

Covestro Makrolon® 6165 X Polycarbonate

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

Material Notes:

Main characteristics:• High toughness• Good heat resistance• Glass-like transparency, optical quality• High dimensional accuracy and stability
Grade characteristics:• Flame retardant• Low viscosity, easy release
As of 1 September 2015, Bayer Material Science 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-6165-X-Polycarbonate.php

Physical Properties	Metric	English	Comments
Bulk Density	0.640 g/cc	0.0231 lb/in ³	pellets; ISO 60
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.12 %	0.12 %	ISO 62, 50% RH
Water Absorption at Saturation	0.30 %	0.30 %	ISO 62
Linear Mold Shrinkage, Flow	0.0065 cm/cm @Thickness 2.00 mm	0.0065 in/in @Thickness 0.0787 in	60x60x2 mm; 500 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0070 cm/cm @Thickness 2.00 mm	0.0070 in/in @Thickness 0.0787 in	60x60x2 mm; 500 bar; ISO 294-4
Melt Flow	30 g/10 min @Load 1.20 kg, Temperature 300 °C	30 g/10 min @Load 2.65 lb, Temperature 572 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Puncture Resistance	4800 N @Temperature 23.0 °C	1080 lb (f) @Temperature 73.4 °F	ISO 6603-2
Tensile Strength at Break	55.0 MPa	7980 psi	50 mm/min; ISO 527-1,-2
Tensile Strength, Yield	65.0 MPa	9430 psi	50 mm/min; ISO 527-1,-2
Elongation at Break	>= 50 %	>= 50 %	Nominal, 50 mm/min; ISO 527-1,-2
	120 %	120 %	50 mm/min; b.o. ISO 527-1,-2
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527-1,-2
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527-1,-2
	12.0 kJ/m ²	5.71 ft-lb/in ²	

Impact, Notched (ISO) Mechanical Properties	Metric @Thickness 3.20 mm, Temperature 23.0 °C	English @Thickness 0.126 in, Temperature 73.4 °F	complete break; b.o. ISO 180-A Comments
	12.0 kJ/m ²	5.71 ft-lb/in ²	
	@Thickness 3.20 mm, Temperature -30.0 °C	@Thickness 0.126 in, Temperature -22.0 °F	complete break; b.o. ISO 180-A
Charpy Impact Unnotched	NB	NB	ISO 179-1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	ISO 179-1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	complete break; ISO 7391/b.o. ISO 179-1eA
	@Thickness 3.00 mm, Temperature -30.0 °C	@Thickness 0.118 in, Temperature -22.0 °F	
	1.50 J/cm ²	7.14 ft-lb/in ²	complete break; ISO 7391/b.o. ISO 179-1eA
	@Thickness 3.00 mm, Temperature 23.0 °C	@Thickness 0.118 in, Temperature 73.4 °F	
Puncture Energy	45.0 J	33.2 ft-lb	ISO 6603-2
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	65.0 µm/m-°C	36.1 µin/in-°F	ISO 11359-1,-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	65.0 µm/m-°C	36.1 µin/in-°F	ISO 11359-1,-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	cross-flow; ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	136 °C	277 °F	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	124 °C	255 °F	ISO 75-1,-2
Vicat Softening Point	143 °C	289 °F	50°C/h; ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
UL RTI, Electrical	125 °C	257 °F	UL 746B
UL RTI, Mechanical with Impact	115 °C	239 °F	UL 746B
UL RTI, Mechanical without Impact	125 °C	257 °F	UL 746B
	V-0	V-0	

Thermal Properties	Metric	English	Comments
	@ Thickness 1.20 mm	@ Thickness 0.0472 in	
Flash Point	460 °C	860 °F	ASTM D 1929
	530 °C	986 °F	self ignition; ASTM D 1929
Oxygen Index	35 %	35 %	Method A; ISO 4589-2
Glow Wire Test	960 °C	1760 °F	GWFI; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	960 °C	1760 °F	GWFI; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	IEC 60093
Dielectric Constant	3.0	3.0	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.1	3.1	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	34.0 kV/mm	864 kV/in	IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Comparative Tracking Index	125 V	125 V	CTI M; Solution B; IEC 60112
	225 V	225 V	Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	280 °C	536 °F	Injection molding; ISO 294
Mold Temperature	80.0 °C	176 °F	Injection molding; ISO 294
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China