

SABIC Innovative Plastics Lexan® PPC4504 PPC

Category : Polymer , Thermoplastic , Polyphthalate Carbonate

Material Notes:

High heat resistant polycarbonate copolymer, provides DTUL of 290F at 264 psi. FDA food contact compliant in limited colors. Effective January 15th, 2008 this grade will no longer be supported with biocompatibility information and should not be used for medical applications which require biocompatibility. Alternative grade HPH4504. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-PPC4504-PPC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.19 g/cc	0.0430 lb/in ³	ASTM D 792
Water Absorption	0.16 % @Time 86400 sec	0.16 % @Time 24.0 hour	ASTM D 570
Linear Mold Shrinkage, Flow	0.0070 - 0.0080 cm/cm @Thickness 3.20 mm	0.0070 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	3.0 g/10 min @Load 1.20 kg, Temperature 300 °C	3.0 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ASTM D 785
Hardness, Rockwell R	122	122	ASTM D 785
Tensile Strength at Break	71.0 MPa	10300 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	122 %	122 %	Type I, 50 mm/min; ASTM D 638
Flexural Yield Strength	95.0 MPa	13800 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.02 GPa	293 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	6.40 J/cm @Temperature 23.0 °C	12.0 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Unnotched	32.04 J/cm @Temperature 23.0 °C	60.02 ft-lb/in @Temperature 73.4 °F	ASTM D 4812

Mechanical Properties	Metric /m ²	English lb/in ²	Comments M D 1822
Dart Drop, Total Energy	149 J @Temperature 23.0 °C	110 ft-lb @Temperature 73.4 °F	ASTM D 3029

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	91.8 μm/m-°C @Temperature -40.0 - 95.0 °C	51.0 μin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
Specific Heat Capacity	1.25 J/g-°C	0.299 BTU/lb-°F	ASTM C 351
Thermal Conductivity	0.210 W/m-K	1.46 BTU-in/hr-ft ² -°F	ASTM C 177
Deflection Temperature at 1.8 MPa (264 psi)	143 °C @Thickness 3.20 mm	289 °F @Thickness 0.126 in	unannealed; ASTM D 648
UL RTI, Electrical	125 °C	257 °F	UL 746B
UL RTI, Mechanical with Impact	125 °C	257 °F	UL 746B
UL RTI, Mechanical without Impact	125 °C	257 °F	UL 746B
Flammability, UL94	V-2 @Thickness 1.47 mm	V-2 @Thickness 0.0579 in	UL 94

Optical Properties	Metric	English	Comments
Refractive Index	1.60	1.60	ASTM D 542
Haze	1.0 % @Thickness 2.54 mm	1.0 % @Thickness 0.100 in	ASTM D 1003
Transmission, Visible	85 % @Thickness 2.54 mm	85 % @Thickness 0.100 in	ASTM D 1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 2.60e+17 ohm-cm	>= 2.60e+17 ohm-cm	ASTM D 257
Dielectric Constant	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	ASTM D 150
	3.15 @Frequency 50.0 - 60.0 Hz	3.15 @Frequency 50.0 - 60.0 Hz	ASTM D 150

Electrical Properties Dielectric Strength	70.2 kV/mm Metric	513 kV/in English	Comments in air, ASTM D 149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0012	0.0012	ASTM D 150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.024	0.024	ASTM D 150
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	175 - 250 V	175 - 250 V	PLC code 3; UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	PLC code 2; UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	surface, PLC code 4; UL 746A
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	PLC code 3; UL 746A

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