LAMINATORS
Composite Panel Solutions

www.LaminatorsInc.com
800.523.2347
3255 Penn St, Hatfield, PA 19440

POLYCARBONATE
Technical Data Sheet

PRODUCT: Polycarbonate

EFFECTIVE: October 30, 2020

Description: Polycarbonate is a thermoplastic polymer material that is available as a natural clear, general grade, solid sheet with a UV coating on one side and non-UV coating on the other. The material provides high transparency, extreme impact strength, and high weather resistance. Sheets are intended for agriculture, industrial, construction, etc. applications.

Physical Properties:

Thickness (standard)	4.5 mm (0.177 in)
Density (ISO 1183)	1.20 g/cm^3
Light Transmission (ASTM D1003)	$\geq$ 86%
Haze (ASTM D1003)	$\leq$ 0.5%
Water Absorption (ASTM D570)	0.15% (@ 24 hours)

Mechanical Properties:

	Value	Test Conditions
Tensile Strength, Ultimate (ISO 527)	65 MPa	50 mm/min
Tensile Strength, Yield (ISO 527)	61 MPa	50 mm/min
Tensile Modulus (ISO 527)	2350 MPa	1 mm/min
Elongation @ Break (ISO 527)	100%	50 mm/min
Flexural Strength (ISO 178)	92 MPa	2 mm/min
Flexural Modulus (ISO 178)	2350 MPa	2 mm/min
Notched Charpy Impact (ISO 179/1eA)	80 KJ/m^2	-
Unnotched Charpy Impact (ISO 179/1eU)	NB (“non-break”)	-

www.LaminatorsInc.com
800.523.2347
3255 Penn St, Hatfield, PA 19440

Thermal Properties:

	Value	Test Conditions
Heat Deflection Temperature (ISO 75)	127°C	1.8 MPa 120°C/h
	138°C	0.45 MPa 120°C/h
Coefficient of Linear Thermal Expansion (ISO 11359-2)	$6.6x10^{-5}$/K	23-55°C

Electrical Properties:

Surface Resistivity (IEC 60093)	$1.00x10^{16}$ Ω
Volume Resistivity (IEC 60093)	$1.00x10^{14}$ Ω-m
Comparative Tracking Index (IEC 60112)	$2.50x10^{2}$ V (solution)

Flammability:

Flammability	UL 94	HB Class	
	GB 8624-2012	B s1 d0 (based on 3 mm)	B s2 d0 (based on 4, 5, and 6 mm)
GW FI (IEC 60695-2-12)		850°C	

Notes:
1. Typical values above measured at 23℃ and RH 50%.