

Covestro Makrolon® 6255 Polycarbonate, Flame Retardant, High Productivity, Mold Release

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Unreinforced, Flame Retardant

Material Notes:

Information provided by Bayer Corporation, Plastics DivisionAs of 1 September 2015, Bayer MaterialScience was separated from Bayer AG and officially adopted its new name – Covestro.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Makrolon-6255-Polycarbonate-Flame-Retardant-High-Productivity-Mold-Release.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ASTM D792
Water Absorption	0.15 %	0.15 %	24 hour immersion; ASTM D570
Water Absorption at Saturation	0.35 %	0.35 %	Equilibrium Immersion; ASTM D570
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	20 g/10 min @Load 1.20 kg, Temperature 300 °C	20 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	75	75	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength, Ultimate	69.0 MPa	10000 psi	ASTM D638
Tensile Strength, Yield	63.0 MPa	9140 psi	ASTM D638
Elongation at Break	110 %	110 %	ASTM D638
Elongation at Yield	6.0 %	6.0 %	ASTM D638
Tensile Modulus	2.40 GPa	348 ksi	ASTM D638
Flexural Yield Strength	83.0 MPa	12000 psi	at 5% strain; ASTM D790
Flexural Modulus	2.28 GPa	331 ksi	ASTM D790
Izod Impact, Notched	6.90 J/cm @Thickness 3.17 mm	12.9 ft-lb/in @Thickness 0.125 in	ASTM D256

Thermal Properties	Metric	English	Comments
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Thermal Properties	70.0 µm/m-°C Metric	38.9 µm/in-°F English	Comments
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Specific Heat Capacity	1.20 J/g-°C	0.287 BTU/lb-°F	ASTM D2766
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	134 °C	273 °F	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	126 °C	259 °F	Unannealed; ASTM D648
Vicat Softening Point	151 °C	304 °F	Rate A; ASTM D1525
UL RTI, Electrical	125 °C	257 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical with Impact	115 °C	239 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	125 °C	257 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	V-2	V-2	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-2	V-2	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	35 %	35 %	ASTM D2863

Optical Properties	Metric	English	Comments
Transmission, Visible	0.00 %	0.00 %	Opaque only

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	ASTM D257
Dielectric Constant	2.9	2.9	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.0	3.0	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	ASTM D149

Electrical Properties	@Thickness 1.60 mm Metric	@Thickness 0.0630 in English	Comments
Dissipation Factor	0.00090	0.00090	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
	0.010	0.010	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Arc Resistance	115 sec	115 sec	Tungsten Electrodes; ASTM D495
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL Rating PLC 3 (175-250 V)
	@Thickness 3.00 mm	@Thickness 0.118 in	
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	UL Rating PLC 2 (30-60 sec)
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	30 - 60 arcs	30 - 60 arcs	UL Rating PLC 2 (30-60 arcs)
	@Thickness 1.50 mm	@Thickness 0.0591 in	
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL Rating PLC 3 (80-150 mm/min.)
	@Thickness 1.50 mm	@Thickness 0.0591 in	

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