

**Product Texts**

ULTEM 2320 resin is a high flow 30% glass fiber reinforced polyetherimide resin. The material is RoHS compliant and is intrinsically flame retardant without the use of FR modifiers and offers UL94 V0 at  $\geq 0.5$  mm. The material may offer excellent dimension stability, strength, stiffness and creep resistance up to high temperature due to its high glass transition temperature of 217 °C. The material is opaque and can be custom colored.

ISCC+ certified renewable bio-based solutions are available for this grade via differentiated color nomenclature.

UL Yellow Card Link: [E121562-104574015](https://www.ulprospector.com/121562-104574015)

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ASTM Data</b>			
Melt Flow Index, MFI	10	g/10min	ASTM D 1238
Temperature	337	°C	-
Load	6.7	kg	-
Mold Shrinkage, MD	0.004	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.004	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	10500	MPa	ISO 527
Stress at break	185	MPa	ISO 527
Strain at break	2.5	%	ISO 527
Flexural modulus, 23°C	10500	MPa	ISO 178
Charpy impact strength, +23°C	50	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	52	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, -30°C	8	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, +23°C, 3mm	8	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact strength, +23°C	46	kJ/m <sup>2</sup>	ISO 180/1U
Izod notched impact strength, +23°C	9	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength	9	kJ/m <sup>2</sup>	ISO 180/1A
Temperature	-30	°C	-
<b>ASTM Data</b>			
Tensile Modulus	10500	MPa	ASTM D 638
Tensile Strength at Break	175	MPa	ASTM D 638
Elongation at Break	2	%	ASTM D 638
Flexural Modulus	10500	MPa	ASTM D 790
Izod Impact notched, 1/8 in	80	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	60	J/m	ASTM D 256
Temperature	-30	°C	-
Izod Impact unnotched, 1/8 in	615	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	212	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	217	°C	ISO 75-1/-2
Vicat softening temperature, B	230	°C	ISO 306
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.5	mm	-
Yellow Card available	yes	-	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.5	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (2)	1.5	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (3)	3	mm	-
Glow Wire Ignition Temperature (GWIT)	850	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.5	mm	-
Glow Wire Ignition Temperature (GWIT)	850	°C	IEC 60695-2-13
GWIT - thickness tested (2)	1.5	mm	-
Glow Wire Ignition Temperature (GWIT)	850	°C	IEC 60695-2-13

**ULTEM™ Resin 2320**

PEI-GF30

Saudi Basic Industries Corporation (SABIC)

GWIT - thickness tested (3)	3	mm	-
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**ASTM Data**

UL 94 Flame rating	V-0	-	UL 94
Thickness tested	0.5	mm	-
Coefficient of Thermal Expansion, MD	15	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	58	E-6/K	ASTM D 696
Vicat Temperature	220	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
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**ISO Data**

Comparative tracking index	137	-	IEC 60112
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**ASTM Data**

Dielectric Strength, Short Time	27	kV/mm	ASTM D 149
Volume Resistivity	1E13	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
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Density	1520	kg/m <sup>3</sup>	ISO 1183
Density	1500	kg/m <sup>3</sup>	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
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Pre-drying - Temperature	150	°C	-
Pre-drying - Time	4 - 6	h	-
Processing humidity	≤0.02	%	-
Melt temperature	350 - 410	°C	-
Mold temperature	135 - 180	°C	-
Zone 1	330 - 400	°C	-
Zone 2	340 - 410	°C	-
Zone 3	345 - 420	°C	-
Nozzle temperature	345 - 410	°C	-
Screw speed	40 - 70	rpm	-
Back pressure	0.3 - 1.5	MPa	-

**Characteristics****Processing**

Injection Molding, Wire/Cable Extrusion

**Special Characteristics**

Flame retardant, Halogen-free, Platable, Heat stabilized or stable to heat, Opaque

**Features**

Amorphous, Creep Resistance, Good Adhesion, Low Smoke, Low Warpage

**Chemical Resistance**

General Chemical Resistance, Hydrolytically Stable

**Certifications**

RoHS compliant, ISCC Plus

**Applications**

Aircraft and Aerospace, Automotive, Building Construction, IT / Business Machine, Electrical and Electronical, General Purpose, Medical, Packaging, Refrigeration, Sports Equipment, Toys

**Regional Availability**

North America, Europe, Asia Pacific, South and Central America