

Materials Services
Engineered Plastics

Electrical Insulation for the Transit Industry

Engineered Plastics Solutions



thyssenkrupp



GlasGuard™ Grade 1130

GlasGuard™ Grade 1130 is a fiberglass-reinforced thermoset polyester composite. It was initially developed to meet the challenging requirements of the New York City Transit Authority. 1130 pultruded channel shaped covers are used for the electrified third rails. Flat panels are used for signs and switchgear components. Grade 1130 is approved for NYCTA Specifications 62, 64 and 65. 1130 exhibits a unique combination of properties which make it ideal for a variety of applications including outstanding resistance to color fading caused by UV light and resistance to surface erosion caused by weathering. It performs well in corrosive environments, such as acids, bases and aliphatic hydrocarbons.



GlasGuard™ has a flame resistance rating of V-O when tested to UL® Section 94. It also meets the National Electrical Manufacturers Association (NEMA) criteria for grade GPO-3. Low smoke and low smoke toxicity make this material ideal for use in the transit industry, where smoke generation and smoke toxicity are of primary concern. First designed for use in switchgears, connectors and control panels in enclosed areas, 1130 is now widely used in structural applications. Grade 1130 meets or exceeds the stringent (polyester), as well as MIL-P-15037E (melamine) specification.

GlasGuard™ Grade 1130 Features

- Dielectric Properties:
This system is formulated from a special methyl methacrylate modified neopentyl glycol-isophthalic acid unsaturated polyester resin.
- Flame Resistance (UL 94 V-0 Rating)
- NEMA Grade GPO-3
- Corrosion Resistance
- Weatherability
- UV Resistant

Custom Sheet Sizes and Pultruded Shapes

Other thicknesses of sheet and custom pultrusions are available upon request. A constant cross-sections can be pultruded in a wide variety of sizes and shapes. Solid parts, hollow parts, and complex geometries are all possible. Length is only restricted by the practicalities of material handling and transportation. Roechling Glastic pultruded rods as small as 0.020 inches in diameter with a length of over 50 kilometers. Our equipment will accommodate parts up to 48 inches in width.

Sheet Sizes

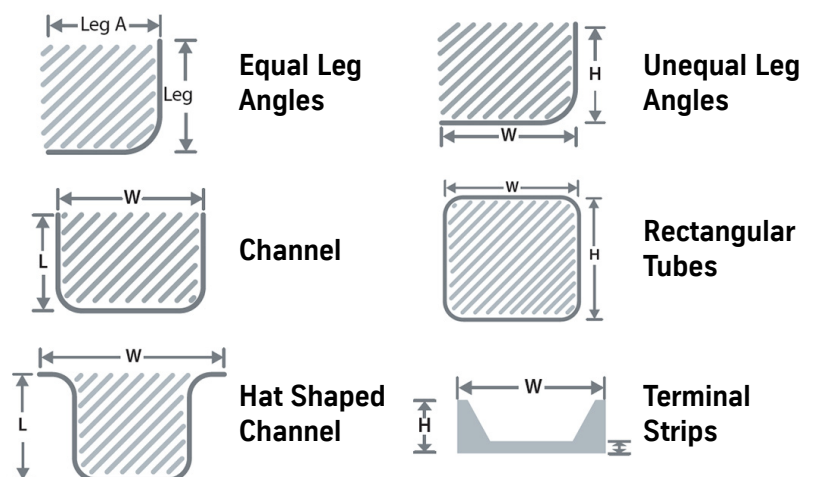
Thickness Range	Width	Length
0.032 - 2.00	36	72
0.032 - 2.00	49	96
0.032 - 0.50	48	60

More Materials for the Transit Industry

As a full line distributor we offer numerous materials for the transit industry. Ask about these products and more...

- GPO-3 Grade Sheet, Angle, Channel
- G10, FR4, G11, G9, G7, G3
- Phenolic Grades XX, XXX, L, LE, C, CE
- Standoff Insulators
- Electrical Grade Polycarbonate
- Industrial Plastics: PVC, Nylon, PTFE, Acrylic, ABS, HDPE, PEI, PET, PETG
- Copper Busbar

