

Covestro Makroblend® DP UT5005 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 easy release injection molding grade Makroblend DP UT5005* provides an outstanding balance of low-temperature impact strength and flowability beside excellent chemical resistance. Preprocessing Max. Water content

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Makroblend-DP-UT5005-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	0.0368 lb/in ³	Melt
	@Temperature 260 °C	@Temperature 500 °F	
Melt Flow	29 g/10 min	29 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	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	5.50 J/cm ²	26.2 ft-lb/in ²	ISO 179/1eA
	4.00 J/cm ²	19.0 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Impact	3700	3700	Puncture - maximum force (N); ISO 6603-2
	4900	4900	Puncture - maximum force (N); ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Puncture Energy	46.0 J	33.9 ft-lb	ISO 6603-2

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 6603-2

Thermal Properties	Metric	English	Comments
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 @Thickness 1.60 mm	HB @Thickness 0.0630 in	IEC 60695-11-10
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 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	IEC 60250
	3.2 @Frequency 100 Hz	3.2 @Frequency 100 Hz	IEC 60250
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.00070 @Frequency 100 Hz	0.00070 @Frequency 100 Hz	IEC 60250
	0.0045 @Frequency 1.00e+6 Hz	0.0045 @Frequency 1.00e+6 Hz	IEC 60250
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 Processing Properties	60.0 - 80.0 °C Metric	140 - 176 °F English	Comments
	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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