

Fiberglass - Technical Data

Corrosion Guide

The information shown in this corrosion guide is based on full immersion laboratory tests and data generated from resin manufacturer's data. It should be noted that in some of the environments listed, splashes and spill situations may result in a more corrosive situation than indicated due to the evaporation of water. Regular wash down is recommended in these situations.

All data represents the best available information and is believed to be correct. The data should not be construed as a warranty of performance for that product as presented in these tables. User tests should be performed to determine suitability of service if there is any doubt or concern. Such variables as concentration, temperature, time and combined chemical effects of mixtures of chemicals make it impossible to specify the exact suitability of fiber reinforced plastics in all environments. Cooper B-Line will be happy to supply material samples for testing. These recommendations should only be used as a guide and Cooper B-Line does not take responsibility for design or suitability of materials for service intended. In no event will Cooper B-Line be liable for any consequential or special damages for any defective material or workmanship including without limitation, labor charge, other expense or damage to properties resulting from loss of materials or profits or increased expenses of operations.

CHEMICAL ENVIRONMENT	POLYESTER		VINYL ESTER	
	Max Wt. %	Max Oper. Temp °F	Max Wt. %	Max Oper. Temp °F
Acetic Acid	10	190	10	210
Acetic Acid	50	125	50	180
Acetone	N/R	N/R	100	75
Aluminum Chloride	SAT	170	SAT	200
Aluminum Hydroxide	SAT	160	SAT	170
Aluminum Nitrate	SAT	150	SAT	170
Aluminum Sulfate	SAT	180	SAT	200
Ammonium Chloride	SAT	170	SAT	190
Ammonium Hydroxide	1	100	10	150
Ammonium Hydroxide	28	N/R	28	100
Ammonium Carbonate	N/R	N/R	SAT	150
Ammonium Bicarbonate	15	125	SAT	130
Ammonium Nitrate	SAT	160	SAT	190
Ammonium Persulfate	SAT	N/R	SAT	150
Ammonium Sulfate	SAT	170	SAT	200
Amyl Alcohol	ALL	N/R	ALL	90
Amyl Alcohol Vapor	-	140	-	120
Benzene	N/R	N/R	100	140
Benzene Sulfonic Acid	25	110	SAT	200
Benzoic Acid	SAT	150	SAT	200
Benzoyl Alcohol	100	N/R	100	N/R
Borax	SAT	170	SAT	200
Calcium Carbonate	SAT	170	SAT	200
Calcium Chloride	SAT	170	SAT	200
Calcium Hydroxide	25	70	25	165
Calcium Nitrate	SAT	180	SAT	200
Calcium Sulfate	SAT	180	SAT	200
Carbon Disulfide	N/R	N/R	N/R	N/R
Carbonic Acid	SAT	130	SAT	180
Carbon Dioxide Gas	-	200	-	200
Carbon Monoxide Gas	-	200	-	200
Carbon Tetrachloride	N/R	N/R	100	75
Chlorine, Dry Gas	-	140	-	170
Chlorine, Wet Gas	-	N/R	-	180
Chlorine Water	SAT	80	SAT	180

CHEMICAL ENVIRONMENT	POLYESTER		VINYL ESTER	
	Max Wt. %	Max Oper. Temp °F	Max Wt. %	Max Oper. Temp °F
Chromic Acid	5	70	10	120
Citric Acid	SAT	170	SAT	200
Copper Chloride	SAT	170	SAT	200
Copper Cyanide	SAT	170	SAT	200
Copper Nitrate	SAT	170	SAT	200
Crude Oil, Sour	100	170	100	200
Cyclohexane	N/R	N/R	N/R	N/R
Cyclohexane, Vapor	ALL	100	ALL	130
Diesel Fuel	100	160	100	180
Diethyl Ether	N/R	N/R	N/R	N/R
Dimethyl Phthalate	N/R	N/R	N/R	N/R
Ethanol	50	75	50	90
Ethyl Acetate	N/R	N/R	N/R	N/R
Ethylene Chloride	N/R	N/R	N/R	N/R
Ethylene Glycol	100	90	100	200
Fatty Acids	SAT	180	SAT	200
Ferric Chloride	SAT	170	SAT	200
Ferric Nitrate	SAT	170	SAT	200
Ferric Sulfate	SAT	170	SAT	200
Ferrous Chloride	SAT	170	SAT	200
Fluoboric Acid	N/R	N/R	SAT	165
Fluosilicic Acid	N/R	N/R	SAT	70
Formaldehyde	50	75	50	100
Formic Acid	N/R	N/R	50	100
Gasoline	100	80	100	150
Glucose	100	170	100	200
Glycerine	100	150	100	200
Heptane	100	110	100	120
Hexane	100	90	100	130
Hydrobromic Acid	50	120	50	120
Hydrochloric Acid	10	150	10	200
Hydrochloric Acid	20	140	20	190
Hydrochloric Acid	37	75	37	95
Hydrofluoric Acid	N/R	N/R	15	80
Hydrogen Bromide, Dry	100	190	100	200

