

Makroblend® UT1018

Polycarbonate + PET

Covestro - Polycarbonates

PROSPECTOR®

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Technical Data

Product Description

(PET+PC) blend, unreinforced; impact modified, injection molding grade. Good dimensional stability; excellent low-temperature impact and chemical resistance. UL746C f2 rated.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet (Chinese (Traditional)) • Technical Datasheet (Chinese) • Technical Datasheet (English) • Technical Datasheet (German) • Technical Datasheet (Japanese)
UL Yellow Card ²	• E41613-100711270
Search for UL Yellow Card	• Covestro - Polycarbonates • Makroblend®
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Additive	• Impact Modifier
Features	• Chemical Resistant • Good Dimensional Stability • 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))	1.22 g/cm ³	1.22 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (270°C/5.0 kg)	0.793 in ³ /10min	13.0 cm ³ /10min	ISO 1133
Molding Shrinkage ⁴			ISO 2577
Across Flow	0.70 to 0.90 %	0.70 to 0.90 %	
Flow	0.70 to 0.90 %	0.70 to 0.90 %	
Water Absorption			ISO 62
Saturation, 73°F (23°C)	0.70 %	0.70 %	
Equilibrium, 73°F (23°C), 50% RH	0.20 %	0.20 %	
Outdoor Suitability	f2	f2	UL 746C

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus (73°F (23°C))	290000 psi	2000 MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield, 73°F (23°C)	7110 psi	49.0 MPa	
Break, 73°F (23°C)	6670 psi	46.0 MPa	
Tensile Strain (Yield, 73°F (23°C))	4.5 %	4.5 %	ISO 527-2/50
Nominal Tensile Strain at Break			ISO 527-2/50
73°F (23°C)	100 %	100 %	
Flexural Modulus ⁵ (73°F (23°C))	276000 psi	1900 MPa	ISO 178
Flexural Stress ⁵			ISO 178
3.5% Strain, 73°F (23°C)	8700 psi	60.0 MPa	
73°F (23°C)	10200 psi	70.0 MPa	

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	17 ft·lb/in ²	35 kJ/m ²	
73°F (23°C)	31 ft·lb/in ²	65 kJ/m ²	
Notched Izod Impact Strength			ISO 180/A
-4°F (-20°C)	24 ft·lb/in ²	50 kJ/m ²	
73°F (23°C)	29 ft·lb/in ²	60 kJ/m ²	



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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	226 °F	108 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	172 °F	78.0 °C	ISO 75-2/A
Vicat Softening Temperature	270 °F	132 °C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 73 to 131°F (23 to 55°C)	4.4E-5 in/in/°F	8.0E-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+16 ohms	1.0E+16 ohms	IEC 60093
Volume Resistivity (73°F (23°C))	1.0E+16 ohms·cm	1.0E+16 ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
73°F (23°C), 0.0394 in (1.00 mm)	860 V/mil	34 kV/mm	
Relative Permittivity			IEC 60250
73°F (23°C), 100 Hz	3.20	3.20	
73°F (23°C), 1 MHz	3.10	3.10	
Dissipation Factor			IEC 60250
73°F (23°C), 100 Hz	2.0E-3	2.0E-3	
73°F (23°C), 1 MHz	0.015	0.015	
Comparative Tracking Index (Solution A)	600 V	600 V	IEC 60112
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	

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 A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ 600 bar

⁵ 0.079 in/min (2.0 mm/min)

⁶ Cross-flow



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Where to Buy

Supplier

Covestro - Polycarbonates

Leverkusen, Germany

Telephone: +49-214-6009-2000

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

Distributor

ALBIS Plastic

ALBIS Plastic is a global distribution and compounding company. Contact ALBIS Plastic for availability of individual products per country.

Telephone: +49-40-78105-0

Web: <http://www.albis.com/>

Availability: Algeria, Austria, Belgium, China, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hong Kong, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Spain, Sweden, Switzerland, Tunisia, Turkey, United Kingdom

Amco Polymers

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Web: <http://www.mholland.com/>

Availability: Canada

M. Holland Company

Telephone: 855-497-1403

Web: <http://www.mholland.com/>

Availability: Mexico, United States

PolyOne Distribution

PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.

Telephone: 800-894-4266

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Availability: Global

