

CORROSION GUIDE

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The data in this corrosion guide is based on field service performance, laboratory testing and extrapolated values from our resin manufacturers' recommendations. Data shown is intended as a guide only. It is recommended that for a specific application, testing be done in the actual chemical environment.

The following conditions will effect the suitability of a specific resin laminate:

- Periodic changes in temperature
- Changes in chemical concentrations
- Exposure to vapors only
- Exposure to intermittent splashes and spills
- Load bearing or non-load bearing requirements
- Temperature spikes
- Combinations of chemicals
- Exposure to frequent splashes and spills
- Frequency of maintenance wash down

Chemical Environment	Maximum Recommended Service Temperatures, °F/°C		Chemical Environment	Maximum Recommended Service Temperatures, °F/°C	
	Vinyl Ester	Polyester		Vinyl Ester	Polyester
Acetic Acid, to 10%	170 / 76	80 / 26	Butyl Acetate	NR / NR	NR / NR
Acetic Acid, to 50%	180 / 81	NR / NR	Butyl Alcohol	80 / 26	NR / NR
Acetic Acid, Glacial	NR / NR	NR / NR	Calcium Carbonate	170 / 76	120 / 49
Acetone	NR / NR	NR / NR	Calcium Hydroxide	140 / 60	120 / 49
Aluminum Chloride	170 / 76	120 / 49	Calcium Hypochlorite	120 / 49	NR / NR
Aluminum Hydroxide	140 / 60	120 / 49	Calcium Nitrate	170 / 76	120 / 49
Aluminum Nitrate	140 / 60	120 / 49	Calcium Sulfate	170 / 76	120 / 49
Aluminum Sulfate	170 / 76	120 / 49	Carbon Disulfide	NR / NR	NR / NR
Ammonium Chloride	170 / 76	120 / 49	Carbon Monoxide Gas	170 / 76	160 / 60
Ammonium Hydroxide, 5%	140 / 60	NR / NR	Carbon Dioxide Gas	170 / 76	160 / 60
Ammonium Nitrate, to 50%	170 / 76	120 / 49	Carbon Tetrachloride	70 / 20	NR / NR
Ammonium Nitrate, Saturated	170 / 76	NR / NR	Liquid or Vapor	110 / 43	NR / NR
Ammonium Persulfate, to 25%	140 / 60	90 / 32	Chlorine, Dry Gas	170 / 76	NR / NR
Ammonium Phosphate	170 / 76	120 / 49	Chlorine, Wet Gas	170 / 76	NR / NR
Ammonium Sulfate	170 / 76	120 / 49	Chlorine Water	140 / 60	NR / NR
Amyl Alcohol	80 / 26	NR / NR	Chloroform	140 / 60	NR / NR
Barium Carbonate	170 / 76	120 / 49	Chromic Acid, to 5%	110 / 43	NR / NR
Barium Chloride	170 / 76	120 / 49	Chromous Sulfate	140 / 60	120 / 49
Barium Sulfate	170 / 76	120 / 49	Citric Acid	170 / 76	120 / 49
Benzene	NR / NR	NR / NR	Copper Chloride	170 / 76	170 / 76
Benzene Sulfonic Acid 50%	110 / 43	NR / NR	Copper Cyanide	170 / 76	170 / 76
Benzoic Acid	170 / 76	120 / 49	Copper Nitrate	170 / 76	170 / 76
Benzyl Alcohol	NR / NR	NR / NR	Crude Oil, Sour	170 / 76	170 / 76
Borax	170 / 76	120 / 49	Cyclohexane, Liquid and Vapor	170 / 76	NR / NR
Brine (Sodium Chloride Sol.)	170 / 76	120 / 49	Diesel Fuel	140 / 60	90 / 32
Bromine, Liquid or Vapor	NR / NR	NR / NR	Ethyl Acetate	NR / NR	NR / NR
Ethyl Alcohol	NR / NR	NR / NR	Phosphoric Acid, Vapor	170 / 76	120 / 49
Ethylene Glycol	170 / 76	120 / 49	Potassium Aluminum Sulfate	170 / 76	120 / 49

