

## SABIC Innovative Plastics Noryl FXN2090H PPE+HIPS

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

### Material Notes:

Noryl\* FXN2090H resin is an unfilled, injection moldable grade. Designed for exceptionally high gloss and improved pencil hardness vs. standard Noryl grades, FXN2090H resin uses non-halogenated FR additives to deliver UL94 V-0 performance at 1.5 mm. Noryl FXN2090H resin is currently available in custom black colors and may be an excellent material candidate for consumer electronics applications requiring high gloss aesthetics, scratch resistance and FR performance. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Noryl-FXN2090H-PPEHIPS.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Noryl-FXN2090H-PPEHIPS.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.12 g/cc	1.12 g/cc	ASTM D 792
Density	1.12 g/cc	0.0405 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.060 %	0.060 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.18 % @Temperature 23.0 <sup>o</sup> C	0.18 % @Temperature 73.4 <sup>o</sup> F	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	9.0 g/10 min @Load 2.16 kg, Temperature 260 <sup>o</sup> C	9.0 g/10 min @Load 4.76 lb, Temperature 500 <sup>o</sup> F	ASTM D 1238
	25 g/10 min @Load 2.16 kg, Temperature 280 <sup>o</sup> C	25 g/10 min @Load 4.76 lb, Temperature 536 <sup>o</sup> F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D 638
	58.0 MPa	8410 psi	50 mm/min; ISO 527
Tensile Strength, Yield	66.0 MPa	9570 psi	Type I, 50 mm/min; ASTM D 638
	66.0 MPa	9570 psi	50 mm/min; ISO 527
Elongation at Break	6.3 %	6.3 %	50 mm/min; ISO 527
	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield	3.6 %	3.6 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.64 GPa	383 ksi	1 mm/min; ISO 527
	2.68 GPa	389 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	99.0 MPa	14400 psi	1.3 mm/min, 50 mm span; ASTM D 790
	105 MPa	15200 psi	2 mm/min; ISO 178
Flexural Modulus	2.51 GPa	364 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.66 GPa	386 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.450 J/cm @Temperature -30.0 Â°C	0.843 ft-lb/in @Temperature -22.0 Â°F	ASTM D 256
	1.00 J/cm @Temperature 23.0 Â°C	1.87 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Notched (ISO)	3.00 kJ/mÂ² @Temperature -30.0 Â°C	1.43 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
	5.00 kJ/mÂ² @Temperature 23.0 Â°C	2.38 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.500 J/cmÂ² @Temperature 23.0 Â°C	2.38 ft-lb/inÂ² @Temperature 73.4 Â°F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	17.0 J @Temperature 23.0 Â°C	12.5 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	75.0 Âµm/m-Â°C	41.7 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	75.0 Âµm/m-Â°C	41.7 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	83.0 Âµm/m-Â°C	46.1 Âµin/in-Â°F	ASTM E 831

Thermal Properties	Metric @Temperature -40.0 - 40.0 Å°C	English @Temperature -40.0 - 104 Å°F	Comments
	83.0 Åµm/m-Å°C	46.1 Åµin/in-Å°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Å°C	@Temperature -40.0 - 104 Å°F	
Deflection Temperature at 1.8 MPa (264 psi)	87.0 Å°C	189 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	84.0 Å°C	183 Å°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	107 Å°C	225 Å°F	Rate B/50; ISO 306
	109 Å°C	228 Å°F	Rate B/120; ISO 306
	109 Å°C	228 Å°F	Rate B/50; ASTM D 1525
UL RTI, Electrical	65.0 Å°C	149 Å°F	UL 746B
UL RTI, Mechanical with Impact	65.0 Å°C	149 Å°F	UL 746B
UL RTI, Mechanical without Impact	65.0 Å°C	149 Å°F	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Glow Wire Test	725 Å°C	1340 Å°F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	725 Å°C	1340 Å°F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	750 Å°C	1380 Å°F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	960 Å°C	1760 Å°F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Optical Properties	Metric	English	Comments
Gloss	97 %	97 %	untextured, 60 degrees; ASTM D 523

Electrical Properties	Metric	English	Comments
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	PLC code 0; UL 746A

Descriptive Properties	Value	Comments
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Ball Pressure Test, 75A°C +/- 2A°C  
Descriptive Properties

PASS  
Value

IEC 60695-10-2  
Comments

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