

SABIC Innovative Plastics NORYL ENV105 PPE+HIPS (Europe-Africa-Middle East)

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

Material Notes:

NORYL ENV105 is an impact modified extrusion grade with a Vicat B/120 of 115C according ISO 306.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-ENV105-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	0.0600 %	0.0600 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.15 %	0.15 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	7.0 g/10 min @Load 5.00 kg, Temperature 280 ^o C	7.0 g/10 min @Load 11.0 lb, Temperature 536 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	90.0 MPa	13100 psi	ISO 2039-1
Tensile Strength at Break	40.0 MPa	5800 psi	50 mm/min; ISO 527
Tensile Strength, Yield	50.0 MPa	7250 psi	50 mm/min; ISO 527
Elongation at Break	10 %	10 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527
Tensile Modulus	2.00 GPa	290 ksi	1 mm/min; ISO 527
Flexural Yield Strength	60.0 MPa	8700 psi	2 mm/min; ISO 178
Flexural Modulus	1.70 GPa	247 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	25.0 kJ/m ²	11.9 ft-lb/in ²	80*10*4; ISO 180/1A
	20.0 kJ/m ² @Temperature -30.0 ^o C	9.52 ft-lb/in ² @Temperature -22.0 ^o F	80*10*4; ISO 180/1A
Charpy Impact, Notched	3.00 J/cm ²	14.3 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	2.00 J/cm ²	9.52 ft-lb/in ²	

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 11359-2

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	44.4 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	100 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	55.6 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
Thermal Conductivity	0.230 W/m-K	1.60 BTU-in/hr-ftÂ²-Â°F	ISO 8302
Hot Ball Pressure Test	<= 105 Â°C	<= 221 Â°F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	110 Â°C	230 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	80.0 Â°C	176 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	110 Â°C	230 Â°F	Rate A/50; ISO 306
	110 Â°C	230 Â°F	Rate B/50; ISO 306
	115 Â°C	239 Â°F	Rate B/120; ISO 306
UL RTI, Electrical	50.0 Â°C	122 Â°F	UL 746B
UL RTI, Mechanical with Impact	50.0 Â°C	122 Â°F	UL 746B
UL RTI, Mechanical without Impact	50.0 Â°C	122 Â°F	UL 746B
Flammability, UL94	V-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	UL 94
Oxygen Index	32 %	32 %	ISO 4589
Glow Wire Test	960 Â°C @Thickness 1.00 mm	1760 Â°F @Thickness 0.0394 in	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	2.7 @Frequency 1.00e+6	2.7 @Frequency 1.00e+6	IEC 60250

Electrical Properties	Hz Metric	Hz English	Comments
	2.8	2.8	
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	16.0 kV/mm	406 kV/in	
	@Thickness 3.20 mm	@Thickness 0.126 in	in oil; IEC 60243-1
	26.0 kV/mm	660 kV/in	
	@Thickness 1.60 mm	@Thickness 0.0630 in	in oil; IEC 60243-1
	33.0 kV/mm	838 kV/in	
	@Thickness 0.800 mm	@Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.0030	0.0030	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
	0.010	0.010	
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250

Descriptive Properties	Value	Comments
Ball Pressure Test, 75Â°C +/- 2Â°C	PASSES	IEC 60695-10-2
M1 Flame Class Rating	1mm	NF P 92501
M2 Flame Class Rating	2mm	NF P 92501

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