

ULTEM™ HU2300 resin

Polyether Imide

SABIC Innovative Plastics

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

30% Glass fiber filled, standard flow Polyetherimide (Tg 217C). ECO Conforming. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
UL Yellow Card ²	• E121562-221099
Search for UL Yellow Card	• SABIC Innovative Plastics • ULTEM™
Availability	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Features	• Biocompatible • ECO Compliant • Food Contact Acceptable
Uses	• Medical/Healthcare Applications • Pharmaceuticals
Agency Ratings	• EU Eco • ISO 10993 • USP Class VI
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity			
--	1.51	1.51 g/cm ³	ASTM D792
--	1.51 g/cm ³	1.51 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	5.0 g/10 min	5.0 g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.126 in (3.20 mm))	2.0E-3 to 4.0E-3 in/in	0.20 to 0.40 %	Internal Method
Water Absorption			ISO 62
Saturation, 73°F (23°C)	0.90 %	0.90 %	
Equilibrium, 73°F (23°C), 50% RH	0.50 %	0.50 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			
-- ⁴	1.35E+6 psi	9310 MPa	ASTM D638
--	1.38E+6 psi	9500 MPa	ISO 527-2/1
Tensile Strength			
Yield ⁵	24500 psi	169 MPa	ASTM D638
Yield	23900 psi	165 MPa	ISO 527-2/5
Break ⁵	23000 psi	159 MPa	ASTM D638
Break	23900 psi	165 MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁵	3.0 %	3.0 %	ASTM D638
Yield	2.0 %	2.0 %	ISO 527-2/5
Break ⁵	3.0 %	3.0 %	ASTM D638
Break	2.0 %	2.0 %	ISO 527-2/5
Flexural Modulus			
1.97 in (50.0 mm) Span ⁶	1.34E+6 psi	9250 MPa	ASTM D790
-- ⁷	1.23E+6 psi	8500 MPa	ISO 178
Flexural Stress			
-- ^{7, 8}	32600 psi	225 MPa	ISO 178
Yield, 1.97 in (50.0 mm) Span ⁶	31900 psi	220 MPa	ASTM D790



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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength ⁹ (73°F (23°C))	4.8 ft·lb/in ²	10 kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-22°F (-30°C)	1.7 ft·lb/in	90 J/m	ASTM D256
73°F (23°C)	1.6 ft·lb/in	85 J/m	ASTM D256
-22°F (-30°C) ¹⁰	4.8 ft·lb/in ²	10 kJ/m ²	ISO 180/1A
73°F (23°C) ¹⁰	4.8 ft·lb/in ²	10 kJ/m ²	ISO 180/1A
Unnotched Izod Impact (73°F (23°C))	8.0 ft·lb/in	430 J/m	ASTM D4812
Instrumented Dart Impact			ASTM D3763
73°F (23°C), Total Energy	88.5 in·lb	10.0 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
264 psi (1.8 MPa), Unannealed, 0.252 in (6.40 mm)	410 °F	210 °C	ASTM D648
264 psi (1.8 MPa), Unannealed, 2.52 in (64.0 mm) Span ¹¹	410 °F	210 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	442 °F	228 °C	ASTM D1525 ¹²
--	415 °F	213 °C	ISO 306/B50
--	428 °F	220 °C	ISO 306/B120
CLTE			
Flow : -4 to 302°F (-20 to 150°C)	1.1E-5 in/in/°F	2.0E-5 cm/cm/°C	ASTM E831
Flow : -40 to 104°F (-40 to 40°C)	8.9E-6 in/in/°F	1.6E-5 cm/cm/°C	ISO 11359-2
Transverse : -40 to 104°F (-40 to 40°C)	8.9E-6 in/in/°F	1.6E-5 cm/cm/°C	ASTM E831
Transverse : -40 to 104°F (-40 to 40°C)	2.3E-5 in/in/°F	4.1E-5 cm/cm/°C	ISO 11359-2
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	300 °F	149 °C	
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr	
Drying Time, Maximum	24 hr	24 hr	
Suggested Max Moisture	0.020 %	0.020 %	
Suggested Shot Size	40 to 60 %	40 to 60 %	
Rear Temperature	630 to 750 °F	332 to 399 °C	
Middle Temperature	640 to 750 °F	338 to 399 °C	
Front Temperature	650 to 750 °F	343 to 399 °C	
Nozzle Temperature	650 to 750 °F	343 to 399 °C	
Processing (Melt) Temp	660 to 750 °F	349 to 399 °C	
Mold Temperature	275 to 325 °F	135 to 163 °C	
Back Pressure	50.0 to 100 psi	0.345 to 0.689 MPa	
Screw Speed	40 to 70 rpm	40 to 70 rpm	
Vent Depth	1.0E-3 to 3.0E-3 in	0.025 to 0.076 mm	



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 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.

³ Typical properties: these are not to be construed as specifications.

⁴ 0.20 in/min (5.0 mm/min)

⁵ Type I, 0.20 in/min (5.0 mm/min)

⁶ 0.051 in/min (1.3 mm/min)

⁷ 0.079 in/min (2.0 mm/min)

⁸ Yield

⁹ 80*10*4 sp=62mm

¹⁰ 80*10*4

¹¹ 80*10*4 mm

¹² Rate B (120°C/h), Loading 2 (50 N)



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Where to Buy

Supplier

SABIC Innovative Plastics

Pittsfield, MA USA

Telephone: 800-845-0600

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

Distributor

Nexeo Solutions

Telephone: 888-594-6009

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

Availability: North America

Reseller

A Reseller is not a distributor authorized by the Supplier.

Guangzhou Huaxiu Plastics Co., Ltd.

Telephone: +86-20-82582555

Web: <http://www.va-so.com>

Availability: China

