

ULTEM™ Resin 2300 - Europe

Polyether Imide
SABIC

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

30% Glass fiber filled, standard flow Polyetherimide (Tg 217°C). ECO Conforming, UL94 V0 and 5VA listing. NSF 51 listing, WRAS certification, KTW certification in recognized colors.

General

Material Status	• Commercial: Active
Literature ¹	• Brochure - ULTEM™ & EXTEM™ Resin for Mobility Industry (Chinese)
Search for UL Yellow Card	• SABIC • ULTEM™ Resin
Availability	• Europe
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Features	<ul style="list-style-type: none">• Amorphous• Chemical Resistant• Creep Resistant• Flame Retardant• General Purpose• Good Adhesion• Good Dimensional Stability• Good Thermal Stability• High Heat Resistance• High Stiffness• High Strength• Hydrolytically Stable• Low Smoke Emission• Low Toxicity
Uses	<ul style="list-style-type: none">• Aerospace Applications• Appliances• Automotive Interior Parts• Automotive Under the Hood• Composites• Construction Applications• Electrical Parts• Electrical/Electronic Applications• Electronic Displays• Energy Storage• Heavy Transportation• Industrial Applications• Lawn and Garden Equipment• Lighting Applications• Material Handling• Military/Defense Applications• Outdoor Applications• Personal Care• Rail Applications• Recreational Vehicle Applications• Rigid Packaging• Semiconductor Applications• Sporting Goods• Textile Applications• Wind Energy Applications
Processing Method	• Injection Molding
Also Available In	• Asia Pacific • Latin America • North America

Physical	Nominal Value Unit	Test Method
Density	1.51 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	6.0 cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ³	0.20 to 0.40 %	Internal Method
Water Absorption		ISO 62
Saturation, 23°C	0.90 %	
Equilibrium, 23°C, 50% RH	0.50 %	
Outdoor Suitability	f1	UL 746C

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	9500 MPa	ISO 527-1/1
Tensile Stress (Break)	165 MPa	ISO 527-2/5
Tensile Strain (Break)	2.0 %	ISO 527-2/5
Flexural Modulus ⁴	8500 MPa	ISO 178
Flexural Stress ^{4, 5}	225 MPa	ISO 178
Taber Abrasion Resistance		Internal Method
1000 Cycles, 1000 g, CS-17 Wheel	20.0 mg	

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength (23°C)	10 kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ⁶		ISO 179/1eU
-30°C	40 kJ/m ²	
23°C	40 kJ/m ²	
Unnotched Izod Impact Strength ⁷		ISO 180/1U
-30°C	40 kJ/m ²	
23°C	40 kJ/m ²	



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Hardness	Nominal Value Unit	Test Method
Ball Indentation Hardness (H 358/30)	165 MPa	ISO 2039-1
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load ⁸		
0.45 MPa, Unannealed, 4.00 mm, 100 mm Span	215 °C	ISO 75-2/Be
1.8 MPa, Unannealed, 4.00 mm, 100 mm Span	210 °C	ISO 75-2/Ae
Vicat Softening Temperature		
--	220 °C	ISO 306/B120
--	213 °C	ISO 306/B50
--	225 °C	ISO 306/A50
Ball Pressure Test (123 to 127°C)	Pass	IEC 60695-10-2
CLTE		ISO 11359-2
Flow : -20 to 150°C	1.8E-5 cm/cm/°C	
Transverse : -20 to 150°C	4.8E-5 cm/cm/°C	
Thermal Conductivity	0.29 W/m/K	ISO 8302
RTI Elec	180 °C	UL 746B
RTI Imp	170 °C	UL 746B
RTI Str	180 °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	35 kV/mm	
1.60 mm, in Oil	26 kV/mm	
3.20 mm, in Oil	15 kV/mm	
Relative Permittivity		IEC 60250
50 Hz	3.30	
60 Hz	3.30	
1 MHz	3.40	
Dissipation Factor		IEC 60250
50 Hz	1.6E-3	
60 Hz	1.6E-3	
1 MHz	2.3E-3	
2.45 GHz	5.3E-3	
Arc Resistance ⁹	PLC 6	ASTM D495
Comparative Tracking Index (CTI)	PLC 4	UL 746A
Comparative Tracking Index ¹⁰		IEC 60112
--	150 V	
Solution B	100 V	
High Amp Arc Ignition (HAI)		UL 746A
> 1.5 mm	PLC 3	
> 3.0 mm	PLC 4	
High Voltage Arc Resistance to Ignition (HVAR)	PLC 3	UL 746A
Hot-wire Ignition (HWI)		UL 746A
> 1.5 mm	PLC 3	
> 3.0 mm	PLC 1	
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
> 0.25 mm	V-0	
> 1.2 mm	5VA	
Glow Wire Flammability Index (2.0 mm)	960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature (2.0 mm)	900 °C	IEC 60695-2-13
Oxygen Index	48 %	ISO 4589-2



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Injection	Nominal Value Unit
Drying Temperature	150 °C
Drying Time	4.0 to 6.0 hr
Suggested Max Moisture	0.020 %
Hopper Temperature	80 to 120 °C
Rear Temperature	350 to 400 °C
Middle Temperature	360 to 410 °C
Front Temperature	370 to 420 °C
Nozzle Temperature	360 to 410 °C
Processing (Melt) Temp	370 to 410 °C
Mold Temperature	140 to 180 °C

Notes

¹ 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.

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

³ Tensile Bar

⁴ 2.0 mm/min

⁵ at Break

⁶ 80*10*4 sp=62mm

⁷ 80*10*4 mm

⁸ 120*10*4 mm

⁹ Tungsten Electrode

¹⁰ Value shown here is based on internal measurement.



Where to Buy

Supplier

SABICWeb: <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

