

## Technical Data

### Product Description

Transparent, Thermoplastic Polyimide (TPI). Glass transition Temperature (Tg) of 227degC. Haze onset temperature of 212degC (SABIC IP method). Very low outgassing and plateout, for automotive lighting applications where highly metallized, reflective surfaces are required.

### General

Material Status	<ul style="list-style-type: none"> <li>Commercial: Active</li> </ul>		
Literature <sup>1</sup>	<ul style="list-style-type: none"> <li>Drones</li> <li>EZISURG MEDICAL SCALPEL CASE STUDY</li> <li>ISCC+ CERTIFIED RENEWABLE BIO-BASED ULTEM™ RESINS</li> <li>SABIC-MOBILITY-ADAS CAMERA FLYER</li> <li>SABIC-MOBILITY-ADAS LIDAR FLYER</li> <li>THERMOPLASTIC SOLUTIONS FOR AUTOMOTIVE OIL PUMPS</li> <li>ULTEM™ RESIN: AN ALTERNATIVE SOLUTION TO SULFONE POLYMERS</li> </ul>		
Search for UL Yellow Card	<ul style="list-style-type: none"> <li>SABIC</li> <li>ULTEM™ Resin</li> </ul>		
Availability	<ul style="list-style-type: none"> <li>Europe</li> </ul>		
Features	<ul style="list-style-type: none"> <li>Amorphous</li> <li>Chemical Resistant</li> <li>Creep Resistant</li> <li>Flame Retardant</li> <li>Good Adhesion</li> </ul>	<ul style="list-style-type: none"> <li>Good Dimensional Stability</li> <li>Good Thermal Stability</li> <li>High Heat Resistance</li> <li>High Stiffness</li> <li>High Strength</li> </ul>	<ul style="list-style-type: none"> <li>Hydrolytically Stable</li> <li>Low Shrinkage</li> <li>Low Smoke Emission</li> <li>Low Toxicity</li> </ul>
Uses	<ul style="list-style-type: none"> <li>Automotive Exterior Parts</li> </ul>	<ul style="list-style-type: none"> <li>Automotive Lighting</li> </ul>	
Processing Method	<ul style="list-style-type: none"> <li>Injection Molding</li> </ul>		
Also Available In	<ul style="list-style-type: none"> <li>Asia Pacific</li> </ul>	<ul style="list-style-type: none"> <li>Latin America</li> </ul>	<ul style="list-style-type: none"> <li>North America</li> </ul>

Physical	Nominal Value Unit	Test Method
Density / Specific Gravity	1.29 g/cm <sup>3</sup>	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	11 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	16 cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70 %	Internal Method
Water Absorption		ISO 62
Saturation, 23°C	1.0 %	
Equilibrium, 23°C, 50% RH	0.20 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus		
-- <sup>3</sup>	3590 MPa	ASTM D638
--	3320 MPa	ISO 527-1/1
Tensile Strength		
Yield <sup>4</sup>	105 MPa	ASTM D638
Yield	103 MPa	ISO 527-2/5
Break <sup>4</sup>	88.0 MPa	ASTM D638
Break	88.0 MPa	ISO 527-2/5
Tensile Elongation		
Yield <sup>4</sup>	8.0 %	ASTM D638
Yield	7.0 %	ISO 527-2/5
Break <sup>4</sup>	75 %	ASTM D638
Break	54 %	ISO 527-2/5
Flexural Modulus		
50.0 mm Span <sup>5</sup>	3330 MPa	ASTM D790
-- <sup>6</sup>	3140 MPa	ISO 178
Flexural Strength <sup>5</sup> (Yield, 50.0 mm Span)	170 MPa	ASTM D790



# ULTEM™ Resin AUT210 - Europe

Polyether Imide

SABIC

# PROSPECTOR®

www.ulprospector.com

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength <sup>7</sup> (23°C)	16 kJ/m <sup>2</sup>	ISO 179/1eA
Notched Izod Impact		
-30°C	38 J/m	ASTM D256
23°C	37 J/m	ASTM D256
-30°C <sup>8</sup>	4.0 kJ/m <sup>2</sup>	ISO 180/1A
23°C <sup>8</sup>	5.0 kJ/m <sup>2</sup>	ISO 180/1A
Unnotched Izod Impact		
23°C	2400 J/m	ASTM D4812
-30°C <sup>8</sup>	No Break	ISO 180/1U
23°C <sup>8</sup>	No Break	ISO 180/1U
Instrumented Dart Impact		
23°C, Total Energy	33.0 J	ASTM D3763
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		
0.45 MPa, Unannealed, 3.20 mm	215 °C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	201 °C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	211 °C	ASTM D648
1.8 MPa, Unannealed, 4.00 mm, 100 mm Span <sup>9</sup>	196 °C	ISO 75-2/Ae
Vicat Softening Temperature		
--	222 °C	ASTM D1525 <sup>10</sup>
--	221 °C	ISO 306/B50
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	212 °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> 5.0 mm/min

<sup>4</sup> Type I, 5.0 mm/min

<sup>5</sup> 1.3 mm/min

<sup>6</sup> 2.0 mm/min

<sup>7</sup> 80\*10\*4 sp=62mm

<sup>8</sup> 80\*10\*4 mm

<sup>9</sup> 120\*10\*4 mm

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



**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, 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

