



NON-METALLIC CABLE TRAY & STRUT SYSTEMS

CORROSION GUIDE

The information shown in this corrosion guide is based on full immersion laboratory tests and data generated from resin manufacturers. It should be noted that in some of the environments listed, splashes and spills 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

of exposure and combined chemical effects of mixtures of chemicals make it impossible to specify the exact suitability of fiber-reinforced plastics in all environments. Thomas & Betts will be happy to supply material samples for testing. These recommendations should only be used as a guide and Thomas & Betts does not take responsibility for design or suitability of materials for service intended. In no event will Thomas & Betts be liable for any consequential or special damages for any defective material or workmanship including, without limitation, labor charges or other expenses or damage to property 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 |

- : No Information Available
 N/R : Not Recommended
 SAT : Saturated Solution
 FUM : Fumes

| 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 | 200 |
| 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 |
| Hydrochloric Acid | N/R | N/R | 15 | 80 |
| Hydrogen Bromide, Dry | 100 | 190 | 100 | 200 |



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TECHNICAL
INFORMATION

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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 | 80 |
| 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 | 90 |
| Oxalic Acid | ALL | 75 | ALL | 120 |
| Paper Mill Liquors | - | 100 | - | 120 |
| Perchlorethylene | 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 Alum. Sulfate | SAT | 170 | SAT | 200 |
| Potassium Bicarbonate | 50 | 80 | 50 | 140 |
| Potassium Bichromate | SAT | 170 | SAT | 200 |
| Potassium Carbonate | 10 | N/R | 10 | 120 |
| Potassium Chloride | SAT | 170 | SAT | 200 |

| 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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