

Sheet

H1000

9/18/2008

Haysite Grade 1000 laminate sheet is an outstanding material that is used in applications requiring exceptional weather and corrosion resistance. Grade H1000's unique polyester resin system provides corrosion resistance in sunlight and harsh weather environments in addition to meeting NEMA GPO-3 specifications for track resistance, flame retardance, heat resistance and physical properties. H1000 is particularly qualified for applications in the transportation industry due to its' low smoke generation, low smoke toxicity & halogen-free flame retardants. H1000 meets the rigid New York City Transit - Specification #64. Transit Authorities use Grade H1000 under their 3rd rail ties to provide electrical insulation, corrosion protection, UV resistance & most importantly to insure low smoke/flame toxicity in case of electrical failure. H1000, in a pultruded profile shape is used for electrical insulation for electrical cables, conduit & 3rd rail protection for workers.

	<u>Test Method</u>	<u>Units</u>	<u>Performance Value</u>
Electrical Properties			
Track Resistance - 1/4" Thick	D-2303	Minutes	>660
Arc Resistance	D-495	Seconds	193
Dielectric Strength, Perpendicular	D-149	VPM	290
Flame Resistance Properties			
UL Flame Resistance	UL 94	Class	94 V-O
Ignition Time	D-229	Seconds	80
Burning Time	D-229	Seconds	35
Radiant Panel - Flame Spread	E162		15.9
Smoke Density @ 4.0 Minutes, Flaming	E-662	Optical Density	6.3
Flame Spread Index	E-84		20
Smoke and Toxicity Data			
Smoke Developed Index	E-84		165
Smoke Toxicity	BSS7239	PPM	0
Hydrogen Chloride	BSS7239	PPM	0
Hydrogen Bromide	BSS7239	PPM	0.5
Hydrogen Cyanide	BSS7239	PPM	0
Hydrogen Sulfide	BSS7239	PPM	0
Vinyl Chloride	BSS7239	PPM	0
Ammonia	BSS7239	PPM	0
Aldehydes	BSS7239	PPM	10
Oxides of Nitrogen	BSS7239	PPM	4.5
Carbon Dioxide	BSS7239	PPM	2400
Carbon Monoxide	BSS7239	PPM	700

Mechanical Properties			
Tensile Strength - Lengthwise	D-638	PSI	13,500
Tensile Strength - Crosswise	D-639	PSI	13,000
Tensile Modulus - Lengthwise	D-638	PSI X 10 ⁶	1.65
Tensile Modulus - Crosswise	D-639	PSI X 10 ⁶	1.65
Flexural Strength - Lengthwise	D-790	PSI	25,800
Flexural Strength - Crosswise	D-791	PSI	22,500
Flexural Modulus - Lengthwise	D-792	PSI X 10 ⁶	1.88
Flexural Modulus - Crosswise	D-793	PSI X 10 ⁶	1.33
Compressive Strength (Flatwise)	D-695	PSI	30,000
Impact Strength, IZOD - Lengthwise	D-256	Ft. lbs./in. notch	12
Impact Strength, IZOD - Crosswise	D-257	Ft. lbs./in. notch	10.4
Water Absorption	D-570	%/wgt.	0.16
Thermal Expansion	D-696	in/in/°F	0.000007

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.