



# PROFESSIONAL PLASTICS, INC.

Leading Global Supplier of Engineered Plastic Shapes

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## G-7 Glass-Silicone Laminate

G-7 glass-silicone laminate has good electrical properties under humid conditions, excellent heat and arc resistance, and is self-extinguishing. G-7 is used for electrical grade insulation, and for heating & appliance insulation. Meets Mil-I-247681/17 GSG

Physical Properties	Metric	English	Comments
Density	1.80 g/cc	0.0650 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.100 %	0.100 %	24 hrs.; ASTM D570
Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	105	105	ASTM D785
Tensile Strength at Break	138 MPa	20000 psi	Lengthwise; ASTM D638
Flexural Strength	207 MPa	30000 psi	Lengthwise; ASTM D790
Flexural Modulus	11.0 GPa	1600 ksi	Lengthwise; ASTM D790
Compressive Strength	345 MPa	50000 psi	ASTM D695
Izod Impact, Notched	6.94 J/cm	13.0 ft-lb/in	Lengthwise; ASTM D256
Electrical Properties	Metric	English	Comments
Dielectric Constant	4.50 @Frequency 1e+6 Hz	4.50 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	13.8 kV/mm	350 kV/in	Short Time; 1/8 inch; ASTM D149
Dissipation Factor	0.0180 @Frequency 1e+6 Hz	0.0180 @Frequency 1e+6 Hz	ASTM D150
Arc Resistance	240 sec	240 sec	ASTM D495
Thermal Properties	Metric	English	Comments
CTE, linear	13.0 µm/m-°C @Temperature 20.0 °C	7.20 µin/in-°F @Temperature 68.0 °F	Lengthwise; ASTM D696
CTE, linear, Transverse to Flow	16.2 µm/m-°C @Temperature 20.0 °C	9.00 µin/in-°F @Temperature 68.0 °F	Crosswise; Transverse to Flow; ASTM D696
Thermal Conductivity	0.288 W/m-K	2.00 BTU-in/hr-ft <sup>2</sup> -°F	ASTM C177
Maximum Service Temperature, Air	220 °C	428 °F	
Flammability, UL94	HB	HB	

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. Professional Plastics shall not be responsible for the accuracy of this data. All properties are based on typical test results. It is the sole responsibility of the customer to test each material in their specific application to determine the suitability and performance characteristics.

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