

XENOY™ 6620 resin

Polycarbonate + PBT
SABIC Innovative Plastics

PROSPECTOR®

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Technical Data

Product Description

PBT+PC, Unreinforced, impact modified thermoplastic alloy. Outstanding impact at low temperature

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
UL Yellow Card ²	• E121562-221088
Search for UL Yellow Card	• SABIC Innovative Plastics • XENOY™
Availability	• North America
Additive	• Impact Modifier
Features	• Impact Modified • Low Temperature Impact Resistance
Processing Method	• Injection Molding
Multi-Point Data	• Elastic Modulus vs Temperature (ASTM D4065) • Flexural DMA (ASTM D4065) • Instrumented Impact (Energy) (ASTM D3763) • Instrumented Impact (Load) (ASTM D3763) • Tensile Creep (ASTM D2990) • Tensile Fatigue • Tensile Stress vs. Strain (ASTM D638)

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity	1.20	1.20 g/cm ³	ASTM D792
Specific Volume	23.2 in ³ /lb	0.838 cm ³ /g	ASTM D792
Molding Shrinkage			Internal Method
Flow : 0.126 in (3.20 mm)	0.016 to 0.018 in/in	1.6 to 1.8 %	
Across Flow : 0.126 in (3.20 mm)	0.016 to 0.018 in/in	1.6 to 1.8 %	
Water Absorption (24 hr)	0.080 %	0.080 %	ASTM D570
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ⁴ (Yield)	6300 psi	43.4 MPa	ASTM D638
Tensile Elongation ⁴ (Break)	180 %	180 %	ASTM D638
Flexural Modulus ⁵ (1.97 in (50.0 mm) Span)	250000 psi	1720 MPa	ASTM D790
Flexural Strength ⁵			ASTM D790
Yield, 1.97 in (50.0 mm) Span	9300 psi	64.1 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
-22°F (-30°C)	12 ft·lb/in	670 J/m	
73°F (23°C)	17 ft·lb/in	900 J/m	
Unnotched Izod Impact (73°F (23°C))	30 ft·lb/in	1600 J/m	ASTM D4812
Gardner Impact			ASTM D3029
73°F (23°C)	480 in·lb	54.2 J	
73°F (23°C) ⁶	480 in·lb	54.2 J	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-Scale)	108	108	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, 0.126 in (3.20 mm)	199 °F	93.0 °C	
66 psi (0.45 MPa), Unannealed, 0.252 in (6.40 mm)	210 °F	98.9 °C	
264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	127 °F	53.0 °C	
264 psi (1.8 MPa), Unannealed, 0.252 in (6.40 mm)	140 °F	60.0 °C	



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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
CLTE			ASTM E831
Flow : -40 to 104°F (-40 to 40°C)	5.2E-5 in/in/°F	9.4E-5 cm/cm/°C	
Flow : 140 to 280°F (60 to 138°C)	5.7E-5 in/in/°F	1.0E-4 cm/cm/°C	
Transverse : -40 to 104°F (-40 to 40°C)	5.4E-5 in/in/°F	9.8E-5 cm/cm/°C	
RTI Elec	167 °F	75.0 °C	UL 746
RTI Imp	167 °F	75.0 °C	UL 746
RTI Str	167 °F	75.0 °C	UL 746
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity	5.5E+16 ohms·cm	5.5E+16 ohms·cm	ASTM D257
Dielectric Strength			ASTM D149
0.0630 in (1.60 mm), in Oil	710 V/mil	28 kV/mm	
0.126 in (3.20 mm), in Air	490 V/mil	19 kV/mm	
0.126 in (3.20 mm), in Oil	490 V/mil	19 kV/mm	
Dielectric Constant			ASTM D150
100 Hz	3.10	3.10	
100 kHz	3.00	3.00	
1 MHz	3.00	3.00	
Dissipation Factor			ASTM D150
100 Hz	2.0E-3	2.0E-3	
100 kHz	0.020	0.020	
1 MHz	0.020	0.020	
Arc Resistance ⁷	PLC 5	PLC 5	ASTM D495
Comparative Tracking Index (CTI)	PLC 0	PLC 0	UL 746
High Amp Arc Ignition (HAI)	PLC 0	PLC 0	UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 1	PLC 1	UL 746
Hot-wire Ignition (HWI)	PLC 3	PLC 3	UL 746
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating (0.0580 in (1.47 mm))	HB	HB	UL 94
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	220 to 240 °F	104 to 116 °C	
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr	
Drying Time, Maximum	6.0 hr	6.0 hr	
Suggested Max Moisture	0.020 %	0.020 %	
Suggested Shot Size	50 to 80 %	50 to 80 %	
Rear Temperature	440 to 470 °F	227 to 243 °C	
Middle Temperature	450 to 480 °F	232 to 249 °C	
Front Temperature	460 to 500 °F	238 to 260 °C	
Nozzle Temperature	460 to 500 °F	238 to 260 °C	
Processing (Melt) Temp	460 to 500 °F	238 to 260 °C	
Mold Temperature	120 to 180 °F	48.9 to 82.2 °C	
Back Pressure	25.0 to 50.0 psi	0.172 to 0.345 MPa	
Vent Depth	5.0E-4 to 8.0E-4 in	0.013 to 0.020 mm	



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 Type I, 2.0 in/min (50 mm/min)

⁵ 0.051 in/min (1.3 mm/min)

⁶ Modified

⁷ Tungsten Electrode



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Where to Buy

Supplier

SABIC Innovative Plastics

Pittsfield, MA USA

Telephone: 800-845-0600

Web: <http://www.sabic-ip.com/>

Distributor

Nexeo Solutions

Telephone: 888-594-6009

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

Availability: North America

