

## CHEMICAL RESISTANCE GUIDE FOR ISO-TUFF FRP PANELS

Data shown is provided ONLY as a preliminary guide in determining suitability of ISO-TUFF FRP panels. Based on information in the HETRON® and AROPOL™ Resin Selection Guide these charts are to assist in narrowing your field of choice. They should not be used for anything more. Effects of contaminants, aeration, galvanic coupling, erosion, etc., must be taken into account. Field tests are best for determining suitability.

Environment	Volume %	Rating/Temp. °F	Environment	Volume %	Rating/Temp. °F	Environment	Volume %	Rating/Temp. °F
Acetic Acid	10	150	Ethylene Glycol	100	250	Oleic Acid	100	200
Acetic Acid	25	125	Fatty Acids	Sat'd	250	Oxalic Acid	100	220
Acetic Acid	50	90	Fertilizer Fumes	-	100	Palmitic Acid	Sat'd	160
Alum	Sat'd	250	Flue Gas <sup>3,4</sup>	-	180	Picric Acid	10	100
Alum, Potassium	100	160	Fluosilicic Acid	25	90	Potassium Aluminum Sulfate	Sat'd	160
Aluminum Chloride	100	120	Formaldehyde @ 150°F	37	90	Potassium Sulfate	100	200
Aluminum Fluoride	100	90	Formic Acid	50	90	Sewage, Municipal, Treated & Untreated	-	90
Aluminum Potassium Sulfate	100	160	Gluconic Acid	50	120	Sodium Bicarbonate	Sat'd	140
Aluminum Sulfate	100	250	Glycolic Acid	70	120	Sodium Bisulfate	Sat'd	200
Ammonia, Dry & Wet	Gas	90	Hydrobromic Acid	25	160	Sodium Carbonate	Sat'd	90
Ammonium Acetate	50	NR	Hydrochloric Acid <sup>5</sup>	5	210	Sodium Chloride	Sat'd	200
Ammonium Hydroxide	10	90	Hydrochloric Acid <sup>5</sup>	25	150	Sodium Hydroxide <sup>6</sup>	0.5	100
Ammonium Nitrate	Sat'd	200	Hydrocyanic Acid	Sat'd	200	Sodium Nitrate	Sat'd	220
Anaerobic Sewage	-	85	Hydrofluoric Acid	10	100	Sodium Sulfate	100	180
Arsenious Acid	19°Be	180	Hydrogen Chloride, Anhydrous	100	90	Stearic Acid	100	200
Benzene	100	90	Hydrogen Fluoride, Wet	100	90	Sulfite Liquors	-	160
Benzene Sulfonic Acid	30	180	Hydrogen Sulfide	100	250	Sulfur	-	200
Benzoic Acid	Sat'd	250	Hypochlorous Acid	Conc.	90	Sulfuric Acid	50	200
Bromine, Wet Gas	100	90	Isopropyl Alcohol	100	90	Sulfuric Acid Vapor	70	150
Butyric Acid	70	120	Kerosene Vapor & Condensate	100	120	Sulfurous Acid	10	90
Calcium Hydroxide	Sat'd	160	Lactic Acid	100	200	Tannic Acid	Sat'd	200
Calcium Hypochlorite <sup>1</sup>	Sat'd	100	Lime Slurry	Sat'd	180	Toluene	100	90
Carbon Dioxide, Wet, Acidic	100	250	Magnesium Chloride	Sat'd	220	Turpentine, Pure Gum	100	90
Carbon Monoxide Gas	100	200	Mercury	100	250	Urea	Sat'd	90
Carbon Tetrachloride, Vapor	100	90	Mineral Oils	100	180	Waste Water Treatment	-	100
Carbonic Acid	Sat'd	160	Naphtha	100	200	Zinc Sulfate	100	200
Chlorine Gas, Dry	100	200	Nitric Acid <sup>2</sup>	10	175			
Chlorine, Wet Gas	100	90	Nitric Acid Vapor <sup>2</sup>	60	95			
Citric Acid	Sat'd	200	Nitrous Acid	10	90			
Copper Sulfate	Sat'd	250						
Diesel Fuel	100	100						

**Footnotes**

- 1 Benzoic peroxide/dimethyl aniline cure system generally used.
- 2 Post-cure strongly recommended.
- 3 Vol. 0.25% SO<sub>2</sub>, 0.03% SO<sub>3</sub>, 12.5% CO<sub>2</sub>, 74.6% N<sub>2</sub>, 4.9% O<sub>2</sub>, 7.8% H<sub>2</sub>O, fly ash, 5.0 gms/ft<sup>3</sup>; velocity 60fps.
- 4 Vol. 0.25% SO<sub>2</sub>, 0.03% SO<sub>3</sub>, 12.5% CO<sub>2</sub>, 74.6% N<sub>2</sub>, 4.9% O<sub>2</sub>, 7.8% H<sub>2</sub>O, fly ash, 1.2 gms/ft<sup>3</sup>; velocity 60fps.

**Footnotes**

- 5 Double carbon veil recommended.
  - 6 Carbon veil recommended at higher temperatures.
- NR = Not Recommended  
- = Data Not Available

For information not listed on this guide please refer to the HETRON® online guide at [www.hetron.com](http://www.hetron.com).

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