

SABIC Innovative Plastics NORYL GFN1740V PPE+PS

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

Material Notes:

Noryl* GFN1740V Polyphenylene Oxide (PPO) + Polystyrene (PS) resin is a 40 % Glass Reinforced, injection moldable grade with improved hydrolytic stability and with a Tensile Modulus > 11000 MPa; this grade has been developed for fluid engineering applications where higher static stiffness is required. Noryl* GFN1740V has been certified for potable water applications up to 85C in Europe and North America in limited colours.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-GFN1740V-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.40 g/cc	1.40 g/cc	ASTM D792
Density	1.40 g/cc	0.0506 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 %	0.20 %	ISO 62
Linear Mold Shrinkage, Flow	0.00090 - 0.0015 cm/cm @Thickness 3.20 mm	0.00090 - 0.0015 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10 g/10 min @Load 5.00 kg, Temperature 300 Â°C	10 g/10 min @Load 11.0 lb, Temperature 572 Â°F	ASTM D1238
Melt Index of Compound	20 g/10 min @Load 10.0 kg, Temperature 300 Â°C	20 g/10 min @Load 22.0 lb, Temperature 572 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	155 MPa	22500 psi	5 mm/min; ISO 527
	165 MPa	23900 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	155 MPa	22500 psi	5 mm/min; ISO 527
	165 MPa	23900 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	1.8 %	1.8 %	Type I, 5 mm/min; ASTM D638
	1.8 %	1.8 %	5 mm/min; ISO 527
Elongation at Yield	1.8 %	1.8 %	Type I, 5 mm/min; ASTM D638
	1.8 %	1.8 %	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	11.3 GPa	1640 ksi	1 mm/min; ISO 527
	13.8 GPa	2000 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	195 MPa	28300 psi	2 mm/min; ISO 178
	225 MPa	32600 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	9.50 GPa	1380 ksi	2 mm/min; ISO 178
	11.7 GPa	1700 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.08 J/cm	2.02 ft-lb/in	ASTM D256
	0.900 J/cm	1.69 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Unnotched (ISO)	30.0 kJ/mÂ²	14.3 ft-lb/inÂ²	80*10*4; ISO 180/1U
	30.0 kJ/mÂ²	14.3 ft-lb/inÂ²	80*10*4; ISO 180/1U
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact Unnotched	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Dart Drop, Total Energy	18.0 J	13.3 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 Âµm/m-Â°C	11.1 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	20.0 Âµm/m-Â°C	11.1 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
CTE, linear, Transverse to Flow	70.0 Âµm/m-Â°C	38.9 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	70.0 Âµm/m-Â°C	38.9 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Deflection Temperature at 1.8 MPa	147 Â°C	297 Â°F	

(264 psi) Thermal Properties	Metric	English	Flatw 80*10*4 sp=64mm; ISO 75/Af Comments
	148 Â°C @Thickness 3.20 mm	298 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	151 Â°C	304 Â°F	Rate B/50; ASTM D1525
	152 Â°C	306 Â°F	Rate B/50; ISO 306
	161 Â°C	322 Â°F	Rate B/120; ISO 306

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