

POLYCARBONATE PTFR SHEET

PRODUCT DATASHEET

DESCRIPTION

PTFR sheet is the standard Polycarbonate Flame Retardant sheet. Polycarbonate PTFR sheet combines high impact and temperature resistance with optical clarity and can be utilized for applications requiring improved fire performance. PTFR sheet can be cut, sawn, drilled and milled by using standard workshop equipment without the risk of cracking and breakage and is therefore an excellent candidate for fabricating a wide range of indoor applications such as electrical enclosures, machine guards etc.

TYPICAL PROPERTY VALUES

PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ASTM D792	g/cm ³	1.217
Water Absorption, 24 hours	ASTM D 570	%	0.15
Water Absorption, equilibrium, 23C	ASTM D 570	%	0.35
Water Absorption, equilibrium, 100°C	ASTM D 570	%	0.58
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	ASTM D 638	MPa	62
Tensile Stress, brk, Type I, 50 mm/min	ASTM D 638	MPa	55
Tensile Strain, yld, Type I, 50 mm/min	ASTM D 638	%	7
Tensile Strain, brk, Type I, 50 mm/min	ASTM D 638	%	90
Flexural Stress, yld, 1.3 mm/min, 50 mm span	ASTM D 790	MPa	91
Flexural Modulus, 1.3 mm/min, 50 mm span	ASTM D 790	MPa	2240
Hardness, Rockwell M	ASTM D 785	--	70
Hardness, Rockwell R	ASTM D 785	--	118
IMPACT			
Izod Impact, unnotched, 23°C	ASTM D 4812	J/m	3204
Izod Impact, notched, 23°C	ASTM D 256	J/m	640
Falling Dart Impact (D 3029), 23°C	ASTM D 3029	J	169
THERMAL			
Vicat Softening Temp, Rate B/50	ASTM D 1525	°C	151
HDT, 0.45 MPa, 6.4 mm, unannealed	ASTM D 648	°C	137
HDT, 1.82 MPa, 6.4 mm, unannealed	ASTM D 648	°C	132
CTE, -40°C to 95°C, flow	ASTM E 831	1/°C	6.84E-05
Thermal Conductivity	ASTM C 177	W/m-°C	0.19
Relative Temp Index, Elec	UL 746B	°C	130
Relative Temp Index, Mech w/impact	UL 746B	°C	120
Relative Temp Index, Mech w/o impact	UL 746B	°C	130
Comparative Tracking Index (UL) (PLC)	UL 746A	PLC Code	3

PROPERTY	TEST METHOD	UNITS	VALUE
ELECTRICAL			
Volume resistivity	ASTM D 257	Ohm.cm	>1.E+17
Dielectric Strength, in air, 3.2 mm	ASTM D 149	kV/mm	16.7
Relative Permittivity, 50/60 Hz	ASTM D 150	-	3.01
Relative Permittivity, 1 MHz	ASTM D 150	-	2.96
Dissipation Factor, 50/60 Hz	ASTM D 150	-	0.0009
Dissipation Factor, 1 MHz	ASTM D 150	-	0.01
Arc Resistance, Tungsten {PLC}	ASTM D 495	PLC Code	7
FLAME CHARACTERISTICS			
UL Recognized, 94V-2 Flame Class Rating (3)	UL 94	MM	1.47
OPTICAL			
Light Transmission, 2.54 mm	ASTM D1003	%	85

◆ These property values have been derived from LEXAN™ resin data for the material used to produce this sheet product. Variations within normal tolerances are possible for various colors. If minimum certifiable properties are required please contact your local SABIC representative. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties are measured on injection molded samples.

All samples are prepared according to ISO 294.

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