

SABIC Innovative Plastics NORYL FXN121BK PPE+HIPS (Asia Pacific)

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

Material Notes:

Noryl* FXN121BK is an unfilled modified polyphenylene ether resin suitable for injection molding. Designed to possess a unique low gloss surface appearance even when molded in polished tools, this resin uses non-chlorinated, non-brominated FR additives to achieve a V1 UL94 rating. FXN121BK is available in black only.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-FXN121BK-PPEHIPS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.08 g/cc	1.08 g/cc	ASTM D792
Density	1.08 g/cc	0.0390 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23 ^o 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	7.0 g/10 min @Load 5.00 kg, Temperature 280 ^o C	7.0 g/10 min @Load 11.0 lb, Temperature 536 ^o F	ASTM D1238
Melt Index of Compound	7.0 g/10 min @Load 5.00 kg, Temperature 280 ^o C	7.0 g/10 min @Load 11.0 lb, Temperature 536 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	119	119	ISO 2039-2
Hardness, H358/30	105 MPa	15200 psi	ISO 2039-1
Tensile Strength at Break	52.0 MPa	7540 psi	50 mm/min; ISO 527
	53.0 MPa	7690 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	63.0 MPa	9140 psi	50 mm/min; ISO 527
	64.0 MPa	9280 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	30 %	30 %	50 mm/min; ISO 527
	30 %	30 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.6 %	4.6 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
			Type 1, 50 mm/min; ASTM D638
Tensile Modulus	2.30 GPa	334 ksi	5 mm/min; ASTM D638
	2.35 GPa	341 ksi	1 mm/min; ISO 527
Flexural Yield Strength	92.0 MPa	13300 psi	2 mm/min; ISO 178
	97.0 MPa	14100 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	2.40 GPa	348 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.20 J/cm	2.25 ft-lb/in	ASTM D256
	0.700 J/cm	1.31 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
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	3.33 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
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	3.33 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	41.0 J	30.2 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	60	60	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	82.0 Åµm/m-Å°C	45.6 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
	82.0 Åµm/m-Å°C	45.6 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	85.0 Åµm/m-Å°C	47.2 Åµin/in-Å°F	ASTM E 831

Thermal Properties	Metric @Temperature -40.0 - 40.0 Å°C	English @Temperature -40.0 - 104 Å°F	Comments
	85.0 Åµm/m-Å°C	47.2 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	133 Å°C	271 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	133 Å°C	271 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	118 Å°C	244 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Åf
	119 Å°C	246 Å°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	138 Å°C	280 Å°F	Rate B/50; ISO 306
	139 Å°C	282 Å°F	Rate B/50; ASTM D1525
	142 Å°C	288 Å°F	Rate B/120; ISO 306
Flammability, UL94	V-1	V-1	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	30 %	30 %	ISO 4589
Glow Wire Test	700 Å°C	1290 Å°F	IEC 60695-2-13
	960 Å°C	1760 Å°F	IEC 60695-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	

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

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	2.7	2.7	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.7	2.7	IEC 60250
	@Frequency 50.0 - 60.0	@Frequency 50.0 - 60.0	

Electrical Properties	Hz Metric	Hz English	Comments
Dielectric Strength	16.0 kV/mm @Thickness 3.20 mm	406 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
Dissipation Factor	0.00040 @Frequency 50.0 - 60.0 Hz	0.00040 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0020 @Frequency 1.00e+6 Hz	0.0020 @Frequency 1.00e+6 Hz	IEC 60250

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

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