

ULTEM™ Resin 2300R - Europe

Polyether Imide
SABIC

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

30% Glass fiber filled, standard flow Polyetherimide (Tg 217C) with internal mold release. ECO Conforming, UL94 V0 and 5VA listing.

General

Material Status	• Commercial: Active
Search for UL Yellow Card	• SABIC • ULTEM™ Resin
Availability	• Europe
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Features	• Amorphous • Chemical Resistant • Creep Resistant • Flame Retardant • General Purpose • Good Adhesion • Good Dimensional Stability • Good Mold Release • Good Thermal Stability • High Heat Resistance • High Stiffness • High Strength • Hydrolytically Stable • Low Shrinkage • Low Smoke Emission • Low Toxicity
Uses	• 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 • 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 / Specific Gravity	1.51 g/cm ³	ASTM D792 ISO 1183
Molding Shrinkage - Flow ²	0.20 to 0.40 %	Internal Method
Water Absorption		
24 hr, 23°C	0.16 %	ASTM D570
Saturation, 23°C	0.90 %	ISO 62
Equilibrium, 23°C, 50% RH	0.50 %	ISO 62
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 ³	8500 MPa	ISO 178
Flexural Stress ^{3,4}	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 ⁵		ISO 179/1eU
-30°C	40 kJ/m ²	
23°C	40 kJ/m ²	
Notched Izod Impact (23°C)	85 J/m	ASTM D256
Unnotched Izod Impact		
23°C	430 J/m	ASTM D4812
-30°C ⁶	40 kJ/m ²	ISO 180/1U
23°C ⁶	40 kJ/m ²	ISO 180/1U



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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 ⁷		
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		
--	227 °C	ASTM D1525 ⁸
--	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 : 23 to 150°C	2.0E-5 cm/cm/°C	
Transverse : 23 to 150°C	6.0E-5 cm/cm/°C	
Thermal Conductivity	0.30 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
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 Typical properties: these are not to be construed as specifications.

² Tensile Bar

³ 2.0 mm/min

⁴ at Break

⁵ 80*10*4 sp=62mm

⁶ 80*10*4 mm

⁷ 120*10*4 mm

⁸ Rate A (50°C/h), Loading 2 (50 N)

⁹ Tungsten Electrode



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