Chemical Environment	Maximum Recommended Service Temperatures, °F/°C		Chemical Environment	Maximum Recommended Service Temperatures, °F/°C	
	Vinyl Ester	Polyester		Vinyl Ester	Polyester
Fatty Acids	170 / 76	80 / 26	Potassium Bicarbonate	110 / 43	100 / 37
Ferric Chloride	170 / 76	110 / 43	Potassium Carbonate, to 10%	110 / 43	NR / NR
Ferric Sulfate	170 / 76	110 / 43	Potassium Chloride	170 / 76	120 / 49
Formaldehyde	110 / 43	NR / NR	Potassium Hydroxide	140 / 60	NR / NR
Fuel Oil	140 / 60	80 / 26	Potassium Nitrate	170 / 76	120 / 49
Gasoline, Aviation and Ethyl	140 / 60	80 / 26	Potassium Sulfate	170 / 76	120 / 49
Glucose	170 / 76	100 / 37	Propylene Glycol	170 / 76	120 / 49
Glycerine	170 / 76	100 / 37	Sodium Acetate	170 / 76	120 / 49
Hexane	120 / 49	90 / 32	Sodium Benzoate	140 / 60	120 / 49
Hydraulic Fluid (Glycol Based)	140 / 60	NR / NR	Sodium Bicarbonate	140 / 60	120 / 49
Hydraulic Fluid Skydraul	140 / 60	NR / NR	Sodium Bisulfate	170 / 76	120 / 49
Hydrobromic Acid	110 / 43	NR / NR	Sodium Bisulfite	170 / 76	120 / 49
Hydrochloric Acid, up to 15%	140 / 60	80 / 26	Sodium Borate	170 / 76	120 / 49
Hydrochloric Acid, Concentrated	110 / 43	NR / NR	Sodium Bromide	170 / 76	120 / 49
Hydrogen Bromide, Dry Gas	140 / 60	80 / 26	Sodium Carbonate, to 10%	140 / 60	70 / 20
Hydrogen Bromine, Wet Gas	140 / 60	NR / NR	Sodium Chloride	170 / 76	120 / 49
Hydrogen Chloride, Dry Gas	170 / 76	80 / 26	Sodium Cyanide	170 / 76	120 / 49
Hydrogen Chloride, Wet Gas	170 / 76	80 / 26	Sodium Dichromate	170 / 76	120 / 49
Hydrogen Fluoride, Sol or Vapor	NR / NR	NR / NR	Sodium Di-Phosphate	170 / 76	120 / 49
Hydrogen Peroxide, to 10%	110 / 43	NR / NR	Sodium Hydroxide, 10%	140 / 60	NR / NR
Hydrogen Sulfide, Dry Gas	140 / 60	80 / 26	Sodium Hypochlorite, to 5 1/4%	110 / 43	70 / 20
Hydrogen Sulfide, Wet Gas	140 / 60	80 / 26	Sodium Monophosphate	170 / 76	120 / 49
Isopropyl Alcohol	80 / 26	NR / NR	Sodium Nitrate	170 / 76	120 / 49
JP-4	140 / 60	80 / 26	Sodium Nitrite	170 / 76	120 / 49
Kerosene	140 / 60	110 / 43	Sodium Sulfate	170 / 76	120 / 49
Lactic Acid	170 / 76	120 / 49	Sodium Tetraborate	140 / 60	120 / 49
Lead Acetate	170 / 76	120 / 49	Sodium Thiosulfate	140 / 60	120 / 49
Linseed Oil	170 / 76	100 / 37	Soy Oil	170 / 76	100 / 37
Lithium Chloride	170 / 76	120 / 49	Stearic Acid	170 / 76	120 / 49
Magnesium Carbonate	170 / 76	120 / 49	Styrene	NR / NR	NR / NR
Magnesium Chloride	170 / 76	120 / 49	Sulfamic Acid	170 / 76	120 / 49
Magnesium Hydroxide	170 / 76	100 / 37	Sulfated Detergents	NR / NR	120 / 49
Magnesium Nitrate	170 / 76	120 / 49	Sulfite Liquor	160 / 71	100 / 37
Magnesium Sulfate	170 / 76	120 / 49	Sulfur Dioxide, gas-dry	170 / 76	120 / 49
Mercuric Chloride	170 / 76	120 / 49	Sulfur Dioxide, gas-wet	170 / 76	70 / 20
Mercury Metal	170 / 76	120 / 49	Sulfur Trioxide, gas-wet or dry	170 / 76	NR / NR
Methyl Ethyl Ketone	NR / NR	NR / NR	Sulfuric Acid, to 25%	170 / 76	80 / 26
Mineral Oil	170 / 76	120 / 49	Tartaric Acid	170 / 76	120 / 49
Monochlorobenzene	NR / NR	NR / NR	Tetrachloroethylene	NR / NR	NR / NR
Naphtha	140 / 60	120 / 49	Toluene	NR / NR	NR / NR
Nickel Chloride	170 / 76	120 / 49	Trichloroethylene vapor	NR / NR	NR / NR
Nitric Acid, to 5%	110 / 43	100 / 37	Trisodium Phosphate	170 / 76	NR / NR
Nitric Acid, Concentrated	NR / NR	NR / NR	Urea, 35%	110 / 43	NR / NR
Nitric Acid, Vapor	140 / 60	100 / 37	Vinegar	170 / 76	150 / 65
Oleic Acid	170 / 76	120 / 49	Water, Distilled	180 / 81	150 / 65
Oxalic Acid	170 / 76	120 / 49	Water, Tap	180 / 81	120 / 65
Paper Mill Liquor	100 / 37	100 / 37	Zinc Chloride	170 / 76	120 / 49
Phenol Solution or Vapor	NR / NR	NR / NR	Zinc Nitrate	170 / 76	120 / 49
Phosphoric Acid	170 / 76	100 / 37	Zinc Sulfate	170 / 76	120 / 49
Phosphoric Acid, Salts thereof	170 / 76	120 / 49			