

SABIC Innovative Plastics NORYL 731 PPE+PS

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

Material Notes:

PPE+PS blend. Unfilled. NSF listed for potable water use in several colors (Standard 61). FDA compliant in several colors (restrictions apply). UL94 HB rated. Low water absorption. Hydrolytic stability. Dimensional stability. Suitable for fluid engineering applications: valve components, water pump housings, etc. This grade will no longer be supported with biocompatibility information and should not be used for medical applications which require biocompatibility. Alternative grade HN731A.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-NORYL-731-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.06 g/cc	1.06 g/cc	ASTM D792
Density	1.06 g/cc	0.0383 lb/in ³	ISO 1183
Water Absorption	0.060 % @Time 86400 sec	0.060 % @Time 24.0 hour	ASTM D570
Moisture Absorption	0.0600 %	0.0600 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.23 %	0.23 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	9.2 g/10 min @Load 5.00 kg, Temperature 280 Â°C	9.2 g/10 min @Load 11.0 lb, Temperature 536 Â°F	ASTM D1238
Melt Index of Compound	9.0 g/10 min @Load 5.00 kg, Temperature 280 Â°C	9.0 g/10 min @Load 11.0 lb, Temperature 536 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	119	119	ASTM D785
Tensile Strength at Break	49.0 MPa	7110 psi	Type I, 50 mm/min; ASTM D638
	51.0 MPa	7400 psi	50 mm/min; ISO 527
Tensile Strength, Yield	57.0 MPa	8270 psi	50 mm/min; ISO 527

Mechanical Properties	58.0 MPa Metric	8410 psi English	Type I, 50 mm/min; ASTM D638 Comments
Elongation at Break	17 %	17 %	50 mm/min; ISO 527
	28.1 %	28.1 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	3.5 %	3.5 %	50 mm/min; ISO 527
	7.2 %	7.2 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.70 GPa	392 ksi	1 mm/min; ISO 527
	2.86 GPa	415 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	89.0 MPa	12900 psi	2.6 mm/min, 100 mm span; ASTM D790
	90.0 MPa	13100 psi	1.3 mm/min, 50 mm span; ASTM D790
	95.0 MPa	13800 psi	2 mm/min; ISO 178
Flexural Modulus	2.42 GPa	351 ksi	2.6 mm/min, 100 mm span; ASTM D790
	2.55 GPa	370 ksi	2 mm/min; ISO 178
	2.64 GPa	383 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	2.13 J/cm	3.99 ft-lb/in	ASTM D256
	1.33 J/cm	2.49 ft-lb/in	
	@Temperature -40.0 Â°C	@Temperature -40.0 Â°F	ASTM D256
Izod Impact, Notched (ISO)	17.0 kJ/mÂ²	8.09 ft-lb/inÂ²	80*10*4; ISO 180/1A
	5.00 kJ/mÂ²	2.38 ft-lb/inÂ²	
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.70 J/cmÂ²	8.09 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Gardner Impact	5.00 J	3.69 ft-lb	
	@Temperature -40.0 Â°C	@Temperature -40.0 Â°F	ASTM D3029
	25.0 J	18.4 ft-lb	
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	ASTM D3029
Dart Drop, Total Energy	48.0 J	35.4 ft-lb	
	@Temperature 23.0	@Temperature 73.4 Â°F	ASTM D3763

Mechanical Properties	^{°C} Metric	English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	91.8 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	51.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	91.8 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	51.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	95.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	53.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	95.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	53.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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 0.46 MPa (66 psi)	131 $\text{Å}^\circ\text{C}$	268 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	137 $\text{Å}^\circ\text{C}$	279 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	120 $\text{Å}^\circ\text{C}$	248 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	117 $\text{Å}^\circ\text{C}$	243 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	126 $\text{Å}^\circ\text{C}$	259 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	140 $\text{Å}^\circ\text{C}$	284 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	143 $\text{Å}^\circ\text{C}$	289 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	148 $\text{Å}^\circ\text{C}$	298 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D1525
UL RTI, Electrical	105 $\text{Å}^\circ\text{C}$	221 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	90.0 $\text{Å}^\circ\text{C}$	194 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	105 $\text{Å}^\circ\text{C}$	221 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.47 mm	@Thickness 0.0579 in	
Oxygen Index	22 %	22 %	ASTM D2863

Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Dielectric Constant	2.65	2.65	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	21.6 kV/mm	549 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.00040	0.00040	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	Tungsten; ASTM D495
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 in/min	UL 746A

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China