



ULTEM™ Resin 2210R - Americas

SABIC - Polyetherimide

Tuesday, May 14, 2024

General Information

Product Description

20% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C) with internal mold release. ECO Conforming, UL94 V0 and 5VA listing.

General

Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight		
Features	<ul style="list-style-type: none">• Amorphous• Chemical Resistant• Creep Resistant• Electrically Insulating• Flame Retardant• Good Dimensional Stability• Good Mold Release	<ul style="list-style-type: none">• Good Processability• Halogen Free• High Heat Resistance• High Stiffness• High Strength• Hydrolytically Stable• Low Shrinkage	<ul style="list-style-type: none">• Low Smoke Emission• Low Toxicity• Low Warpage• PFAS not intentionally added• Platable• Renewable Resource Content
Uses	<ul style="list-style-type: none">• Additive Manufacturing (3D Printing)• Aerospace Applications• Appliances• Automotive Under the Hood• Building Materials• Cell Phones• Communication Applications• Computer Components• Consumer Applications• Displays• Drone Applications• Electrical Parts• Electrical/Electronic Applications	<ul style="list-style-type: none">• Eyeglasses• Furniture• Heavy Transportation• Housings• Hygiene• Industrial Applications• Labware• Lighting Applications• Material Handling• Medical/Healthcare Applications• Motorcycle Applications• Packaging• Personal Care	<ul style="list-style-type: none">• Pharmaceutical Packaging• Printer• Rail Applications• Recreational Vehicle Applications• Semiconductor Applications• Speaker Applications• Sporting Goods• Surgical Instruments• Textile Applications• Thin-walled Parts• Trays• Water Management• Wire & Cable Applications
Processing Method	• Injection Molding		
Also Available In	• Asia Pacific	• Europe	

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.42		ASTM D792
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	9.0	g/10 min	ASTM D1238
Outdoor Suitability	fl		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	999000	psi	ASTM D638
Tensile Strength ³ (Break)	20200	psi	ASTM D638
Tensile Elongation ³ (Break)	4.0	%	ASTM D638
Flexural Modulus ⁴ (3.94 in Span)	999000	psi	ASTM D790
Flexural Strength ⁴ (Break, 3.94 in Span)	32900	psi	ASTM D790

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Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	1.4	ft·lb/in	ASTM D256
Unnotched Izod Impact (73°F)	8.9	ft·lb/in	ASTM D4812
Reverse Notch Izod Impact (0.126 in)	8.9	ft·lb/in	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	114		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 66 psi, Unannealed, 0.252 in	410	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed, 0.252 in	412	°F	ASTM D648
Vicat Softening Temperature	437	°F	ASTM D1525 ⁵
RTI Elec	338	°F	UL 746B
RTI Imp	338	°F	UL 746B
RTI Str	338	°F	UL 746B
Electrical	Nominal Value	Unit	Test Method
Arc Resistance ⁶	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 4		UL 746A
High Amp Arc Ignition (HAI)			UL 746A
> 0.06 in	PLC 3		
> 0.12 in	PLC 4		
High Voltage Arc Resistance to Ignition (HVAR)	PLC 2		UL 746A
Hot-wire Ignition (HWI)			UL 746A
> 0.06 in	PLC 2		
> 0.12 in	PLC 1		
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
> 0.016 in	V-0		
> 0.07 in	5VA		
Oxygen Index	50	%	ASTM D2863

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	302	°F
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 60	%
Rear Temperature	626 to 752	°F
Middle Temperature	644 to 752	°F
Front Temperature	653 to 752	°F
Nozzle Temperature	653 to 752	°F
Processing (Melt) Temp	662 to 752	°F
Mold Temperature	275 to 329	°F
Back Pressure	43.5 to 102	psi

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Injection	Nominal Value	Unit
Screw Speed	40 to 70	rpm
Vent Depth	9.8E-4 to 3.0E-3	in
Injection Notes		

- Drying Time (Cumulative): 24 hr

Notes

¹ Typical properties: these are not to be construed as specifications.
² 0.20 in/min
³ Type I, 0.20 in/min
⁴ 0.10 in/min
⁵ Rate A (50°C/h), Loading 2 (50 N)
⁶ Tungsten Electrode

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