

SABIC Innovative Plastics Noryl CRX2201 PPE+HIPS

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO , Polystyrene (PS)

Material Notes:

Noryl* CRX2201 resin is a 25% mineral reinforced, injection moldable modified polyphenylene ether resin designed for improved chemical resistance when compared with standard Noryl resins. Noryl CRX2201 resin uses non chlorinated, non brominated FR additives to deliver a UL94 V1 rating at 1.5 mm. Noryl CRX2201 may be an excellent material candidate where flame resistance and dimensional stability are required. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Noryl-CRX2201-PPEHIPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.29 g/cc	1.29 g/cc	ASTM D 792
Density	1.29 g/cc	0.0466 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.020 %	0.020 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.020 % @Temperature 23.0 ^o C	0.020 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm @Thickness 3.20 mm	0.0030 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	6.0 g/10 min @Load 5.00 kg, Temperature 280 ^o C	6.0 g/10 min @Load 11.0 lb, Temperature 536 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	8.0 g/10 min @Load 5.00 kg, Temperature 280 ^o C	8.0 g/10 min @Load 11.0 lb, Temperature 536 ^o F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	63.0 MPa	9140 psi	5 mm/min; ISO 527
	76.0 MPa	11000 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	63.0 MPa	9140 psi	5 mm/min; ISO 527
	76.0 MPa	11000 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	2.8 %	2.8 %	5 mm/min; ISO 527
	4.0 %	4.0 %	Type I, 5 mm/min; ASTM D 638
Elongation at Yield	2.8 %	2.8 %	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
			Type I, 5 mm/min; ASTM D 638
Tensile Modulus	5.50 GPa	798 ksi	1 mm/min; ISO 527
	5.60 GPa	812 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	119 MPa	17300 psi	1.3 mm/min, 50 mm span; ASTM D 790
	120 MPa	17400 psi	2 mm/min; ISO 178
Flexural Modulus	5.50 GPa	798 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	6.10 GPa	885 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.260 J/cm @Temperature -30.0 °C	0.487 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	0.320 J/cm @Temperature 23.0 °C	0.599 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	2.00 kJ/m ² @Temperature 23.0 °C	0.952 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
	2.00 kJ/m ² @Temperature -30.0 °C	0.952 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.100 J/cm ² @Temperature 23.0 °C	0.476 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	3.00 J @Temperature 23.0 °C	2.21 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	32.0 Åµm/m-Å°C @Temperature -40.0 - 40.0 Å°C	17.8 Åµin/in-Å°F @Temperature -40.0 - 104 Å°F	ISO 11359-2
	34.0 Åµm/m-Å°C @Temperature -40.0 - 40.0 Å°C	18.9 Åµin/in-Å°F @Temperature -40.0 - 104 Å°F	ASTM E 831
CTE, linear, Transverse to Flow	54.0 Åµm/m-Å°C	30.0 Åµin/in-Å°F	ASTM E 831

Thermal Properties	Metric @Temperature -40.0 - 40.0 Â°C	English @Temperature -40.0 - 104 Â°F	Comments
	60.0 Âµm/m-Â°C	33.3 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Deflection Temperature at 1.8 MPa (264 psi)	112 Â°C	234 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	108 Â°C	226 Â°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	124 Â°C	255 Â°F	Rate B/50; ASTM D 1525
	124 Â°C	255 Â°F	Rate B/50; ISO 306
	127 Â°C	261 Â°F	Rate B/120; ISO 306
Flammability, UL94	V-1	V-1	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Surface Resistance	5.00e+16 ohm	5.00e+16 ohm	ASTM D 257
Dielectric Constant	2.9	2.9	ASTM D 150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	27.0 kV/mm	686 kV/in	in oil; ASTM D 149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0070	0.0070	ASTM D 150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	

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