





**SABIC NORYL GFN1V PPE+HIPS (Europe-Africa-Middle East) (Unverified Data\*\*)**

**Categories:** [Polymer](#); [Thermoplastic](#); [Polyphenylene Ether/PPO](#); [Polystyrene \(PS\)](#)

**Material Notes:** NORYL GFN1V is a 10 % glass fibre reinforced material with a HDT/A of 110C according ISO 75. NORYL GFN1V cust spec 1977 has been approved for potable water applications up to 85C by the UK WFBS according BS 6920 in limited colours.

**Vendors:** No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	<a href="#">1.17</a> g/cc	<a href="#">0.0423</a> lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	ISO 62
Linear Mold Shrinkage, Flow	<a href="#">0.0030</a> - <a href="#">0.0050</a> cm/cm	<a href="#">0.0030</a> - <a href="#">0.0050</a> in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	<a href="#">8.0</a> g/10 min @Load 5.00 kg, Temperature 280 °C	<a href="#">8.0</a> g/10 min @Load 11.0 lb, Temperature 536 °F	MVR [cm <sup>3</sup> /10 min]; ISO 1133
Mechanical Properties	Metric	English	Comments
Hardness, H358/30	<a href="#">100</a> MPa	<a href="#">14500</a> psi	ISO 2039-1
Tensile Strength at Break	<a href="#">45.0</a> MPa	<a href="#">6530</a> psi	5 mm/min; ISO 527
Tensile Strength, Yield	<a href="#">50.0</a> MPa	<a href="#">7250</a> psi	5 mm/min; ISO 527
Elongation at Break	4.0 %	4.0 %	5 mm/min; ISO 527
Elongation at Yield	3.0 %	3.0 %	5 mm/min; ISO 527
Tensile Modulus	<a href="#">4.00</a> GPa	<a href="#">580</a> ksi	1 mm/min; ISO 527
Flexural Strength	<a href="#">95.0</a> MPa	<a href="#">13800</a> psi	2 mm/min; ISO 178
Flexural Yield Strength	<a href="#">95.0</a> MPa	<a href="#">13800</a> psi	2 mm/min; ISO 178
Flexural Modulus	<a href="#">3.50</a> GPa	<a href="#">508</a> ksi	2 mm/min; ISO 178
Izod Impact, Unnotched (ISO)	<a href="#">20.0</a> kJ/m <sup>2</sup>	<a href="#">9.52</a> ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1U
 Charpy Impact Unnotched	<a href="#">20.0</a> kJ/m <sup>2</sup> @Temperature -30.0 °C	<a href="#">9.52</a> ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1U
 Charpy Impact Unnotched	<a href="#">2.50</a> J/cm <sup>2</sup> <a href="#">2.50</a> J/cm <sup>2</sup> @Temperature -30.0 °C	<a href="#">11.9</a> ft-lb/in <sup>2</sup> <a href="#">11.9</a> ft-lb/in <sup>2</sup> @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU Edgew 80*10*4 sp=62mm; ISO 179/1eU
Taber Abrasion, mg/1000 Cycles	50	50	CS-17, 1 kg; SABIC Method
Electrical Properties	Metric	English	Comments
Volume Resistivity	<a href="#">1.00e+15</a> ohm-cm	<a href="#">1.00e+15</a> ohm-cm	IEC 60093
Surface Resistance	>= <a href="#">1.00e+15</a> ohm	>= <a href="#">1.00e+15</a> ohm	ROA; IEC 60093
Dielectric Constant 	2.8 @Frequency 50.0 - 60.0 Hz	2.8 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	2.8 @Frequency 1.00e+6 Hz	2.8 @Frequency 1.00e+6 Hz	IEC 60250
Dissipation Factor 	<a href="#">18.0</a> kV/mm @Thickness 3.20 mm	<a href="#">457</a> kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	0.00050 @Frequency 50.0 - 60.0 Hz	0.00050 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.0010 @Frequency 1.00e+6 Hz	0.0010 @Frequency 1.00e+6 Hz	IEC 60250
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	<a href="#">50.0</a> µm/m-°C @Temperature 23.0 - 80.0 °C	<a href="#">27.8</a> µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	<a href="#">70.0</a> µm/m-°C @Temperature 23.0 - 80.0 °C	<a href="#">38.9</a> µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Thermal Conductivity	<a href="#">0.240</a> W/m-K	<a href="#">1.67</a> BTU-in/hr-ft <sup>2</sup> -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	<a href="#">130</a> °C	<a href="#">266</a> °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	<a href="#">115</a> °C	<a href="#">239</a> °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	<a href="#">125</a> °C	<a href="#">257</a> °F	Rate B/50; ISO 306
	<a href="#">130</a> °C	<a href="#">266</a> °F	Rate B/120; ISO 306
	<a href="#">135</a> °C	<a href="#">275</a> °F	Rate A/50; ISO 306

UL R11, Electrical	<a href="#">50.0</a> °C	<a href="#">122</a> °F	UL 746B
UL RTI, Mechanical with Impact	<a href="#">50.0</a> °C	<a href="#">122</a> °F	UL 746B
UL RTI, Mechanical without Impact	<a href="#">50.0</a> °C	<a href="#">122</a> °F	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	26 %	26 %	ISO 4589
Glow Wire Flammability Index	<a href="#">750</a> °C	<a href="#">1380</a> °F	IEC 60695-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	

### Descriptive Properties

Ball Pressure Test, 125°C +/- 2°C	PASSES	IEC 60695-10-2
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