

SABIC Innovative Plastics NORYL NH4030B PPE+HIPS (Europe-Africa-Middle East)

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

Material Notes:

NH4030B is a modified PPE-HIPS blend that presents an excellent balance of non halogenated flame retardance, lower smoke production upon burning and low specific gravity for light weight parts. Noryl NH4030B is available in custom colors and may be an excellent material candidate for applications requiring light weight parts and may be processed by injection molding or extrusion techniques.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-NH4030B-PPEHIPS-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 ³	ISO 1183
Moisture Absorption	0.0400 %	0.0400 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.27 %	0.27 %	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	18.3 g/10 min @Load 5.00 kg, Temperature 280 ^o C	18.3 g/10 min @Load 11.0 lb, Temperature 536 ^o F	ASTM D1238
	42.7 g/10 min @Load 5.00 kg, Temperature 300 ^o C	42.7 g/10 min @Load 11.0 lb, Temperature 572 ^o F	ASTM D1238
Melt Index of Compound	17 g/10 min @Load 5.00 kg, Temperature 280 ^o C	17 g/10 min @Load 11.0 lb, Temperature 536 ^o F	MVR [cm ³ /10 min]; ISO 1133
	41 g/10 min @Load 5.00 kg, Temperature 300 ^o C	41 g/10 min @Load 11.0 lb, Temperature 572 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	46.0 MPa	6670 psi	Type I, 50 mm/min; ASTM D638
	47.0 MPa	6820 psi	50 mm/min; ISO 527
Tensile Strength, Yield	54.0 MPa	7830 psi	50 mm/min; ISO 527
	56.0 MPa	8120 psi	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Elongation at Break	27.8 %	27.8 %	Type I, 50 mm/min; ASTM D638
	27.8 %	27.8 %	ISO 527
	27.8 %	27.8 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527
	4.2 %	4.2 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.43 GPa	352 ksi	1 mm/min; ISO 527
	2.45 GPa	355 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	90.0 MPa	13100 psi	1.3 mm/min, 50 mm span; ASTM D790
	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	2.38 GPa	345 ksi	2 mm/min; ISO 178
	2.40 GPa	348 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	2.00 J/cm	3.75 ft-lb/in	ASTM D256
	1.17 J/cm	2.19 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	ASTM D256
Izod Impact, Notched (ISO)	15.0 kJ/mÂ²	7.14 ft-lb/inÂ²	80*10*4; ISO 180/1A
	11.0 kJ/mÂ²	5.23 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.90 J/cmÂ²	9.04 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	46.0 J	33.9 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	83.9 Âµm/m-Â°C	46.6 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	83.9 Âµm/m-Â°C	46.6 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	

Thermal Properties <i>CTE, linear, transverse to Flow</i>	85.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ Metric	47.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ English	Comments ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	85.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	47.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	107 $\text{Å}^\circ\text{C}$	225 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	106 $\text{Å}^\circ\text{C}$	223 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	112 $\text{Å}^\circ\text{C}$	234 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	127 $\text{Å}^\circ\text{C}$	261 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D1525
	127 $\text{Å}^\circ\text{C}$	261 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	128 $\text{Å}^\circ\text{C}$	262 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306

Descriptive Properties	Value	Comments
Draeger Tube Toxicity, Flaming (1.52mm)	Pass	AITM 3.0005, ABD0031
Draeger Tube Toxicity, Non-Flaming (1.52mm)	Pass	AITM 3.0005, ABD0031
Flame Spread Index (1.52mm)	15	ASTM E 162
NBS Smoke Density, Flaming, 20 min (3.2 mm)	126	ASTM E 662
NBS Smoke Density, Flaming, 4 min (1.52mm)	29	ASTM E 662
NBS Smoke Density, Flaming, 4 min (3.2 mm)	35	ASTM E 662
NBS Smoke Density, Non-Flaming, 4 min (1.52mm)	7	ASTM E 662
Vertical Burn a (60s, 1.52mm) passes at	0sec	FAR 25.853
Vertical Burn b (12s, 1.52mm) passes at	4sec	FAR 25.853

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