

ULTEM™ CRS5201R resin

Polyether Imide

SABIC Innovative Plastics

Message:

20% Glass fiber filled, standard flow Polyetherimide copolymer (Tg 225C) with internal mold release and enhanced chemical resistance to strong acids, bases, aromatics, and ketones. Resin is RoHS compliant.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight		
Additive	demoulding		
Features	Copolymer		
	Good chemical resistance		
	alkali resistance		
	acid resistance		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.43	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	5.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.30 - 0.50	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	1.0	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	145	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7200	MPa	ISO 527-2/1
Tensile Stress (Break)	135	MPa	ISO 527-2/5
Tensile Strain (Break)	3.0	%	ISO 527-2/5
Flexural Modulus ²	5800	MPa	ISO 178
Flexural Stress	180	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact Strength ³			ISO 180/1U
-30°C	40	kJ/m ²	ISO 180/1U
23°C	40	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁴			
0.45 MPa, unannealed, 100 mm span	210	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	205	°C	ISO 75-2/Ae

Vicat Softening Temperature			
--	225	°C	ISO 306/A50
--	220	°C	ISO 306/B50
--	222	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 150°C	2.0E-5	cm/cm/°C	ISO 11359-2
Horizontal: 23 to 150°C	5.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec	105	°C	UL 746
RTI Imp	105	°C	UL 746
RTI	105	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Dielectric Strength			IEC 60243-1
1.60mm, in oil	26	kV/mm	IEC 60243-1
3.20mm, in oil	16	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	3.20		IEC 60250
60 Hz	3.20		IEC 60250
1 MHz	3.00		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	1.6E-3		IEC 60250
60 Hz	1.6E-3		IEC 60250
1 MHz	4.3E-3		IEC 60250
Comparative Tracking Index			IEC 60112
--	150	V	IEC 60112
Solution B	100	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
	V-0		
Flame Rating (1.50 mm)	5VA		UL 94
Glow Wire Flammability Index (3.20 mm)	960	°C	IEC 60695-2-12
Oxygen Index	47	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0 - 6.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	80.0 - 100	°C	
Rear Temperature	350 - 390	°C	
Middle Temperature	370 - 410	°C	

Front Temperature	380 - 420	°C
Nozzle Temperature	370 - 410	°C
Processing (Melt) Temp	370 - 410	°C
Mold Temperature	140 - 180	°C

NOTE		
1.	Tensile Bar	
2.	2.0 mm/min	
3.	80*10*4	
4.	120*10*4 mm	

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