

Bayer MaterialScience AG Makrolon® 8035 Polycarbonate

Subcategory: Polycarbonate; Polymer; Thermoplastic

Key Words: PC

Material Notes:

High viscosity extrusion and injection molding grade with 30% short glass fibers and easy mold release, low anisotropy, for stiff moldings requiring good dimensional stability.

Information provided by Bayer.

Physical Properties	Metric	English	Comments
Density	1.44 g/cc	0.052 lb/in ³	
Water Absorption	0.28 %	0.28 %	Saturation in water
Moisture Absorption at Equilibrium	0.11 %	0.11 %	Equilibrium at 50% RH
Water Absorption at Saturation	0.28 %	0.28 %	
Melt Flow	4 g/10 min	4 g/10 min	300°C/1.2kg
Mechanical Properties			
Tensile Strength, Ultimate	70 MPa	10200 psi	
Elongation at Break	3.5 %	3.5 %	
Tensile Modulus	5.8 GPa	841 ksi	
Charpy Impact, Unnotched	3.5 J/cm ²	16.7 ft-lb/in ²	
Tensile Creep Modulus, 1 hour	5900 MPa	856000 psi	
Tensile Creep Modulus, 1000 hours	5400 MPa	783000 psi	
Electrical Properties			
Electrical Resistivity	Min 1e+015 ohm-cm	Min 1e+015 ohm-cm	
Surface Resistance	1e+014 ohm	1e+014 ohm	
Dielectric Constant	3.3	3.3	1 MHz
Dielectric Constant, Low Frequency	3.3	3.3	100 Hz
Dielectric Strength	30 kV/mm	762 kV/in	
Dissipation Factor	0.009	0.009	1 MHz
Dissipation Factor, Low Frequency	0.001	0.001	100 Hz
Comparative Tracking Index	175 V	175 V	
Thermal Properties			
CTE, linear 20°C	30 µm/m-°C	16.7 µin/in-°F	Parallel Direction
Maximum Service Temperature, Air	135 °C	275 °F	Deflection temperature at 1.8 MPa
Deflection Temperature at 0.46 MPa (66 psi)	140 °C	284 °F	
Deflection Temperature at 1.8 MPa (264 psi)	135 °C	275 °F	
Vicat Softening Point	149 °C	300 °F	

Glass Temperature	148 °C	298 °F	
Flammability, UL94	V-1	V-1	1.6 mm
Oxygen Index	32 %	32 %	

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