

SABIC Innovative Plastics NORYL ENV131 PPE+HIPS (Europe-Africa-Middle East)

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

Material Notes:

Noryl* ENV131 is an unfilled modified polyphenylene ether resin developed for extrusion process. Designed for high heat resistance and thin wall FR performance, this resin delivers a UL94 V1 rating at 1.5 mm and a UL94 V0 rating at 3.0 mm. Noryl ENV131 is also halogen free according to VDE/DIN 472 part 815 and may be an excellent material candidate for extrusion moulded application where flame resistance and high temperature resistance is required. This Resin pass the BPT @ 125 deg C and has CTI > 450V in selected colors.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-ENV131-PPEHIPS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.10 g/cc	0.0397 lb/in ³	ISO 1183
Moisture Absorption	0.0800 %	0.0800 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.29 %	0.29 %	ISO 62
Melt Index of Compound	11 g/10 min @Load 10.0 kg, Temperature 280 ^o C	11 g/10 min @Load 22.0 lb, Temperature 536 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	60.0 MPa	8700 psi	50 mm/min; ISO 527
Tensile Strength, Yield	67.0 MPa	9720 psi	50 mm/min; ISO 527
Elongation at Break	9.0 %	9.0 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527
Tensile Modulus	2.45 GPa	355 ksi	1 mm/min; ISO 527
Flexural Yield Strength	100 MPa	14500 psi	2 mm/min; ISO 178
Flexural Modulus	2.49 GPa	361 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	21.0 kJ/m ²	9.99 ft-lb/in ²	80*10*4; ISO 180/1A
	9.00 kJ/m ² @Temperature -30.0 ^o C	4.28 ft-lb/in ² @Temperature -22.0 ^o F	80*10*4; ISO 180/1A
Charpy Impact, Notched	2.80 J/cm ²	13.3 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	79.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	44.1 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	79.8 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	44.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTME 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	82.6 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	45.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTME 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	82.8 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	46.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	112 $\text{Å}^\circ\text{C}$	234 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	132 $\text{Å}^\circ\text{C}$	270 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	138 $\text{Å}^\circ\text{C}$	280 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
UL RTI, Electrical	65.0 $\text{Å}^\circ\text{C}$	149 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	65.0 $\text{Å}^\circ\text{C}$	149 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	65.0 $\text{Å}^\circ\text{C}$	149 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	V-1	V-1	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0	V-0	UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	960 $\text{Å}^\circ\text{C}$	1760 $\text{Å}^\circ\text{F}$	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.17e+16 ohm-cm	1.17e+16 ohm-cm	ASTM D257
Surface Resistance	8.95e+13 ohm	8.95e+13 ohm	ASTM D257
Dielectric Constant	2.8	2.8	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.8	2.8	

Electrical Properties	Metric @Frequency 1.00e+6 Hz	English @Frequency 1.00e+6 Hz	Comments
Dielectric Strength	24.5 kV/mm @Thickness 1.60 mm	622 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
Comparative Tracking Index	450 V	450 V	IEC 60112

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

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