

Makroblend® S7916

Polycarbonate + PBT

Covestro - Polycarbonates

PROSPECTOR®

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Technical Data

Product Description

(PBT+PC)-blend, impact modified, Injection molding grade, excellent chemical resistance, high toughness at low temperatures, ideal for painted applications, unreinforced

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
Features	• Chemical Resistant • Impact Modified • Low Temperature Toughness • Paintable
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	0.70 g/cm ³	0.70 g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	0.793 in ³ /10min	13.0 cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 2577
Across Flow ³	1.2 to 1.6 %	1.2 to 1.6 %	
Across Flow : 194°F (90°C), 1 hr	0.10 to 0.20 %	0.10 to 0.20 %	
Flow ³	1.2 to 1.6 %	1.2 to 1.6 %	
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))	261000 psi	1800 MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield, 73°F (23°C)	5800 psi	40.0 MPa	
Break, 73°F (23°C)	5080 psi	35.0 MPa	
Tensile Strain (Yield, 73°F (23°C))	4.0 %	4.0 %	ISO 527-2/50
Nominal Tensile Strain at Break			ISO 527-2/50
73°F (23°C)	> 50 %	> 50 %	
Tensile Creep Modulus			ISO 899-1
1 hr	218000 psi	1500 MPa	
1000 hr	174000 psi	1200 MPa	
Flexural Modulus ⁴ (73°F (23°C))	247000 psi	1700 MPa	ISO 178
Flexural Stress ⁴			ISO 178
3.5% Strain, 73°F (23°C)	7830 psi	54.0 MPa	
73°F (23°C)	9140 psi	63.0 MPa	
Flexural Strain at Flexural Strength ⁵			ISO 178
73°F (23°C)	5.0 %	5.0 %	



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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	33 ft·lb/in ²	69 kJ/m ²	ISO 179/1eA
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
-22°F (-30°C)	22 ft·lb/in ²	47 kJ/m ²	
73°F (23°C)	31 ft·lb/in ²	66 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	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness	12300 psi	85.0 MPa	ISO 2039-1
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	196 °F	91.0 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	140 °F	60.0 °C	ISO 75-2/A
Vicat Softening Temperature	246 °F	119 °C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 73 to 131°F (23 to 55°C)	6.1E-5 in/in/°F	1.1E-4 cm/cm/°C	
Transverse : 73 to 131°F (23 to 55°C)	6.1E-5 in/in/°F	1.1E-4 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
Relative Permittivity			IEC 60250
73°F (23°C), 100 Hz	3.10	3.10	
73°F (23°C), 1 MHz	2.90	2.90	
Dissipation Factor			IEC 60250
73°F (23°C), 100 Hz	2.3E-3	2.3E-3	
73°F (23°C), 1 MHz	0.014	0.014	
Comparative Tracking Index			IEC 60112
Solution A	600 V	600 V	
Solution B	400 V	400 V	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.031 in (0.8 mm)	HB	HB	
0.06 in (1.6 mm)	HB	HB	
Glow Wire Flammability Index			IEC 60695-2-12
0.08 in (2.0 mm)	1200 °F	650 °C	
Oxygen Index ⁷	20 %	20 %	ISO 4589-2
Burning Rate - US-FMVSS (> 39.4 mil (> 1.00 mm))	passed	passed	ISO 3795
Additional Information	Nominal Value (English)	Nominal Value (SI)	Test Method
Electrolytical Corrosion (73°F (23°C))	A1	A1	IEC 60426
Gottfert Melt Viscosity ⁸ (500°F (260°C))	640 Pa·s	640 Pa·s	Internal Method
ISO Shortname	ISO 7792-1- PBT/PC,MHPR,- 020	ISO 7792-1- PBT/PC,MHPR,- 020	



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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

⁸ 165/s



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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.

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