

## G-11 Fiberglass Epoxy Laminate Sheet

Category : Polymer , Thermoset , Epoxy , Filled/Reinforced Thermoset

### Material Notes:

This glass-epoxy laminate is specified for its extremely high strength and high dimensional stability over temperature. G-11 is used for terminal boards, high humidity applications, electrical and electronic test equipment and electric rotor insulation. G-11 is difficult to cut or machine and may require special equipment. G-10 is slightly stronger while G-11 is a better insulator and can withstand higher temperatures. G-11 and similar fiberglass reinforced thermosets are sometimes known as garolite. Information provide by Boedeker Plastics.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_G-11-Fiberglass-Epoxy-Laminate-Sheet.php](http://www.lookpolymers.com/polymer_G-11-Fiberglass-Epoxy-Laminate-Sheet.php)

Physical Properties	Metric	English	Comments
Density	1.80 g/cc	0.0650 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.20 %	0.20 %	24 hrs.; ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	112	112	ASTM D785
Tensile Strength at Break	255 MPa	37000 psi	Crosswise; ASTM D638
	296 MPa	43000 psi	Lengthwise; ASTM D638
Flexural Strength	483 MPa	70000 psi	Crosswise; ASTM D790
	552 MPa	80000 psi	Lengthwise; ASTM D790
Flexural Modulus	18.6 GPa	2700 ksi	Crosswise; ASTM D790
	20.7 GPa	3000 ksi	Lengthwise; ASTM D790
Compressive Strength	434 MPa	63000 psi	ASTM D695
Izod Impact, Notched	4.81 J/cm	9.00 ft-lb/in	Crosswise; ASTM D256
	6.41 J/cm	12.0 ft-lb/in	Lengthwise; ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	13.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	7.20 $\mu\text{in}/\text{in}\cdot\text{°F}$	Lengthwise; ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
CTE, linear, Transverse to Flow	15.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	8.33 $\mu\text{in}/\text{in}\cdot\text{°F}$	Crosswise; ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Thermal Properties	0.288 W/m-K Metric	2.00 BTU-in/hr-ft <sup>2</sup> -F English	ASTM C177 Comments
Maximum Service Temperature, Air	165 °C	329 °F	
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Dielectric Constant	4.5 @Frequency 1e+6 Hz	4.5 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	35.4 kV/mm	900 kV/in	Short Time; 1/8 inch; ASTM D149
Dissipation Factor	0.020 @Frequency 1e+6 Hz	0.020 @Frequency 1e+6 Hz	ASTM D150
Arc Resistance	120 sec	120 sec	ASTM D495

## Contact Songhan Plastic Technology Co.,Ltd.

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