- : No Information Available

N/R: Not Recommended

SAT: Saturated Solution

FUM: Fumes

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	Max Wt. %	Max Oper. Temp °F	Max Wt. %	Max Oper. Temp °F
Hydrogen Bromide, Wet	100	75	100	130
Hydrogen Chloride	-	120	-	200
Hydrogen Peroxide	5	100	30	100
Hydrogen Sulfide, Dry	100	170	100	210
Hydrogen Sulfide, Wet	100	170	100	210
Hypochlorous Acid	20	80	20	150
Isopropyl Alcohol	N/R	N/R	15	80
Kerosene	100	140	100	180
Lactic Acid	SAT	170	SAT	200
Lead Acetate	SAT	170	SAT	200
Lead Chloride	SAT	140	SAT	200
Lead Nitrate	SAT	-	SAT	200
Linseed Oil	100	150	100	190
Lithium Chloride	SAT	150	SAT	190
Magnesium Carbonate	SAT	140	SAT	170
Magnesium Chloride	SAT	170	SAT	200
Magnesium Hydroxide	SAT	150	SAT	190
Magnesium Nitrate	SAT	140	SAT	180
Magnesium Sulfate	SAT	170	SAT	190
Mercuric Chloride	SAT	150	SAT	190
Mercurous Chloride	SAT	140	SAT	180
Methyl Ethyl Ketone	N/R	N/R	N/R	N/R
Mineral Oils	100	170	100	200
Monochlorobenzene	N/R	N/R	N/R	N/R
Naphtha	100	140	100	170
Nickel Chloride	SAT	170	SAT	200
Nickel Nitrate	SAT	170	SAT	200
Nickel Sulfate	SAT	170	SAT	200
Nitric Acid	5	140	5	150
Nitric Acid	20	70	20	100
Oleic Acid	100	170	100	190
Oxalic Acid	ALL	75	ALL	120
Paper Mill Liquors	-	100	-	120
Perchloroethylene	100	N/R	100	N/R
Perchloric Acid	N/R	N/R	10	150
Perchloric Acid	N/R	N/R	30	80
Phosphoric Acid	10	160	10	200
Phosphoric Acid	100	120	100	200
Potassium Aluminum Sulfate	SAT	170	SAT	200
Potassium Bicarbonate	50	80	50	140
Potassium Carbonate	10	N/R	10	120
Potassium Chloride	SAT	170	SAT	200
Potassium Dichromate	SAT	170	SAT	200

-: No Information Available

N/R: Not Recommended

CHEMICAL ENVIRONMENT	POLYESTER		VINYL ESTER	
	Max Wt. %	Max Oper. Temp °F	Max Wt. %	Max Oper. Temp °F
Potassium Hydroxide	N/R	N/R	25	150
Potassium Nitrate	SAT	170	SAT	200
Potassium Permanganate	100	80	100	210
Potassium Sulfate	SAT	170	SAT	200
Propylene Glycol	ALL	170	ALL	200
Phthalic Acid	-	-	SAT	200
Sodium Acetate	SAT	160	SAT	200
Sodium Benzoate	SAT	170	SAT	200
Sodium Bicarbonate	SAT	160	SAT	175
Sodium Bisulfate	ALL	170	ALL	200
Sodium Bromide	ALL	170	ALL	200
Sodium Carbonate	10	80	35	160
Sodium Chloride	SAT	170	SAT	200
Sodium Cyanide	SAT	170	SAT	200
Sodium Hydroxide	N/R	N/R	50	150
Sodium Hydroxide	N/R	N/R	25	80
Sodium Hypochloride	N/R	N/R	10	150
Sodium Monophosphate	SAT	170	SAT	200
Sodium Nitrate	SAT	170	SAT	200
Sodium Sulfate	SAT	170	SAT	200
Sodium Thiosulfate	ALL	100	ALL	120
Stannic Chloride	SAT	160	SAT	190
Styrene	N/R	N/R	N/R	N/R
Sulfated Detergent	0/50	170	0/50	200
Sulfur Dioxide	100	80	100	200
Sulfur Trioxide	100	80	100	200
Sulfuric Acid	93	N/R	93	N/R
Sulfuric Acid	50	N/R	50	180
Sulfuric Acid	25	75	25	190
Sulfurous Acid	SAT	80	N/R	N/R
Tartaric Acid	SAT	170	SAT	200
Tetrachloroethylene	N/R	N/R	FUM	75
Toluene	N/R	N/R	N/R	N/R
Trisodium Phosphate	N/R	N/R	SAT	175
Urea	SAT	130	SAT	140
Vinegar	100	170	100	200
Water, Distilled	100	170	100	190
Water, Tap	100	170	100	190
Water, Sea	SAT	170	SAT	190
Xylene	N/R	N/R	N/R	N/R
Zinc Chloride	SAT	170	SAT	200
Zinc Nitrate	SAT	170	SAT	200
Zinc Sulfate	SAT	170	SAT	200

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