

Chemical Resistance Chart For Protectowire EPC, CTI & XLT Jacket Materials

Ratings-chemical effect:

A - No effect - Excellent.

B - Minor effect - Good.

C - Moderate effect - Fair.

D - Severe effect - Not recommended.

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

Explanation of footnotes:

1 - Satisfactory to 72°F.

2 - Satisfactory to 120°F.

The Protectowire Company, Inc.

60 Washington Street, Pembroke, MA 02359-1833 U.S.A.

781-826-3878; Fax 781-826-2045;

Web site: www.protectowire.com; E-Mail: pwire@protectowire.com

**Manufacturer of
Special Hazard
Fire Detection Systems**

Ratings-chemical effect:

A - No effect - Excellent.
B - Minor effect - Good.

C - Moderate effect - Fair.
D - Severe effect - Not recommended.

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

Explanation of footnotes:

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

The Protectowire Company, Inc.

60 Washington Street, Pembroke, MA 02359-1833 U.S.A.
 781-826-3878; Fax 781-826-2045;
 Web site: www.protectowire.com; E-Mail: pwire@protectowire.com

**Manufacturer of
 Special Hazard
 Fire Detection Systems**

Ratings-chemical effect:

A - No effect - Excellent.
B - Minor effect - Good.

C - Moderate effect - Fair.
D - Severe effect - Not recommended.

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

Explanation of footnotes:

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

The Protectowire Company, Inc.

60 Washington Street, Pembroke, MA 02359-1833 U.S.A.
 781-826-3878; Fax 781-826-2045;
 Web site: www.protectowire.com; E-Mail: pwire@protectowire.com

**Manufacturer of
 Special Hazard
 Fire Detection Systems**

Ratings-chemical effect:

A - No effect - Excellent.
B - Minor effect - Good.

C - Moderate effect - Fair.
D - Severe effect - Not recommended.

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

Explanation of footnotes:

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

The Protectowire Company, Inc.

60 Washington Street, Pembroke, MA 02359-1833 U.S.A.
 781-826-3878; Fax 781-826-2045;
 Web site: www.protectowire.com; E-Mail: pwire@protectowire.com

**Manufacturer of
 Special Hazard
 Fire Detection Systems**

Ratings-chemical effect:

A - No effect - Excellent.
B - Minor effect - Good.

C - Moderate effect - Fair.
D - Severe effect - Not recommended.

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

Explanation of footnotes:

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

The Protectowire Company, Inc.

60 Washington Street, Pembroke, MA 02359-1833 U.S.A.
 781-826-3878; Fax 781-826-2045;
 Web site: www.protectowire.com; E-Mail: pwire@protectowire.com

**Manufacturer of
 Special Hazard
 Fire Detection Systems**

Ratings-chemical effect:

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

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

Explanation of footnotes:

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

The Protectowire Company, Inc.

60 Washington Street, Pembroke, MA 02359-1833 U.S.A.
 781-826-3878; Fax 781-826-2045;
 Web site: www.protectowire.com; E-Mail: pwire@protectowire.com

**Manufacturer of
 Special Hazard
 Fire Detection Systems**

Ratings-chemical effect:

A - No effect - Excellent.
B - Minor effect - Good.

C - Moderate effect - Fair.
D - Severe effect - Not recommended.

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

All information supplied in this bulletin by The Protectowire Co. in relation to its products and their application is intended for general reference only. The information is not a guarantee of product performance or a recommendation for product use in the environments indicated. The Protectowire Co. assumes no liability whatsoever in respect to application, or use made of the aforementioned information or products, or any consequence thereof.

The Protectowire Company, Inc.

60 Washington Street, Pembroke, MA 02359-1833 U.S.A.
 781-826-3878; Fax 781-826-2045;
 Web site: www.protectowire.com; E-Mail: pwire@protectowire.com

**Manufacturer of
 Special Hazard
 Fire Detection Systems**