

SABIC Innovative Plastics NORYL FXN119BK PPE+HIPS

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

Material Notes:

Noryl* FXN119BK is a low gloss PPE/HIPS grade. It provides a balance of mechanical properties and heat performance with intrinsic low gloss appearance. FXN119BK is available in black only.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-FXN119BK-PPEHIPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.06 g/cc	1.06 g/cc	ASTM D792
Density	1.06 g/cc	0.0383 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.23 %	0.23 %	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	8.0 g/10 min @Load 5.00 kg, Temperature 280 °C	8.0 g/10 min @Load 11.0 lb, Temperature 536 °F	ASTM D1238
Melt Index of Compound	8.0 g/10 min @Load 5.00 kg, Temperature 280 °C	8.0 g/10 min @Load 11.0 lb, Temperature 536 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	116	116	ISO 2039-2
Hardness, H358/30	95.0 MPa	13800 psi	ISO 2039-1
Tensile Strength at Break	48.0 MPa	6960 psi	50 mm/min; ISO 527
	49.0 MPa	7110 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	51.0 MPa	7400 psi	50 mm/min; ISO 527
	53.0 MPa	7690 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	40 %	40 %	Type I, 50 mm/min; ASTM D638
	40 %	40 %	50 mm/min; ISO 527
Elongation at Yield	4.2 %	4.2 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.20 GPa	319 ksi	1 mm/min; ISO 527
	2.40 GPa	348 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	77.0 MPa	11200 psi	2 mm/min; ISO 178
	85.0 MPa	12300 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.20 GPa	319 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.20 GPa	319 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.60 J/cm	3.00 ft-lb/in	ASTM D256
	1.10 J/cm @Temperature -30.0 °C	2.06 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	11.0 kJ/m ²	5.23 ft-lb/in ²	80*10*4; ISO 180/1A
	7.00 kJ/m ² @Temperature -30.0 °C	3.33 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.40 J/cm ²	6.66 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.700 J/cm ² @Temperature -30.0 °C	3.33 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	42.0 J	31.0 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	75	75	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	92.0 µm/m-°C	51.1 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	92.0 µm/m-°C	51.1 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	95.0 µm/m-°C	52.8 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	95.0 µm/m-°C	52.8 µin/in-°F	

Thermal Properties	Metric @ Temperature -40.0 - 40.0 °C	English @ Temperature -40.0 - 104 °F	ISO 11359-2 Comments
Deflection Temperature at 0.46 MPa (66 psi)	133 °C	271 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	117 °C	243 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	117 °C @Thickness 3.20 mm	243 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	139 °C	282 °F	Rate B/50; ISO 306
	140 °C	284 °F	Rate B/50; ASTM D1525
	142 °C	288 °F	Rate B/120; ISO 306
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL 94 by SABIC-IP
Glow Wire Test	750 °C @Thickness 3.20 mm	1380 °F @Thickness 0.126 in	IEC 60695-2-12

Optical Properties	Metric	English	Comments
Gloss	20 %	20 %	untextured, 60 degrees; ASTM D523

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	Passes	IEC 60695-10-2

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