



MANUFACTURERS OF
ELECTRICAL INSULATION MATERIALS
 INSULATING COMPONENTS FOR
 POWER SYSTEMS EQUIPMENT

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MATERIAL DATA SHEET

Item: Polycarbonates

Description: Known by such tradenames as Lexan, Spartech, Tuffak, Merlin, and Hyzod. A polycarbonate sheet is 250 times the strength of glass. In thicknesses of 1/8" or greater, polycarbonates have a UL 94V-0 rating. They are self-extinguishing.

Application: In electrical apparatus, polycarbonate material is often used as a sight window material for metal enclosed switchgear. Also, polycarbonate is commonly used as a clear view barrier serving both as a dielectric barrier and as a sight window to verify equipment operation. Polycarbonate has general maintenance uses for glazing in machine guards where the need for very high impact resistance is required.

Description: Many thermoplastics are available in a multitude of forms such as sheets, rods, and tubes. The Gund Company can fabricate a wider range of thermoplastic components, to the exact specifications and drawings of our customers.

Key Characteristics:	Units - English (SI)	Typical Values
Specific Gravity	Lbs/in ³	0.940-0.942
Specific Volume	Cu. In per lb.	29.8
Tensile Strength	Psi (MPa)	2500 (17.24)
Elongation	%	5.25
Modulus of Elasticity in Tension	Psi (MPa)	1020 (7.03)
Rockwell Hardness	R-Scale	R38
Thermal Expansion	0.001/°C	7.2
Heat Distortion Temperature	°F (°C)	163 (73)
Volume Resistivity	Ohm-cm	>8.2 ¹⁶
Dielectric Strength (S/T in oil)	V/mil (kV/mm)	>380 (>14.82)
Dielectric Constant	60Hz, 1Mhz	3.17, 2.96
Dissipation Factor	60Hz, 1Mhz	0.0009, 0.01

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