

CYCOLOY™ FR Resin C6600 - Americas

Polycarbonate + ABS
SABIC

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

CYCOLOY C6600 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is an injection moldable non chlorinated/brominated flame retardant grade with balanced flow, impact and hydrolytic stability. It also offers good chemical resistance and colorability in opaque colors. It has a UL94 V0@1.5mm and 5VB@2.0mm flame rating.

General

Material Status	• Commercial: Active
UL Yellow Card ¹	• E121562-221038
Search for UL Yellow Card	• SABIC
Availability	• Latin America • North America
Uses	<ul style="list-style-type: none"> • Aerospace Applications • Appliances • Automotive Exterior Parts • Automotive Interior Parts • Automotive Lighting • Automotive Under the Hood • Construction Applications • Decorative Parts • Electric Vehicle (EV) Applications • Electrical Parts • Electrical/Electronic Applications • Electronic Displays • Energy Storage • Fluid Handling • Industrial Applications • Lawn and Garden Equipment • Lighting Applications • Material Handling • Medical Devices • Medical/Healthcare Applications • Military/Defense Applications • Non-specific Food Applications • Nuclear Power Applications • Outdoor Applications • Personal Care • Pharmaceuticals • Recreational Vehicle Applications • Surgical Instruments • Water Management
Multi-Point Data	<ul style="list-style-type: none"> • Coefficient of Thermal Expansion vs. Temperature (ASTM E831) • Flexural DMA (ASTM D5023) • Shear DMA (ASTM D4065) • Specific Heat vs. Temperature (ASTM E1269) • Specific Volume vs. Temperature (PVT) • Tensile Fatigue • Tensile Stress vs. Strain (ASTM D638) • Thermal Conductivity vs. Temperature (ASTM E1530) • Viscosity vs. Shear Rate (ASTM D3835)
Also Available In	• Asia Pacific • Europe

Physical

	Nominal Value Unit	Test Method
Density / Specific Gravity	1.19 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	22 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	48 cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.60 %	Internal Method
Water Absorption (24 hr, 23°C)	0.11 %	ASTM D570

Mechanical

	Nominal Value Unit	Test Method
Tensile Modulus ³	3000 MPa	ASTM D638
Tensile Strength ⁴		ASTM D638
Yield	63.0 MPa	
Break	49.0 MPa	
Tensile Elongation ⁴		ASTM D638
Yield	4.0 %	
Break	80 %	
Flexural Modulus ⁵ (50.0 mm Span)	2620 MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	94.0 MPa	ASTM D790



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Impact	Nominal Value Unit	Test Method
Notched Izod Impact (23°C)	550 J/m	ASTM D256
Instrumented Dart Impact		ASTM D3763
-30°C, Total Energy	51.0 J	
23°C, Total Energy	51.0 J	
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		ASTM D648
0.45 MPa, Unannealed, 6.40 mm	98.0 °C	
1.8 MPa, Unannealed, 3.20 mm	83.0 °C	
1.8 MPa, Unannealed, 6.40 mm	90.0 °C	
Vicat Softening Temperature	99.0 °C	ASTM D1525 ⁶
RTI Elec	80.0 °C	UL 746B
RTI Imp	70.0 °C	UL 746B
RTI Str	80.0 °C	UL 746B
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+15 ohms·cm	IEC 60093
Electric Strength (3.20 mm, in Oil)	17 kV/mm	IEC 60243-1
Relative Permittivity		IEC 60250
50 Hz	2.70	
60 Hz	2.70	
1 MHz	2.70	
Dissipation Factor		IEC 60250
50 Hz	4.0E-3	
60 Hz	4.0E-3	
1 MHz	6.0E-3	
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.75 mm	V-2	
1.5 mm	V-0	
2.0 mm	5VB	
Glow Wire Flammability Index (1.0 mm)	960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.0 mm)	775 °C	IEC 60695-2-13
Injection	Nominal Value Unit	
Drying Temperature	80 to 90 °C	
Drying Time	3.0 to 4.0 hr	
Suggested Max Moisture	0.040 %	
Suggested Shot Size	30 to 80 %	
Rear Temperature	220 to 255 °C	
Middle Temperature	220 to 275 °C	
Front Temperature	245 to 275 °C	
Nozzle Temperature	245 to 275 °C	
Processing (Melt) Temp	245 to 275 °C	
Mold Temperature	60 to 80 °C	
Back Pressure	0.300 to 0.700 MPa	



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Injection	Nominal Value Unit
Screw Speed	40 to 70 rpm
Vent Depth	0.038 to 0.076 mm

Injection Notes

- Drying Time (Cumulative): 8 hr

Notes

¹ 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.

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

³ 50 mm/min

⁴ Type I, 50 mm/min

⁵ 1.3 mm/min

⁶ Rate A (50°C/h), Loading 2 (50 N)

