

GPO-3

ETR-FR-C

1/1/2011

Haysite's high performance material that meets NEMA GPO-3 requirements and exceeds NEMA in dielectric strength, arc resistance, and track resistance. This UL recognized grade is highly flame retardant and low smoke generating. ETR-FR-C is a IEEE 130° C electrical / 160° mechanical Class B material. Applications include high voltage appliance insulators, bus bar supports, and barriers in switchgear. Available in thicknesses .032" - 2.00". Standard color - Red. Meets Gov't Spec - I-24768/6.

Physical	Test Method	Unit	Result
Barcol Hardness	Barcol	Scale	64
Specific Gravity	D-792		1.83
Density, <i>Lbs/In³</i>		Lbs/Cu. In.	0.066
Water Absorption, %	D-229	%	0.20
UL Flammability, File# E81893	UL94	Class	94V-O
Flame Resistance, <i>Seconds</i>			
Ignition Time	D-229	Seconds	100
Burning Time	D-229	Seconds	20
Radiant Panel	E-162	Flame Spread	1.3
Smoke Density at 4.0 minutes, flaming	E-662	Optical Density	40
Tunnel Test, 1/4" Thickness	E-84	Flame Spread	<25
Temperature Class*	--	Degrees C	130
Mechanical			
Tensile Strength, <i>PSI</i>	D-638	PSI	9,400
Flexural Strength, <i>PSI</i>	D-790	PSI	21,000
Modulus of Elasticity in Flexure, <i>PSI</i>	D-790	PSI	1.59 x 10 ⁶
Compressive Strength, <i>PSI</i>	D-695	PSI	35,000
Bond Strength, 1/2" Thickness, <i>PSI</i>	D-229	PSI	1400
Shear Strength, <i>PSI</i>	D-732	PSI	14,000
Impact Strength, Izod Edgewise	D-256	Ft lbs/In. Notch	8.0
Electrical			
Dielectric Strength, ⊥, Short Time In Oil 1/16", <i>VPM</i>	D-149	VPM	450
Dielectric Strength, Parallel, Step-By-Step In Oil, <i>KV</i>	D-149	KV	55.0
Arc Resistance, <i>Seconds</i>	D-495	Seconds	185

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Comparative Track Index	CTI	Volts	500+
Incline Plane Track Resistance	D-2303	Minutes	500
Dielectric Constant @60HZ	D-150		4.73
Dielectric Constant @1MHZ	D-150		4.69
Dissipation Factor @ 60 Hz	D-150		0.016
Dissipation Factor @ 1MHz	D-150		0.011

Unless otherwise indicated, all properties published are based on test performed on standard ASTM test samples and according to ASTM test methods. Values shown are for test samples made from production materials and they are believed to be conservative. No warranty is to be construed, however, in fabricated or molded form, parts may vary considerably from this standard test data. Where specific or unusual applications arise, test should be made on actual parts, and test procedures agreed upon between Haysite Reinforced Plastics and the customer.