

Covestro Makroblend® DP UT6003 Polycarbonate + PBT, Impact Grade

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate/Polybutylene Terephthalate (PBT) Blend, Unreinforced , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

Developmental product(PC+PBT)-blend impact modified UV-stabilized injection molding grade Makroblend DP UT6003* offers an exceptional low-temperature impact strength, good flowability and excellent chemical resistance. Preprocessing Max. Water content

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Makroblend-DP-UT6003-Polycarbonate-PBT-Impact-Grade.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
	1.02 g/cc @Temperature 260 °C	0.0368 lb/in ³ @Temperature 500 °F	Melt
Water Absorption	0.50 %	0.50 %	Similar to ISO 62
Moisture Absorption at Equilibrium	0.20 %	0.20 %	Similar to ISO 62
Melt Flow	18 g/10 min	18 g/10 min	ISO 1133
	@Load 5.00 kg, Temperature 260 °C	@Load 11.0 lb, Temperature 500 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	60.0 MPa	8700 psi	ISO 527-1/-2
Elongation at Break	50 %	50 %	Nominal; ISO 527-1/-2
Elongation at Yield	5.0 %	5.0 %	ISO 527-1/-2
Tensile Modulus	2.20 GPa	319 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	6.00 J/cm ²	28.6 ft-lb/in ²	ISO 179/1eA
	4.00 J/cm ² @Temperature -30.0 °C	19.0 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
Impact	3800	3800	Puncture - maximum force (N); ISO 6603-2
	5000	5000	Puncture - maximum force (N); ISO 6603-2

Mechanical Properties	@Temperature -30.0 °C Metric	@Temperature -22.0 °F English	Comments
Puncture Energy	47.0 J	34.7 ft-lb	ISO 6603-2
	58.0 J	42.8 ft-lb	ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
Specific Heat Capacity	1.82 J/g-°C	0.435 BTU/lb-°F	Melt
Thermal Conductivity	0.179 W/m-K	1.24 BTU-in/hr-ft²-°F	Melt
Deflection Temperature at 0.46 MPa (66 psi)	110 °C	230 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	85.0 °C	185 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	21 %	21 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 60093
Dielectric Constant	3.0	3.0	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.2	3.2	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.00070	0.00070	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0045	0.0045	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	250 - 270 °C	482 - 518 °F	
	260 °C	500 °F	Injection Molding; ISO 294
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	
	70.0 °C	158 °F	Injection Molding; ISO 10724
Ejection Temperature	170 °C	338 °F	
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294

Descriptive Properties	Value	Comments
Availability	Asia Pacific	
	Europe	
	India	
	Near East/Africa	
	North America	
	South and Central America	
Eff. thermal diffusivity (m ² /s)	9.64E-08	
Feature	Release agent	
Form	Pellets	
Process	Injection Molding	

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