

## SABIC Innovative Plastics NORYL RN0712 PPE+HIPS

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

### Material Notes:

Noryl RN0712 is an unfilled Post Consumer recycle (PCR) based injection moldable modified polyphenylene ether resin comprising at least 37% PCR styrenic series resin content. Designed for good dimensional stability and high flow, this resin also uses non-chlorinated, non-brominated FR additives with a specific density of 1.1 g/cm<sup>3</sup>. Noryl RN0712 may be an excellent material candidate for flat panel TV enclosure applications requiring good rheological properties, heat resistance, hydrolysis resistance and low density.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-NORYL-RN0712-PPEHIPS.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-RN0712-PPEHIPS.php)

Physical Properties	Metric	English	Comments
Density	1.11 g/cc	0.0401 lb/in <sup>3</sup>	ISO 1183
Viscosity	95000 cP	95000 cP	Melt Viscosity, 280°C, 1500 sec-1; ISO 11443
Melt Index of Compound	12 g/10 min	12 g/10 min	MVR [cm <sup>3</sup> /10 min]; ISO 1133
	@Load 1.20 kg, Temperature 280 °C	@Load 2.65 lb, Temperature 536 °F	
	22 g/10 min	22 g/10 min	MVR [cm <sup>3</sup> /10 min]; ISO 1133
	@Load 2.16 kg, Temperature 280 °C	@Load 4.76 lb, Temperature 536 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	49.0 MPa	7110 psi	50 mm/min; ISO 527
	50.0 MPa	7250 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	47.0 MPa	6820 psi	50 mm/min; ISO 527
	51.0 MPa	7400 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	7.0 %	7.0 %	50 mm/min; ISO 527
	10 %	10 %	SABIC - Japan Method
Elongation at Yield	3.0 %	3.0 %	50 mm/min; ISO 527
	3.5 %	3.5 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.30 GPa	334 ksi	1 mm/min; ISO 527
	2.47 GPa	358 ksi	50 mm/min; ASTM D638
Flexural Strength	82.0 MPa	11900 psi	1.3 mm/min, 50 mm span; ASTM D790

Flexural Yield Strength Mechanical Properties	77.0 MPa Metric	11200 psi English	2 mm/min; ISO 178 Comments
Flexural Modulus	2.25 GPa	326 ksi	2 mm/min; ISO 178
	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.490 J/cm @Thickness 6.40 mm	0.918 ft-lb/in @Thickness 0.252 in	ASTM D256
Izod Impact, Notched (ISO)	5.00 kJ/m <sup>2</sup>	2.38 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	4.00 kJ/m <sup>2</sup> @Temperature -30.0 °C	1.90 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.500 J/cm <sup>2</sup>	2.38 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.300 J/cm <sup>2</sup> @Temperature -30.0 °C	1.43 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	72.0 µm/m-°C	40.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	72.0 µm/m-°C	40.0 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	74.0 µm/m-°C	41.1 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	74.0 µm/m-°C	41.1 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 1.8 MPa (264 psi)	87.0 °C	189 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
Vicat Softening Point	110 °C	230 °F	Rate B/50; ASTM D1525
	110 °C	230 °F	Rate B/50; ISO 306
	112 °C	234 °F	Rate B/120; ISO 306
Flammability, UL94	V-1	V-1	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	34 %	34 %	ISO 4589

Thermal Properties	Metric	English	Comments
	725 °C	1340 °F	IEC 60695-2-13
	725 °C	1340 °F	IEC 60695-2-13
	960 °C @Thickness 1.00 mm	1760 °F @Thickness 0.0394 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
Dielectric Constant	2.9 @Frequency 1.00e+6 Hz	2.9 @Frequency 1.00e+6 Hz	IEC 60250
	2.91 @Frequency 1.00e+6 Hz	2.91 @Frequency 1.00e+6 Hz	ASTM D150
	2.91 @Frequency 1.00e+6 Hz	2.91 @Frequency 1.00e+6 Hz	ASTM D150
Dissipation Factor	0.0032 @Frequency 1.00e+6 Hz	0.0032 @Frequency 1.00e+6 Hz	ASTM D150
	0.0032 @Frequency 1.00e+6 Hz	0.0032 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A

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