

SABIC Innovative Plastics Noryl N190HX PPE+PS

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

Material Notes:

High gloss. 182F (83C) HDT. UL94 V-0/5VA rated. 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-N190HX-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	ASTM D 792
Water Absorption	0.066 %	0.066 %	ASTM D 570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	117	117	ASTM D 785
Tensile Strength at Break	49.0 MPa	7110 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	14 %	14 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield	3.8 %	3.8 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.46 GPa	357 ksi	50 mm/min; ASTM D 638
Flexural Yield Strength	89.0 MPa	12900 psi	2.6 mm/min, 100 mm span; ASTM D 790
Flexural Modulus	2.27 GPa	329 ksi	2.6 mm/min, 100 mm span; ASTM D 790
Izod Impact, Notched	0.800 J/cm	1.50 ft-lb/in	ASTM D 256
	@Temperature -30.0 Å°C	@Temperature -22.0 Å°F	
Izod Impact, Notched	1.92 J/cm	3.60 ft-lb/in	ASTM D 256
	@Temperature 23.0 Å°C	@Temperature 73.4 Å°F	
Izod Impact, Unnotched	18.69 J/cm	35.01 ft-lb/in	ASTM D 4812
	@Temperature 23.0 Å°C	@Temperature 73.4 Å°F	
Izod Impact, Unnotched	11.0 J	8.11 ft-lb	

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	Instrumented Impact Energy @ peak; ASTM D 3763
	37.0 J	27.3 ft-lb	Instrumented Impact Energy @ peak; ASTM D 3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Taber Abrasion, mg/1000 Cycles	82	82	CS-17; ASTM D 1044
	@Load 1.00 kg	@Load 2.20 lb	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 Âµm/m-Â°C	50.0 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 95.0 Â°C	@Temperature -40.0 - 203 Â°F	
CTE, linear, Transverse to Flow	91.8 Âµm/m-Â°C	51.0 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 95.0 Â°C	@Temperature -40.0 - 203 Â°F	
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ftÂ²- Â°F	ASTM C 177
Deflection Temperature at 0.46 MPa (66 psi)	95.0 Â°C	203 Â°F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	83.0 Â°C	181 Â°F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	
UL RTI, Electrical	95.0 Â°C	203 Â°F	UL 746B
UL RTI, Mechanical with Impact	80.0 Â°C	176 Â°F	UL 746B
UL RTI, Mechanical without Impact	95.0 Â°C	203 Â°F	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.01 mm	@Thickness 0.0398 in	
	V-0	V-0	UL 94
@Thickness 1.47 mm	@Thickness 0.0579 in		
	5VA	5VA	UL 94
	@Thickness 2.99 mm	@Thickness 0.118 in	
Oxygen Index	35.7 %	35.7 %	LOI; ASTM D 2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	8.00e+16 ohm-cm	8.00e+16 ohm-cm	ASTM D 257

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.6 @Frequency 100000 Hz	2.6 @Frequency 100000 Hz	ASTM D 150
Dielectric Strength	28.1 kV/mm @Thickness 1.60 mm	714 kV/in @Thickness 0.0630 in	in oil; ASTM D 149
Dissipation Factor	0.0057 @Frequency 100000 Hz	0.0057 @Frequency 100000 Hz	ASTM D 150
	0.011 @Frequency 100 Hz	0.011 @Frequency 100 Hz	ASTM D 150
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	Tungsten, PLC code 7; ASTM D 495
Comparative Tracking Index	400 - 600 V	400 - 600 V	PLC code 1; UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	PLC code 2; UL 746A
High Amp Arc Ignition, HAI	30 - 60 arcs	30 - 60 arcs	surface, PLC code 2; UL 746A
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 in/min	PLC code 4; UL 746A

Descriptive Properties	Value	Comments
Radiant Panel Listing	YES	UL Tested
UV-light, water exposure/immersion	F1	UL 746C

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