

SABIC Innovative Plastics Noryl GFN1420V PPE+PS (Asia Pacific)

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

Material Notes:

Noryl* GFN1420V resin is a high flow blend of polyphenylene ether (PPE) and polystyrene (PS) resin that contains 20 % glass reinforcement. The resin is suitable for injection molding and is designed to have higher flow compared to Noryl GFN1520V resin. Noryl GFN1420V resin will be certified for potable water applications up to 85C in Europe and North America in limited colors. This data was supplied by SABIC-IP for the Asia Pacific region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Noryl-GFN1420V-PPEPS-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.24 g/cc	1.24 g/cc	ASTM D 792
Density	1.24 g/cc	0.0448 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.060 %	0.060 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 % @Temperature 23.0 ^o C	0.20 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm @Thickness 3.20 mm	0.0020 - 0.0040 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	11 g/10 min @Load 5.00 kg, Temperature 280 ^o C	11 g/10 min @Load 11.0 lb, Temperature 536 ^o F	ASTM D 1238
	23 g/10 min @Load 10.0 kg, Temperature 280 ^o C	23 g/10 min @Load 22.0 lb, Temperature 536 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	105 MPa	15200 psi	5 mm/min; ISO 527
	109 MPa	15800 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	105 MPa	15200 psi	5 mm/min; ISO 527
	109 MPa	15800 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	2.5 %	2.5 %	Type I, 5 mm/min; ASTM D 638
	2.5 %	2.5 %	5 mm/min; ISO 527
Elongation at Yield	2.5 %	2.5 %	Type I, 5 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
			5 mm/min; ISO 527
Tensile Modulus	6.40 GPa	928 ksi	1 mm/min; ISO 527
	6.50 GPa	943 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	155 MPa	22500 psi	2 mm/min; ISO 178
	159 MPa	23100 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	5.80 GPa	841 ksi	2 mm/min; ISO 178
	5.90 GPa	856 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.920 J/cm @Temperature -30.0 Â°C	1.72 ft-lb/in @Temperature -22.0 Â°F	ASTM D 256
	0.980 J/cm @Temperature 23.0 Â°C	1.84 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	5.10 J/cm @Temperature 23.0 Â°C	9.55 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
	5.10 J/cm @Temperature -30.0 Â°C	9.55 ft-lb/in @Temperature -22.0 Â°F	ASTM D 4812
Izod Impact, Unnotched (ISO)	30.0 kJ/mÂ² @Temperature 23.0 Â°C	14.3 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
	30.0 kJ/mÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.00 J/cmÂ² @Temperature 23.0 Â°C	14.3 ft-lb/inÂ² @Temperature 73.4 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.00 J/cmÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Impact Test	17.0 J @Temperature 23.0 Â°C	12.5 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	16.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	30.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	16.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	70.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	70.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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)	131 $\text{Å}^\circ\text{C}$	268 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	132 $\text{Å}^\circ\text{C}$	270 $\text{Å}^\circ\text{F}$	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	135 $\text{Å}^\circ\text{C}$	275 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D 1525
	135 $\text{Å}^\circ\text{C}$	275 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	141 $\text{Å}^\circ\text{C}$	286 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306

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