

CYCOLAC™ Resin EX58F - Europe

Acrylonitrile Butadiene Styrene

SABIC

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

High impact ABS for sheet extrusion and blow molding applications. FDA food contact compliant.

General

Material Status	• Commercial: Active
UL Yellow Card ¹	• E45329-103353495 • E45329-103353496
Search for UL Yellow Card	• SABIC • CYCOLAC™ Resin
Availability	• Europe
Uses	• Appliances • Automotive Interior Parts • Construction Applications • Non-specific Food Applications • Surgical Instruments
Also Available In	• Asia Pacific • Latin America • North America

Physical	Nominal Value Unit	Test Method
Density / Specific Gravity	1.03 g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	4.0 g/10 min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.60 to 0.80 %	Internal Method

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus		
-- ³	2080 MPa	ASTM D638
--	1970 MPa	ISO 527-1/1
Tensile Strength		
Yield ⁴	39.0 MPa	ASTM D638
Yield	41.0 MPa	ISO 527-2/50
Break ⁴	30.0 MPa	ASTM D638
Break	30.0 MPa	ISO 527-2/50
Tensile Elongation		
Yield ⁴	3.1 %	ASTM D638
Yield	2.6 %	ISO 527-2/50
Break ⁴	32 %	ASTM D638
Break	21 %	ISO 527-2/50
Flexural Modulus		
50.0 mm Span ⁵	2160 MPa	ASTM D790
-- ⁶	2000 MPa	ISO 178
Flexural Stress		
-- ^{6,7}	60.0 MPa	ISO 178
Yield, 50.0 mm Span ⁵	66.0 MPa	ASTM D790

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength ⁸ (23°C)	37 kJ/m ²	ISO 179/1eA
Notched Izod Impact		
-30°C	300 J/m	ASTM D256
23°C	430 J/m	ASTM D256
-30°C ⁹	23 kJ/m ²	ISO 180/1A
23°C ⁹	35 kJ/m ²	ISO 180/1A
Instrumented Dart Impact		ASTM D3763
23°C, Total Energy	37.0 J	

Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (R-Scale)	102	ASTM D785



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Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		
0.45 MPa, Unannealed, 3.20 mm	91.0 °C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	76.0 °C	ASTM D648
1.8 MPa, Unannealed, 4.00 mm, 64.0 mm Span ⁹	78.0 °C	ISO 75-2/Af
Vicat Softening Temperature		
--	106 °C	ASTM D1525 ¹⁰
--	97.0 °C	ISO 306/B120
--	95.0 °C	ISO 306/B50
CLTE		ASTM E831
Flow : -40 to 40°C	1.0E-4 cm/cm/°C	
Transverse : -40 to 40°C	1.0E-4 cm/cm/°C	
RTI Elec	60.0 °C	UL 746B
RTI Imp	60.0 °C	UL 746B
RTI Str	60.0 °C	UL 746B
Electrical	Nominal Value Unit	Test Method
Arc Resistance ¹¹	PLC 5	ASTM D495
Comparative Tracking Index (CTI)	PLC 0	UL 746A
High Amp Arc Ignition (HAI) ¹²	PLC 4	UL 746A
High Voltage Arc Resistance to Ignition (HVAR)	PLC 1	UL 746A
Hot-wire Ignition (HWI)	PLC 4	UL 746A
Flammability	Nominal Value Unit	Test Method
Flame Rating (1.5 mm)	HB	UL 94
Fill Analysis	Nominal Value Unit	Test Method
Melt Viscosity (240°C, 100 sec ⁻¹)	1550 Pa·s	ASTM D3835

Extrusion Notes

Sheet Extrusion Parameters

- Drying Temperature: 80 to 95°C
- Drying Time: 4 hr
- Maximum Moisture Content: 0.02%
- Barrel - Zone 1 Temperature: 170 to 200°C
- Barrel - Zone 2 Temperature: 180 to 220°C
- Barrel - Zone 3 Temperature: 190 to 225°C
- Barrel - Zone 4 Temperature: 200 to 240°C
- Adapter Temperature: 205 to 250°C
- Die Temperature: 205 to 250°C
- Melt Temperature: 215 to 260°C
- Roll Stack Temperature - Top: 90 to 95°C
- Roll Stack Temperature - Middle: 95 to 105°C
- Roll Stack Temperature - Bottom: 100 to 105°C



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, 5.0 mm/min

⁵ 1.3 mm/min

⁶ 2.0 mm/min

⁷ at Yield

⁸ 80*10*4 sp=62mm

⁹ 80*10*4 mm

¹⁰ Rate A (50°C/h), Loading 2 (50 N)

¹¹ Tungsten Electrode

¹² Surface



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Where to Buy

Supplier

SABIC

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

Distributor

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, Poland, 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

