

## SABIC Innovative Plastics NORYL NH8006 PPE+HIPS

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

### Material Notes:

Noryl\* NH8006 resin is a 30% glass reinforced, modified PPE-PS blend. The material uses non-halogenated flame retardants to achieve a UL94 V0 flame rating (color specific) while offering an exceptional balance of strength and dimensional stability. This grade can be processed via extrusion or injection molding. Noryl NH8006 is available in custom colors and may be an excellent material candidate for use in electrical and electronics markets.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-NORYL-NH8006-PPEHIPS.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-NH8006-PPEHIPS.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.33 g/cc	1.33 g/cc	ASTM D792
Density	1.34 g/cc	0.0484 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.0700 %	0.0700 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.23 %	0.23 %	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0025 cm/cm @Thickness 3.20 mm	0.0020 - 0.0025 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	2.1 g/10 min @Load 5.00 kg, Temperature 280 <sup>o</sup> C	2.1 g/10 min @Load 11.0 lb, Temperature 536 <sup>o</sup> F	ASTM D1238
Melt Index of Compound	6.0 g/10 min @Load 10.0 kg, Temperature 280 <sup>o</sup> C	6.0 g/10 min @Load 22.0 lb, Temperature 536 <sup>o</sup> F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	125 MPa	18100 psi	Type I, 5 mm/min; ASTM D638
	125 MPa	18100 psi	5 mm/min; ISO 527
Tensile Strength, Yield	125 MPa	18100 psi	Type I, 5 mm/min; ASTM D638
	125 MPa	18100 psi	5 mm/min; ISO 527
Elongation at Break	1.8 %	1.8 %	5 mm/min; ISO 527
	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	1.8 %	1.8 %	5 mm/min; ISO 527
	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638

Mechanical Properties	Metric <sup>1</sup>	English <sup>1</sup>	Comments <sup>ISO 527</sup>
	9.50 GPa	1380 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	160 MPa	23200 psi	2 mm/min; ISO 178
	185 MPa	26800 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	8.00 GPa	1160 ksi	2 mm/min; ISO 178
	8.60 GPa	1250 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.850 J/cm	1.59 ft-lb/in	ASTM D256
	0.750 J/cm	1.41 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched	5.00 J/cm	9.37 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	8.00 kJ/mÂ²	3.81 ft-lb/inÂ²	80*10*4; ISO 180/1A
	8.00 kJ/mÂ²	3.81 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched (ISO)	26.0 kJ/mÂ²	12.4 ft-lb/inÂ²	80*10*4; ISO 180/1U
Charpy Impact, Notched	0.900 J/cmÂ²	4.28 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	14.0 J	10.3 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	37.0 Âµm/m-Â°C	20.6 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	37.0 Âµm/m-Â°C	20.6 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
CTE, linear, Transverse to Flow	55.0 Âµm/m-Â°C	30.6 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	55.0 Âµm/m-Â°C	30.6 Âµin/in-Â°F	ISO 11359-2

Thermal Properties	Metric @Temperature -40.0 - 40.0 Â°C	English @Temperature -40.0 - 100 Â°F	Comments
Deflection Temperature at 1.8 MPa (264 psi)	149 Â°C	300 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/af
	149 Â°C @Thickness 3.20 mm	300 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	156 Â°C	313 Â°F	Rate B/50; ASTM D1525
	156 Â°C	313 Â°F	Rate B/50; ISO 306
	160 Â°C	320 Â°F	Rate B/120; ISO 306
UL RTI, Electrical	110 Â°C	230 Â°F	UL 746B
UL RTI, Mechanical with Impact	105 Â°C	221 Â°F	UL 746B
UL RTI, Mechanical without Impact	110 Â°C	230 Â°F	UL 746B
Flammability, UL94	V-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	UL 94 by SABIC-IP
	V-0 @Thickness 2.00 mm	V-0 @Thickness 0.0787 in	UL 94 by SABIC-IP
	5VB @Thickness 3.00 mm	5VB @Thickness 0.118 in	UL 94 by SABIC-IP
	5VA @Thickness 3.00 mm	5VA @Thickness 0.118 in	UL 94 by SABIC-IP
Glow Wire Test	960 Â°C @Thickness 3.20 mm	1760 Â°F @Thickness 0.126 in	IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Surface Resistance	>= 4.00e+17 ohm	>= 4.00e+17 ohm	ASTM D257
	4.00e+17 - 5.00e+17 ohm	4.00e+17 - 5.00e+17 ohm	ROA; IEC 60093
Dielectric Constant	3.1 @Frequency 1.00e+6 Hz	3.1 @Frequency 1.00e+6 Hz	IEC 60250
	3.11 @Frequency 1.00e+6 Hz	3.11 @Frequency 1.00e+6 Hz	ASTM D150

Electrical Properties	16.0 kV/mm Metric	406 kV/in English	Comments 0243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0040 @Frequency 1.00e+6 Hz	0.0040 @Frequency 1.00e+6 Hz	ASTM D150
	0.0040 @Frequency 1.00e+6 Hz	0.0040 @Frequency 1.00e+6 Hz	IEC 60250
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 in/min	UL 746A

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