



GlasGuard™ Grade 1130 Composite System

Grade 1130 is a fiberglass-reinforced thermoset polyester composite system which is available as sheet stock or in a variety of pultruded shapes. The 1130 system exhibits a unique combination of properties which make it attractive for a variety of applications. Grade 1130 possesses:

- Flame Resistance
- Corrosion Resistance
- Weatherability
- Dielectric Properties

This system is formulated from a special methyl methacrylate modified neopentyl glycol-isophthalic acid unsaturated polyester resin. This type of resin has long been known for outstanding resistance to color fading caused by sunlight and for resistance to surface erosion caused by weathering. This family of resins is also recognized for its performance in corrosive environments, including acids, bases and aliphatic hydrocarbons. The mineral filler used in the 1130 system has been selected to provide a flame resistance rating of V-0 when tested according to the UL® Section 94. It also meets the National Electrical Manufacturers Association (NEMA) criteria for grade GPO-3.

Low Smoke and Low Smoke Toxicity

Grade 1130 materials are especially recommended for use in the transit industry, where smoke generation and smoke toxicity are of primary concern. First designed for use in switchgear, connectors and control panels in enclosed areas, these materials are also now widely used in structural applications. Grade 1130 materials meet or exceed the stringent (polyester), as well as MIL-P-15037E (melamine).

Grade 1130 was developed to meet the challenging requirements of the New York City Transit Authority. It has been pultruded into channel shaped covers for the electrified third rails and molded in flat panels for both a sign material and for switchgear components. Grade 1130 is approved against NYCTA Specifications 62, 64 and 65.





GlasGuard™ Grade 1130

	Unit	ASTM/UL Number	Typical Values
Smoke & Toxicity Data			
Smoke Developed		E84/UL723	115
Composition of Atmosphere		MIL-M-14G	
Hydrogen Chloride	Parts Per Million		0
Hydrogen Bromide	Parts Per Million		0
Hydrogen Cyanide	Parts Per Million		<1
Hydrogen Sulfide	Parts Per Million		0
Vinyl Chloride	Parts Per Million		<0.3
Ammonia	Parts Per Million		0
Aldehydes	Parts Per Million		18
Oxides of Nitrogen	Parts Per Million		19
Carbon Dioxide	Parts Per Million		6,800
Carbon Monoxide	Parts Per Million		105
General Information			
Part Number			1130
Standard Color			Gray
Mechanical Properties			
Tensile Strength – Lengthwise	Psi	D638	14,600
Tensile Strength – Crosswise			16,000
Tensile Modulus – Lengthwise	Psi X 10 ⁶	D638	1.49
Tensile Modulus – Crosswise			1.49
Flexural Strength – Lengthwise	Psi	D790	20,400
Flexural Strength – Crosswise			23,300
Flexural Modulus – Lengthwise			1.41
Flexural Modulus – Crosswise			1.39
Flexural Strength @ 130°C	Psi	D695	11.3
Compressive Strength	Psi	D695	40,000
IZOD Impact Strength (notched)	ft.lb./in.	D256	11.3
Bonding Strength	Lbs.	NEMA L1-1998	6,100
Water Absorption	% by wt.	D570	0.1
Electrical Properties			
Electrical Strength – perpendicular S/T in air	Vpm	D149	316
Electrical Strength –parallel	Vpm	D149	
Condition A			75
Condition D (48/50)			79
Arc Resistance	Seconds	D495	192
Inclined Plane Track Resistance	Minutes	D2303	870
Flame Resistance Properties			
UL Subject 94		UL94	VO
UL Standard 723 Flame Spread		E84	20
UL Standard 723 Fuel Contributed		E84	0
Radiant Panel		E162	12

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