

Bayer MaterialScience Makrolon® 6465 Polycarbonate, Injection Grade

Categories: [Polymer](#); [Thermoplastic](#); [Polycarbonate \(PC\)](#); [Polycarbonate, Unreinforced, Flame Retardant](#)

Material Notes: Medium viscosity, flame retardant injection molding with easy mold burning behavior.

Information provided by Bayer.

Key Words: PC

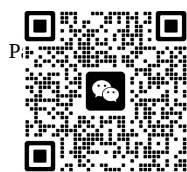
Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in³	
Water Absorption	0.35 %	0.35 %	Saturation in water
Moisture Absorption at Equilibrium	0.15 %	0.15 %	Equilibrium at 50% RH
Water Absorption at Saturation	0.35 %	0.35 %	
Melt Flow	9.5 g/10 min @Load 1.20 kg, Temperature 300 °C	9.5 g/10 min @Load 2.65 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	63.0 MPa	9140 psi	
Elongation at Break	>= 50 %	>= 50 %	Nominal
Elongation at Yield	6.0 %	6.0 %	
Tensile Modulus	2.40 GPa	348 ksi	
Charpy Impact Unnotched	NB	NB	
Tensile Creep Modulus, 1 hour	2200 MPa	319000 psi	
Tensile Creep Modulus, 1000 hours	1900 MPa	276000 psi	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	
Dielectric Constant 	3.0 @Frequency 100 Hz	3.0 @Frequency 100 Hz	
	3.0 @Frequency 1e+6 Hz	3.0 @Frequency 1e+6 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	
Dissipation Factor 	0.0010 @Frequency 100 Hz	0.0010 @Frequency 100 Hz	
	0.0090 @Frequency 1e+6 Hz	0.0090 @Frequency 1e+6 Hz	
Arc Resistance	60 - 120 sec @Thickness 6.00 mm	60 - 120 sec @Thickness 0.236 in	UL Rating PLC 6 (60-120 sec)
Comparative Tracking Index	275 V	275 V	
Hot Wire Ignition, HWI	30 - 60 sec @Thickness 1.10 mm	30 - 60 sec @Thickness 0.0433 in	UL Rating PLC 2 (30-60 sec)
High Amp Arc Ignition, HAI	60 - 120 arcs @Thickness 1.10 mm	60 - 120 arcs @Thickness 0.0433 in	UL Rating PLC 1 (60-120 arcs)
High Voltage Arc-Tracking Rate, HVTR	<= 10.0 mm/min @Thickness 6.00 mm	<= 0.394 in/min @Thickness 0.236 in	UL Rating PLC 0 (<10 mm/min.)

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 µm/m-°C @Temperature 20.0 °C	38.9 µin/in-°F @Temperature 68.0 °F	in flow direction
CTE, linear, Transverse to Flow	70.0 µm/m-°C @Temperature 20.0 °C	38.9 µin/in-°F @Temperature 68.0 °F	
Deflection Temperature at 0.46 MPa (66 psi)	136 °C	277 °F	
Deflection Temperature at 1.8 MPa (264 psi)	128 °C	262 °F	
Vicat Softening Point	144 °C	291 °F	
Glass Transition Temp, Tg	148 °C	298 °F	
UL RTI, Electrical	125 °C @Thickness 1.10 mm	257 °F @Thickness 0.0433 in	
UL RTI, Mechanical with Impact	110 °C @Thickness 1.10 mm	230 °F @Thickness 0.0433 in	
UL RTI, Mechanical without Impact	125 °C @Thickness 1.10 mm	257 °F @Thickness 0.0433 in	
Flammability, UL94 	V-0 @Thickness 1.20 mm	V-0 @Thickness 0.0472 in	
	V-0 @Thickness 1.60 mm	V-0 @Thickness 0.0630 in	



Oxygen Index	35 %	35 %
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Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.

