

## SABIC Innovative Plastics NORYL N1150 PPE+PS (Europe-Africa-Middle East)

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

### Material Notes:

Noryl\* N1150 is an unfilled, injection moldable modified polyphenylene ether resin. Designed for good dimensional stability and good flow, this resin also uses non-chlorinated, non-brominated FR additives to achieve a V0 UL94 rating at 0.75 mm with a specific density of 1.11 g/cm<sup>3</sup>. Noryl\* 1150 may be an excellent material candidate for applications requiring electrically insulating properties, low moisture absorption, low warpage, and thin wall flame resistance.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-NORYL-N1150-PPEPS-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-N1150-PPEPS-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.11 g/cc	1.11 g/cc	ASTM D792
Density	1.11 g/cc	0.0401 lb/in <sup>3</sup>	ISO 1183
Water Absorption at Saturation	0.070 %	0.070 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	15 g/10 min @Load 5.00 kg, Temperature 280 Å°C	15 g/10 min @Load 11.0 lb, Temperature 536 Å°F	ASTM D1238
Melt Index of Compound	15 g/10 min @Load 5.00 kg, Temperature 280 Å°C	15 g/10 min @Load 11.0 lb, Temperature 536 Å°F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	52.0 MPa	7540 psi	50 mm/min; ISO 527
	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	72.0 MPa	10400 psi	50 mm/min; ISO 527
	75.0 MPa	10900 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	7.0 %	7.0 %	50 mm/min; ISO 527
	8.0 %	8.0 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	3.5 %	3.5 %	50 mm/min; ISO 527
	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.65 GPa	384 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric <sup>°Pa</sup>	English	Comments <sup>ASTM D638</sup>
Flexural Yield Strength	105 MPa	15200 psi	2 mm/min; ISO 178
	117 MPa	17000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.60 GPa	377 ksi	2 mm/min; ISO 178
	3.05 GPa	442 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.850 J/cm	1.59 ft-lb/in	ASTM D256
	0.650 J/cm @Temperature -30.0 °C	1.22 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	6.00 kJ/m <sup>2</sup>	2.86 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	0.600 J/cm <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	40.0 J	29.5 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	54.5 Åµm/m-Å°C	30.3 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
	54.5 Åµm/m-Å°C	30.3 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
CTE, linear, Transverse to Flow	57.5 Åµm/m-Å°C	31.9 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Deflection Temperature at 1.8 MPa (264 psi)	109 Å°C	228 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Åf
	108 Å°C	226 Å°F	

Thermal Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	unannealed; ASTM D648 Comments
Vicat Softening Point	130 Â°C	266 Â°F	Rate B/50; ASTM D1525
	130 Â°C	266 Â°F	Rate B/50; ISO 306
	132 Â°C	270 Â°F	Rate B/120; ISO 306
UL RTI, Electrical	65.0 Â°C	149 Â°F	UL 746B
UL RTI, Mechanical with Impact	65.0 Â°C	149 Â°F	UL 746B
UL RTI, Mechanical without Impact	65.0 Â°C	149 Â°F	UL 746B
Flammability, UL94	V-0 @Thickness 0.750 mm	V-0 @Thickness 0.0295 in	UL 94
	5VA @Thickness 2.50 mm	5VA @Thickness 0.0984 in	UL 94
Oxygen Index	38 %	38 %	ISO 4589

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.00e+16 ohm-cm	5.00e+16 ohm-cm	ASTM D257
	5.00e+16 ohm-cm	5.00e+16 ohm-cm	IEC 60093
Surface Resistance	2.00e+16 ohm	2.00e+16 ohm	ASTM D257
	2.00e+16 ohm	2.00e+16 ohm	ROA; IEC 60093
Dielectric Constant	2.6 @Frequency 1.00e+6 Hz	2.6 @Frequency 1.00e+6 Hz	ASTM D150
	2.6 @Frequency 1.00e+6 Hz	2.6 @Frequency 1.00e+6 Hz	IEC 60250
Dissipation Factor	0.0030 @Frequency 1.00e+6 Hz	0.0030 @Frequency 1.00e+6 Hz	ASTM D150
	0.0030 @Frequency 1.00e+6 Hz	0.0030 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	275 V	275 V	IEC 60112
	250 - 400 V	250 - 400 V	UL 746A

Electrical Properties

Metric

English

Comments

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