Common Pultruded Shapes



Glastic materials are made in the USA by Roechling Glastic Composites

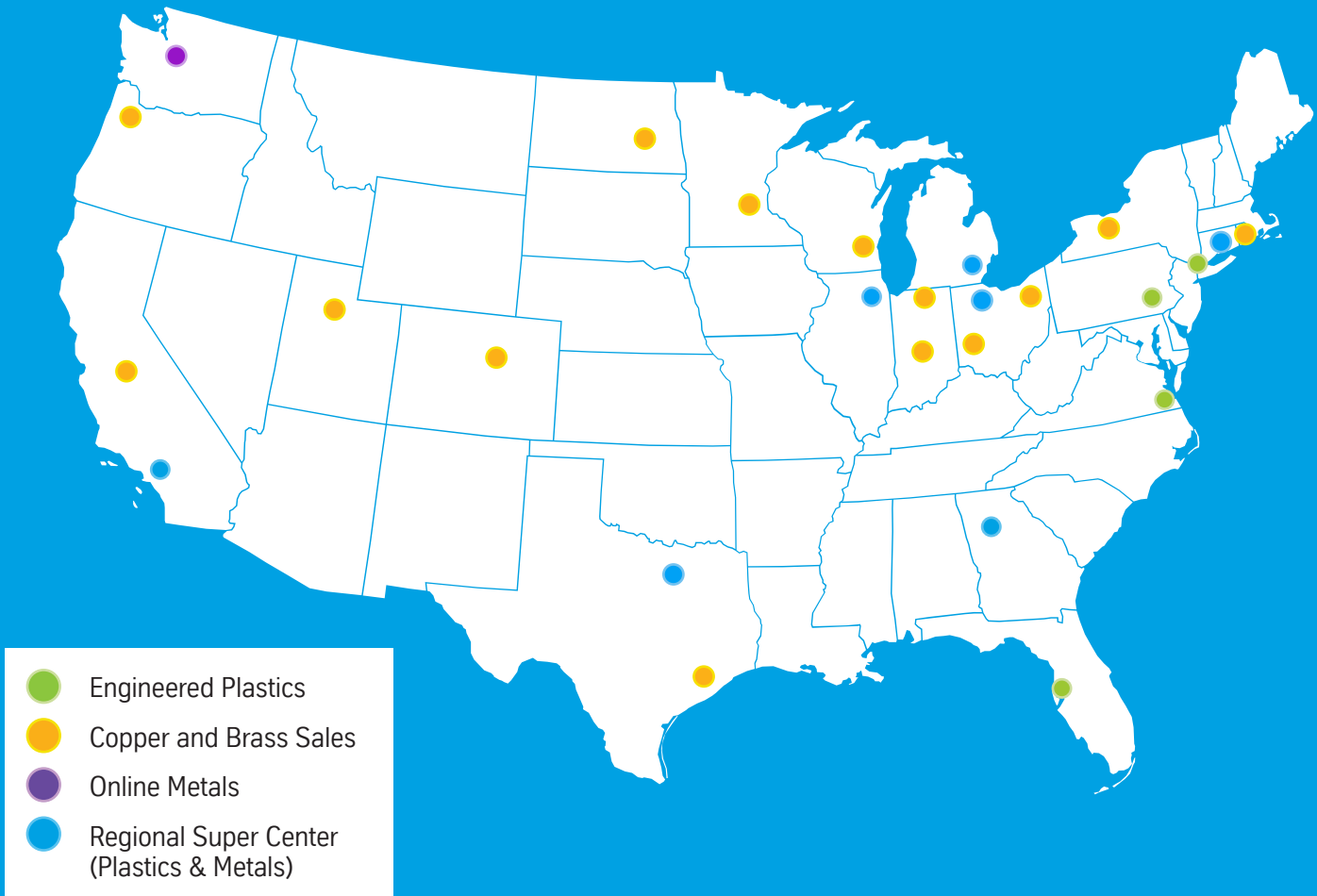
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GlasGuard™ Grade 1130 Technical Data

Description		Unit	ASTM / UL Number	Typical Values
Color				Grey
Smoke and 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		<.03
Ammonia		Parts per million		0
Aldhydes		Parts per million		18
Oxides of Nitrogen		Parts per million		19
Carbon Dioxide		Parts per million		6,800
Carbon Monoxide		Parts per million		105
Mechanical Properties				
Tensile Strength	Lengthwise	Psi	D638	14,600
Tensile Strength	Crosswise	Psi	D638	16,000
Tensile Modulus	Lengthwise	Psi x 10 ⁶	D638	1.49
Tensile Modulus	Crosswise	Psi x 10 ⁶	D638	1.49
Flexural Strength	Lengthwise	Psi	D790	20,400
Flexural Strength	Crosswise	Psi	D790	23,300
Flexural Modulus	Lengthwise	Psi	D790	1.41
Flexural Modulus	Crosswise	Psi	D790	1.39
Flexural Strength	@ 130° C / 266° F	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
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
Electrical Resistance 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

Call Us: 877.246.7700

thyssenkrupp Engineered Plastics has multiple strategically placed branch locations throughout the country that feature full inventory and processing capabilities.



The thyssenkrupp Engineered Plastics Advantage

The Roechling cGrade 1130 is the benchmark for transit grade materials and was developed specifically for the demanding NYCTA requirements. Let us help you grow your business and improve your supply chain.

thyssenkrupp Engineered Plastics has readily available stock to meet the needs of the Transit Industry.

- No Minimums
- Helpful Service
- Cut-to-Size Capabilities

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Roechling Glastic Composites is the manufacturer of GlasGuard™ Grade 1130 and other Glastic materials for the power distribution and other industries.



Visit [OfflinePlastics.com](https://www.OfflinePlastics.com) for more information.

AS9100/ISO9001 Location:
Auburn Hills, MI
ISO9001 Locations:
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