

# ULTEM™ Resin AUT230 - Europe

Polyether Imide  
SABIC

**PROSPECTOR®**

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## Technical Data

### Product Description

Transparent polyetherimide (Tg 247°C). Very low outgassing and plateout, for automotive lighting applications where highly metallized, reflective surfaces are required. Haze onset temperature of 230°C (SABIC Innovative Plastics method)

### General

Material Status	• Commercial: Active
Literature <sup>1</sup>	• <a href="#">Brochure - ULTEM™ &amp; EXTEM™ Resin for Mobility Industry (Chinese)</a>
Search for UL Yellow Card	• <a href="#">SABIC</a> • <a href="#">ULTEM™ Resin</a>
Availability	• Europe
Features	• Amorphous • Chemical Resistant • Creep Resistant • Flame Retardant • Good Adhesion • Good Dimensional Stability • Good Thermal Stability • High Heat Resistance • High Stiffness • High Strength • Hydrolytically Stable • Low Shrinkage • Low Smoke Emission • Low Toxicity
Uses	• Automotive Exterior Parts • Automotive Lighting
Processing Method	• Injection Molding
Also Available In	• Asia Pacific • Latin America • North America

### Physical

	Nominal Value Unit	Test Method
Density / Specific Gravity	1.30 g/cm <sup>3</sup>	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (367°C/6.6 kg)	16 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	8.0 cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage		Internal Method
Flow <sup>3</sup>	0.50 to 0.70 %	
Across Flow : 3.20 mm	0.50 to 0.70 %	
Flow : 3.20 mm	0.50 to 0.70 %	
Water Absorption		ISO 62
Saturation, 23°C	1.8 %	
Equilibrium, 23°C, 50% RH	0.60 %	

### Mechanical

	Nominal Value Unit	Test Method
Tensile Modulus		
-- <sup>4</sup>	3510 MPa	ASTM D638
--	3110 MPa	ISO 527-1/1
Tensile Strength		
Yield <sup>5</sup>	96.0 MPa	ASTM D638
Yield	95.0 MPa	ISO 527-2/5
Break <sup>5</sup>	96.0 MPa	ASTM D638
Break	78.0 MPa	ISO 527-2/5
Tensile Elongation		
Yield <sup>5</sup>	6.0 %	ASTM D638
Yield	8.5 %	ISO 527-2/5
Break <sup>5</sup>	25 %	ASTM D638
Break	17 %	ISO 527-2/5
Flexural Modulus		
50.0 mm Span <sup>6</sup>	3170 MPa	ASTM D790
-- <sup>7</sup>	3080 MPa	ISO 178
Flexural Stress <sup>7,8</sup>	123 MPa	ISO 178



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Impact	Nominal Value Unit	Test Method
Notched Izod Impact		
-30°C	74 J/m	ASTM D256
23°C	69 J/m	ASTM D256
-30°C <sup>9</sup>	5.0 kJ/m <sup>2</sup>	ISO 180/1A
23°C <sup>9</sup>	4.0 kJ/m <sup>2</sup>	ISO 180/1A
Unnotched Izod Impact		
23°C	No Break	ASTM D4812 ISO 180/1U
-30°C <sup>9</sup>	No Break	ISO 180/1U
Instrumented Dart Impact		ASTM D3763
23°C, Total Energy	33.0 J	

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		
0.45 MPa, Unannealed, 6.40 mm	237 °C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	217 °C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	230 °C	ASTM D648
1.8 MPa, Unannealed, 4.00 mm, 64.0 mm Span <sup>9</sup>	228 °C	ISO 75-2/ Af
Vicat Softening Temperature		
--	242 °C	ASTM D1525 <sup>10</sup> ISO 306/B50 <sup>10</sup>
--	238 °C	ISO 306/B120
Ball Pressure Test (123 to 127°C)	Pass	IEC 60695-10-2
CLTE		
Flow : -40 to 150°C	5.0E-5 cm/cm/°C	ASTM E831
Flow : 23 to 150°C	5.0E-5 cm/cm/°C	ISO 11359-2
Transverse : -40 to 150°C	5.0E-5 cm/cm/°C	ASTM E831
Transverse : 23 to 150°C	5.0E-5 cm/cm/°C	ISO 11359-2

Additional Information	Nominal Value Unit	Test Method
Metallized Haze Onset	230 °C	Internal Method

Injection	Nominal Value Unit
Drying Temperature	150 °C
Drying Time	4.0 to 6.0 hr
Suggested Max Moisture	0.020 %
Suggested Shot Size	40 to 60 %
Rear Temperature	360 to 380 °C
Middle Temperature	370 to 395 °C
Front Temperature	380 to 405 °C
Nozzle Temperature	375 to 400 °C
Processing (Melt) Temp	380 to 405 °C
Mold Temperature	135 to 165 °C
Back Pressure	0.300 to 0.700 MPa
Screw Speed	40 to 70 rpm
Vent Depth	0.025 to 0.076 mm

### Injection Notes

- Drying Time (Cumulative): 24 hr



**Notes**

<sup>1</sup> 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.

<sup>2</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> Tensile Bar

<sup>4</sup> 5.0 mm/min

<sup>5</sup> Type I, 5.0 mm/min

<sup>6</sup> 1.3 mm/min

<sup>7</sup> 2.0 mm/min

<sup>8</sup> at Yield

<sup>9</sup> 80\*10\*4 mm

<sup>10</sup> Rate A (50°C/h), Loading 2 (50 N)



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## 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

#### **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

