	A2	B1
Potassium Sulfate	A2	A1	Sodium Peroxide	B2	A1
Potassium Sulfide	A2	-	Sodium Polyphosphate	A1	A1
Propane (liquified)	A1	A1	Sodium Silicate	A2	A1
Propylene Glycol	C1	-	Sodium Sulfate	A2	A
Pyridine	D	C1	Sodium Sulfide	A2	A1
Pyrogallic Acid	A	-	Sodium Sulfite	A2	D
Rosins	C1	A1	Sodium Tetraborate	A2	A
Rust Inhibitors	-	-	Sodium Thiosulfate	A2	B
Sea Water	A2	A2	(hypo)		
Shellac (Bleached)	-	A1	Sorghum	-	A
Shellac (Orange)	-	A1	Stannic Chloride	A2	B1

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Stannic Fluoborate	-	-	Zinc Hydrosulfite	-	A
Stannous Chloride	A1	C1	Zinc Sulfate	A2	C1
Starch	A	A1			
Stearic Acid	B2	A2			
Stoddard Solvent	C1	A			
Styrene	D	A1			
Sugar (Liquids)	-	A1			
Sulfate (Liquors)	B	B1			
Sulfur Chloride	C1	A1			
Sulfur Dioxide	A1	C1			
Sulfur Dioxide (Dry)	A2	B1			
Sulfur Trioxide (Dry)	A1	A1			
Sulfuric Acid (<10%)	A1	C1			
Sulfuric Acid (10-75%)	A1	D			
Sulfuric Acid (75-100%)	D	D			
Sulfuric Acid (Hot Conc)	D	D			
Sulfuric Acid (Cold Conc)	D	D			
Sulfurous Acid	A2	D			
Sulfuryl Chloride	-	-			
Tannic Acid	A1	C1			
Tartaric Acid	A1	B2			
Tetrachloroethane	C	C1			
Tetrachloroethylene	D	A1			
Tetrahydrofuran	D	A			
Toluene (Toluol)	D	A1			
Trichloroethane	C	C1			
Trichloroethylene	D	C1			
Trichloropropane	-	-			
Tricresylphosphate	D	A2			
Triethylamine	A	A1			
Turpentine	B1	A1			
Varnish	D	C1			
Water, Distilled	A2	A1			
Water, Fresh	A2	A1			
Water, Salt	A2	A2			
Whey	-	-			
White Liquor (Pulp Mill)	A2	A1			
White Water (Paper Mill)	A	A			
Xylene	D	A2			
Zinc Chloride	A2	C1			

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