

CYCOLOY™ FR Resin CY6110 - Europe

Polycarbonate + ABS

SABIC

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

CYCOLOY CY6110 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is an impact modified, high flow injection moldable, non chlorinated/brominated flame retardant grade. It features good hydrostability and has a UL94 V0@1.5mm and 5VB@2.5mm flame rating.

General

Material Status	• Commercial: Active
UL Yellow Card ¹	• E45329-575784
Search for UL Yellow Card	• SABIC
Availability	• Europe
Uses	• Appliances • Electrical/Electronic Applications • Electronic Displays • Lighting Applications
RoHS Compliance	• RoHS Compliant
Processing Method	• Injection Molding
Also Available In	• Asia Pacific

Physical	Nominal Value Unit	Test Method
Density	1.18 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	23 cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.60 %	Internal Method
Water Absorption		ISO 62
Saturation, 23°C	0.60 %	
Equilibrium, 23°C, 50% RH	0.20 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus		
-- ³	2760 MPa	ASTM D638
--	2750 MPa	ISO 527-2/1
Tensile Strength		
Yield ⁴	63.0 MPa	ASTM D638
Yield	63.0 MPa	ISO 527-2/50
Break ⁴	47.0 MPa	ASTM D638
Break	46.0 MPa	ISO 527-2/50
Tensile Elongation		
Yield ⁴	4.1 %	ASTM D638
Yield	4.0 %	ISO 527-2/50
Break ⁴	65 %	ASTM D638
Break	35 %	ISO 527-2/50
Flexural Modulus ⁵	2440 MPa	ISO 178
Flexural Stress ^{5, 6}	94.0 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength ⁷		ISO 179/1eA
-30°C	10 kJ/m ²	
23°C	33 kJ/m ²	
Charpy Unnotched Impact Strength ⁷		ISO 179/1eU
-30°C	No Break	
23°C	No Break	
Notched Izod Impact		
-30°C	100 J/m	ASTM D256
23°C	480 J/m	ASTM D256
-30°C ⁸	12 kJ/m ²	ISO 180/1A
23°C ⁸	25 kJ/m ²	ISO 180/1A



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Impact	Nominal Value Unit	Test Method
Unnotched Izod Impact Strength ⁸		ISO 180/1U
-30°C	No Break	
23°C	No Break	
Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature ⁸		
0.45 MPa, Unannealed, 4.00 mm, 64.0 mm Span	98.0 °C	ISO 75-2/Bf
1.8 MPa, Unannealed, 4.00 mm, 64.0 mm Span	88.0 °C	ISO 75-2/Af
Vicat Softening Temperature		
--	106 °C	ISO 306/B120
--	104 °C	ISO 306/B50
Ball Pressure Test (73 to 77°C)	Pass	IEC 60695-10-2
CLTE		ISO 11359-2
Flow : -40 to 40°C	8.0 cm/cm/°C	
Transverse : -40 to 40°C	8.0 cm/cm/°C	
RTI Elec	85.0 °C	UL 746B
RTI Imp	85.0 °C	UL 746B
RTI Str	85.0 °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		IEC 60243-1
0.800 mm, in Oil	46 kV/mm	
1.60 mm, in Oil	31 kV/mm	
Relative Permittivity		IEC 60250
50 Hz	2.90	
60 Hz	2.90	
1 MHz	2.90	
Dissipation Factor		IEC 60250
50 Hz	2.0E-3	
60 Hz	2.0E-3	
1 MHz	7.0E-3	
Comparative Tracking Index (CTI)	PLC 0	UL 746
Hot-wire Ignition (HWI)	PLC 3	UL 746
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
1.5 mm	V-0	
1.5 mm, Testing by SABIC	V-0	
2.5 mm	5VB	
Glow Wire Flammability Index		IEC 60695-2-12
0.75 mm ⁹	960 °C	
1.0 mm	960 °C	
Glow Wire Ignition Temperature		IEC 60695-2-13
0.75 mm ⁹	775 °C	
1.0 mm	825 °C	
1.5 mm ⁹	775 °C	
2.0 mm	825 °C	
3.0 mm ⁹	775 °C	
3.0 mm	825 °C	
Oxygen Index	31 %	ISO 4589-2
Injection	Nominal Value Unit	
Drying Temperature	80 to 90 °C	



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Injection	Nominal Value Unit
Drying Time	2.0 to 4.0 hr
Suggested Max Moisture	0.020 %
Hopper Temperature	60 to 80 °C
Rear Temperature	230 to 280 °C
Middle Temperature	240 to 290 °C
Front Temperature	250 to 300 °C
Nozzle Temperature	250 to 300 °C
Processing (Melt) Temp	250 to 300 °C
Mold Temperature	60 to 85 °C
Vent Depth	0.030 to 0.075 mm

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 5.0 mm/min

⁴ Type I, 50 mm/min

⁵ 2.0 mm/min

⁶ at Yield

⁷ 80*10*4 sp=62mm

⁸ 80*10*4 mm

⁹ by VDE



Where to Buy**Supplier****SABIC**

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

Distributor**3Polymer (Guangzhou) Chemical Technology Co., Ltd.**

Telephone: +86-20-3466-7988

Web: <http://3polymer.com>

Availability: China

AECTRA

Telephone: +33-4-72-54-36-42

Web: <https://www.aectra.fr/>

Availability: Bulgaria, Romania

AGI-Augusto Guimarães & Irmão

Telephone: +351-22753-7400

Web: <https://www.agi.pt/en/>

Availability: Portugal

GRÄSSLIN

Telephone: +49-7721-4040-261

Web: <https://www.graesslin-kunststoffe.de>

Availability: Germany

Guzmán Polymers

Telephone: +34-963-992-400

Web: <https://www.guzmanglobal.com/en/productos/plastics/>

Availability: Italy, Spain, Turkey

Lenorplastics

Telephone: +41-61-706-11-11

Web: <https://www.lenorplastics.ch>

Availability: Switzerland

Plastoplan

Telephone: +43-1-25040-0

Web: <https://www.plastoplan.com/>

Availability: Austria, Czech Republic, Hungary, Slovakia

POLYMIX

POLYMIX is a Pan European distribution company. Contact POLYMIX for availability of individual products by country.

Telephone: +33-3-8920-1380

Web: <http://www.polymix.eu/>

Availability: France

RESINEX Group

RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.

Telephone: +32-14-672511

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

Availability: Europe

Ultrapolymers

Ultrapolymers is a Pan European distribution company. Contact Ultrapolymers for availability of individual products by country.

Telephone: +32-11-57-95-57

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

Availability: Belgium, Netherlands, South Africa

