

SABIC Innovative Plastics NORYL FXN121BK PPE+HIPS (Europe-Africa-Middle East)

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-Europe-Africa-Middle-East.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 %	23Â°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 Â°C	7.0 g/10 min @Load 11.0 lb, Temperature 536 Â°F	ASTM D1238
Melt Index of Compound	7.0 g/10 min @Load 5.00 kg, Temperature 280 Â°C	7.0 g/10 min @Load 11.0 lb, Temperature 536 Â°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 %	Type I, 50 mm/min; ASTM D638
	30 %	30 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments ; ISO 527
	4.8 %	4.8 %	Type I, 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 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	11.0 kJ/mÂ²	5.23 ft-lb/inÂ²	80*10*4; ISO 180/1A
	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	1.40 J/cmÂ²	6.66 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.700 J/cmÂ²	3.33 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Dart Drop, Total Energy	41.0 J	30.2 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°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 Âµm/m-Â°C	45.6 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	82.0 Âµm/m-Â°C	45.6 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	

Thermal Properties CTE, linear, Transverse to Flow	85.0 Âµm/m-Â°C Metric	47.2 Âµin/in-Â°F English	Comments ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	85.0 Âµm/m-Â°C	47.2 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	133 Â°C	271 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	133 Â°C	271 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	118 Â°C	244 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	119 Â°C	246 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	138 Â°C	280 Â°F	Rate B/50; ISO 306
	139 Â°C	282 Â°F	Rate B/50; ASTM D1525
	142 Â°C	288 Â°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 Â°C	1290 Â°F	IEC 60695-2-13
	960 Â°C	1760 Â°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	

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

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

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