

ULTEM™ 2312 resin

Polyether Imide

SABIC Innovative Plastics

Message:

30% Milled glass filled, enhanced flow Polyetherimide (Tg 217C). ECO Conforming, UL94 V0 and 5VA listing.

General Information			
UL YellowCard	E121562-221100		
Filler / Reinforcement	Milled Glass Fiber,30% Filler by Weight		
Features	ECO Compliant		
	Good Flow		
Agency Ratings	EU Eco		
Processing Method	Injection Molding		
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)		
	Elastic Modulus vs Temperature (ASTM D4065)		
	Flexural DMA (ASTM D4065)		
	Specific Heat vs. Temperature (ASTM D3417)		
	Tensile Creep (ASTM D2990)		
	Tensile Fatigue		
	Tensile Stress vs. Strain (ASTM D638)		
	Viscosity vs. Shear Rate (ASTM D3835)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.51	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.30 to 0.40	%	
Across Flow : 3.20 mm	0.45 to 0.55	%	
Water Absorption			ASTM D570
24 hr	0.18	%	
Equilibrium, 23°C	0.98	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	6000	MPa	ASTM D638
Tensile Strength ² (Break)	103	MPa	ASTM D638
Tensile Elongation ³ (Break)	3.5	%	ASTM D638
Flexural Modulus ⁴ (100 mm Span)	6550	MPa	ASTM D790
Flexural Strength ⁵ (Break, 100 mm Span)	179	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	32	J/m	ASTM D256

Reverse Notch Izod Impact (3.20 mm)	310	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm)	208	°C	ASTM D648
CLTE			ASTM E831
Flow : -20 to 150°C	2.3E-5	cm/cm/°C	
Transverse : -20 to 150°C	2.7E-5	cm/cm/°C	
RTI Elec	170	°C	UL 746
RTI Imp	170	°C	UL 746
RTI Str	170	°C	UL 746
Electrical	Nominal Value		Test Method
Dielectric Constant			ASTM D150
1 kHz	3.70		
1 MHz	3.49		
Arc Resistance ⁶	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 4		UL 746
High Amp Arc Ignition (HAI)	PLC 3		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 0		UL 746
Hot-wire Ignition (HWI)	PLC 1		UL 746
Flammability	Nominal Value		Test Method
Flame Rating (0.813 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	149	°C	
Drying Time	4.0 to 6.0	hr	
Drying Time, Maximum	24	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	332 to 399	°C	
Middle Temperature	338 to 399	°C	
Front Temperature	343 to 399	°C	
Nozzle Temperature	343 to 399	°C	
Processing (Melt) Temp	349 to 399	°C	
Mold Temperature	135 to 163	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.025 to 0.076	mm	
NOTE			
1.	5.0 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	2.6 mm/min		
5.	2.6 mm/min		

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