

Makroblend® UT6007

Polycarbonate + PBT

Covestro - Polycarbonates

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Technical Data

Product Description

(PC+PBT)-blend, impact modified, easy release, UV-stabilized, injection molding grade. Makroblend DP UT6007* offers an exceptional low-temperature impact strength, good flowability and excellent chemical resistance.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet (Chinese (Traditional)) • Technical Datasheet (Chinese) • Technical Datasheet (English) • Technical Datasheet (German) • Technical Datasheet (Japanese)
Search for UL Yellow Card	• Covestro - Polycarbonates • Makroblend®
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Additive	• Impact Modifier • UV Stabilizer
Features	• Chemical Resistant • Good Flow • Impact Modified • Low Temperature Impact Resistance
RoHS Compliance	• RoHS Compliant
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density (73°F (23°C))	1.20 g/cm ³	1.20 g/cm ³	ISO 1183
Apparent Density	0.65 g/cm ³	0.65 g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	1.10 in ³ /10min	18.0 cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 2577
Across Flow ³	0.70 to 0.90 %	0.70 to 0.90 %	
Across Flow : 194°F (90°C), 1 hr	0.10 to 0.20 %	0.10 to 0.20 %	
Flow ³	0.70 to 0.90 %	0.70 to 0.90 %	
Flow : 194°F (90°C), 1 hr	0.10 to 0.20 %	0.10 to 0.20 %	
Water Absorption			ISO 62
Saturation, 73°F (23°C)	0.50 %	0.50 %	
Equilibrium, 73°F (23°C), 50% RH	0.20 %	0.20 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus (73°F (23°C))	319000 psi	2200 MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield, 73°F (23°C)	8700 psi	60.0 MPa	
Break, 73°F (23°C)	7250 psi	50.0 MPa	
Tensile Strain (Yield, 73°F (23°C))	5.0 %	5.0 %	ISO 527-2/50
Nominal Tensile Strain at Break			ISO 527-2/50
73°F (23°C)	> 50 %	> 50 %	
Flexural Modulus ⁴ (73°F (23°C))	312000 psi	2150 MPa	ISO 178
Flexural Stress ⁴			ISO 178
3.5% Strain, 73°F (23°C)	10200 psi	70.0 MPa	
73°F (23°C)	11600 psi	80.0 MPa	
Flexural Strain at Flexural Strength ⁵			ISO 178
73°F (23°C)	6.0 %	6.0 %	

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	19 ft·lb/in ²	40 kJ/m ²	
73°F (23°C)	29 ft·lb/in ²	60 kJ/m ²	



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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	No Break	No Break	
73°F (23°C)	No Break	No Break	
Notched Izod Impact Strength			ISO 180/A
-40°F (-40°C)	9.5 ft·lb/in ²	20 kJ/m ²	
-22°F (-30°C)	17 ft·lb/in ²	35 kJ/m ²	
-4°F (-20°C)	21 ft·lb/in ²	45 kJ/m ²	
73°F (23°C)	24 ft·lb/in ²	50 kJ/m ²	
Unnotched Izod Impact Strength			ISO 180
-22°F (-30°C)	No Break	No Break	
73°F (23°C)	No Break	No Break	
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-22°F (-30°C)	42.8 ft·lb	58.0 J	
73°F (23°C)	34.7 ft·lb	47.0 J	
Multi-Axial Instrumented Impact Peak Force			ISO 6603-2
-22°F (-30°C)	1120 lbf	5000 N	
73°F (23°C)	854 lbf	3800 N	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness	15700 psi	108 MPa	ISO 2039-1
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	230 °F	110 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	185 °F	85.0 °C	ISO 75-2/A
Vicat Softening Temperature	259 °F	126 °C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 73 to 131°F (23 to 55°C)	5.0E-5 in/in/°F	9.0E-5 cm/cm/°C	
Transverse : 73 to 131°F (23 to 55°C)	5.0E-5 in/in/°F	9.0E-5 cm/cm/°C	
Thermal Conductivity ⁶ (73°F (23°C))	1.4 Btu·in/hr/ft ² /°F	0.20 W/m/K	ISO 8302
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	> 1.0E+17 ohms	> 1.0E+17 ohms	IEC 60093
Volume Resistivity (73°F (23°C))	> 1.0E+17 ohms·cm	> 1.0E+17 ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
73°F (23°C), 0.0394 in (1.00 mm)	760 V/mil	30 kV/mm	
Relative Permittivity			IEC 60250
73°F (23°C), 100 Hz	3.20	3.20	
73°F (23°C), 1 MHz	3.00	3.00	
Dissipation Factor			IEC 60250
73°F (23°C), 100 Hz	7.0E-4	7.0E-4	
73°F (23°C), 1 MHz	4.5E-3	4.5E-3	
Comparative Tracking Index			IEC 60112
Solution A	600 V	600 V	
Solution B	125 V	125 V	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating (0.06 in (1.6 mm), Bayer Test)	HB	HB	UL 94
Glow Wire Flammability Index			IEC 60695-2-12
0.08 in (2.0 mm)	1380 °F	750 °C	
Oxygen Index ⁷	21 %	21 %	ISO 4589-2



Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² Typical properties: these are not to be construed as specifications.

³ 600 bar

⁴ 0.079 in/min (2.0 mm/min)

⁵ 2 mm/min

⁶ Cross-flow

⁷ Procedure A



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Where to Buy

Supplier

Covestro - Polycarbonates

Leverkusen, Germany

Telephone: +49-214-6009-2000

Web: <http://www.plastics.covestro.com/>

Distributor

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