



# THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

## Polycarbonate

<b>Item:</b>	<b>Polycarbonate</b>
<b>Description:</b>	Polycarbonate is a thermoplastic known by such trade names as Palsun®, Lexan®, Spartech®, Tuffak®, Merlin®, Makrolon®, and Hyzod®. It is utilized for its strong mechanical properties and good electrical insulation characteristics. It is available as transparent or in a variety of colors.
<b>Application:</b>	<p>Polycarbonate materials are commonly used as sight windows or finger guards in metal enclosed switchgear.</p> <p>Polycarbonate is available in different flammability grades; UL 94 HB through UL 5VA and is selected by the customer to meet the needs of their electrical insulation requirements.</p> <p>Polycarbonate can be easily machined and formed into a variety of three dimensional shapes. Polycarbonate is also commonly used for glazing and machine guards where the need for high impact resistance is required.</p>
<b>Availability:</b>	The Gund Company custom fabricates insulation materials to the exact specifications and drawings specified by our customers.

Key Characteristics		Test Method	Units	Typical Values
Density		ASTM D792	g/cm <sup>3</sup>	1.2
Heat Deflection Temperature		ASTM D648	°C	130
Service Temperature	Short Term	--	°C	-50 to 120
	Long Term			-50 to 100
Coefficient of Linear Thermal Expansion		ASTM D696	cm/cm °C	6.5 x 10 <sup>-5</sup>
Thermal Conductivity		ASTM C177	W/mK	0.21
Tensile Strength at Yield		ASTM D638	MPa	60
Tensile Strength at Break		ASTM D638	MPa	65
Elongation at Yield		ASTM D638	%	6
Elongation at Break		ASTM D638	%	> 90
Tensile Modulus of Elasticity		ASTM D638	MPa	2,000
Flexural Strength		ASTM D790	MPa	100
Flexural Modulus		ASTM D790	MPa	2,600
Impact Falling Weight		ISO 6603/1	J	158
Rockwell Hardness		ASTM D-785	R Scale	125
Light Transmission		ASTM D1003	%	89
Haze		ASTM D1003	%	< 0.5
Yellowness Index		ASTM D1925	--	< 1
Dielectric Strength		ASTM D149	V/mil	> 700
Dielectric Constant		ASTM D150	--	3

Data supplied above are typical values and are not to be considered specification values. All of the information, suggestions and recommendations pertaining to the properties and uses of the products herein are based upon tests and data believed to be accurate; however, the final determination regarding suitability of any material described herein for the contemplated application, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty, expressed or implied, including, without limitation warranty of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.

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