

SABIC Innovative Plastics NORYL NH7010 PPE+PS

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

Material Notes:

Noryl* NH7010 resin is a modified PPE-PS blend that exhibits an excellent balance of non-halogenated flame retardance, high heat resistance, good flow, and low specific gravity for light weight parts. The resin will be available in custom colors and is suitable for injection molding.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-NH7010-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.09 g/cc	1.09 g/cc	ASTM D792
Density	1.09 g/cc	0.0394 lb/in ³	ISO 1183
Moisture Absorption	0.0500 %	0.0500 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.25 %	0.25 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0080 cm/cm @Thickness 3.20 mm	0.0050 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10.1 g/10 min @Load 5.00 kg, Temperature 300 Â°C	10.1 g/10 min @Load 11.0 lb, Temperature 572 Â°F	ASTM D1238
Melt Index of Compound	10 g/10 min @Load 5.00 kg, Temperature 300 Â°C	10 g/10 min @Load 11.0 lb, Temperature 572 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	49.0 MPa	7110 psi	Type I, 50 mm/min; ASTM D638
	63.0 MPa	9140 psi	50 mm/min; ISO 527
Tensile Strength, Yield	68.0 MPa	9860 psi	Type I, 50 mm/min; ASTM D638
	69.0 MPa	10000 psi	50 mm/min; ISO 527
Elongation at Break	8.4 %	8.4 %	50 mm/min; ISO 527
	41 %	41 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.9 %	4.9 %	50 mm/min; ISO 527
	5.2 %	5.2 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.25 GPa	326 ksi	5 mm/min; ASTM D638

Mechanical Properties	Metric 2.50 GPa	English 365 ksi	Comments 1 mm/min; ISO 527
Flexural Yield Strength	102 MPa	14800 psi	1.3 mm/min, 50 mm span; ASTM D790
	109 MPa	15800 psi	2 mm/min; ISO 178
Flexural Modulus	2.47 GPa	358 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.52 GPa	365 ksi	2 mm/min; ISO 178
Izod Impact, Notched	2.23 J/cm	4.18 ft-lb/in	ASTM D256
	0.890 J/cm	1.67 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	20.0 kJ/mÂ²	9.52 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	
Charpy Impact, Notched	2.10 J/cmÂ²	9.99 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	38.0 J	28.0 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	81.6 Âµm/m-Â°C	45.3 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	81.6 Âµm/m-Â°C	45.3 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	81.5 Âµm/m-Â°C	45.3 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	81.5 Âµm/m-Â°C	45.3 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)	139 Â°C	282 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	139 Â°C	282 Â°F	

Thermal Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	unannealed; ASTM D648 Comments
Vicat Softening Point	160 Â°C	320 Â°F	Rate B/50; ASTM D1525
	161 Â°C	322 Â°F	Rate B/50; ISO 306
	162 Â°C	324 Â°F	Rate B/120; ISO 306
UL RTI, Electrical	105 Â°C	221 Â°F	UL 746B
UL RTI, Mechanical with Impact	105 Â°C	221 Â°F	UL 746B
UL RTI, Mechanical without Impact	105 Â°C	221 Â°F	UL 746B
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94 by SABIC-IP
	5VA @Thickness 2.00 mm	5VA @Thickness 0.0787 in	UL 94 by SABIC-IP

Electrical Properties	Metric	English	Comments
Arc Resistance	60 - 120 sec	60 - 120 sec	Tungsten; ASTM D495
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746A
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 in/min	UL 746A

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