

SABIC Innovative Plastics Noryl V180HF PPE+HIPS (Europe-Africa-Middle East)

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

Material Notes:

NORYL V180HF is an unfilled, flame retardant material. It has been fully optimized w.r.t. flow and is halogen free according to VDE/DIN 472 part 815. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Noryl-V180HF-PPEHIPS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.11 g/cc	0.0401 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.060 %	0.060 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.15 % @Temperature 23.0 ^o C	0.15 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on tensile bar; SABIC Method
Melt Flow	14 g/10 min @Load 1.20 kg, Temperature 280 ^o C	14 g/10 min @Load 2.65 lb, Temperature 536 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	30 g/10 min @Load 2.16 kg, Temperature 280 ^o C	30 g/10 min @Load 4.76 lb, Temperature 536 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	90.0 MPa	13100 psi	ISO 2039-1
Tensile Strength at Break	35.0 MPa	5080 psi	50 mm/min; ISO 527
Tensile Strength, Yield	40.0 MPa	5800 psi	50 mm/min; ISO 527
Elongation at Break	20 %	20 %	50 mm/min; ISO 527
Elongation at Yield	2.5 %	2.5 %	50 mm/min; ISO 527
Tensile Modulus	2.20 GPa	319 ksi	1 mm/min; ISO 527
Flexural Yield Strength	55.0 MPa	7980 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	4.00 kJ/m ²	1.90 ft-lb/in ²	

Izod Impact, Notched (ISO) Mechanical Properties	@Temperature -30.0 Metric °C	@Temperature -22.0 English °F	80*10*4; ISO 180/1A Comments
	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.400 J/cm ²	1.90 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.500 J/cm ²	2.38 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	65	65	CS-17; SABIC Method
	@Load 1.00 kg	@Load 2.20 lb	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 Åµm/m-Å°C	50.0 Åµin/in-Å°F	ISO 11359-2
	@Temperature 23.0 - 80.0 Å°C	@Temperature 73.4 - 176 Å°F	
CTE, linear, Transverse to Flow	90.0 Åµm/m-Å°C	50.0 Åµin/in-Å°F	ISO 11359-2
	@Temperature 23.0 - 80.0 Å°C	@Temperature 73.4 - 176 Å°F	
Thermal Conductivity	0.220 W/m-K	1.53 BTU-in/hr-ft ² - Å°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	80.0 Å°C	176 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	65.0 Å°C	149 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	80.0 Å°C	176 Å°F	Rate B/50; ISO 306
	85.0 Å°C	185 Å°F	Rate B/120; ISO 306
	95.0 Å°C	203 Å°F	Rate A/50; ISO 306
UL RTI, Electrical	50.0 Å°C	122 Å°F	UL 746B
UL RTI, Mechanical with Impact	50.0 Å°C	122 Å°F	UL 746B
UL RTI, Mechanical without Impact	50.0 Å°C	122 Å°F	UL 746B
Flammability, UL94	V-1	V-1	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0	V-0	

Thermal Properties	Metric @ Thickness 2.50 mm	English @ Thickness 0.0984 in	Comments
Oxygen Index	32 %	32 %	LOI; ISO 4589
Glow Wire Test	960 Â°C @Thickness 3.20 mm	1760 Â°F @Thickness 0.126 in	Glow Wire Flammability Index; IEC 60695-2-12

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	2.6 @Frequency 1.00e+6 Hz	2.6 @Frequency 1.00e+6 Hz	IEC 60250
	2.7 @Frequency 50.0 - 60.0 Hz	2.7 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	16.0 kV/mm @Thickness 3.20 mm	406 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
Dissipation Factor	0.0040 @Frequency 1.00e+6 Hz	0.0040 @Frequency 1.00e+6 Hz	IEC 60250
	0.010 @Frequency 50.0 - 60.0 Hz	0.010 @Frequency 50.0 - 60.0 Hz	IEC 60250

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