

SABIC Innovative Plastics LNP THERMOCOMP Noryl_FM4025 PPE+PS

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

Material Notes:

LNP* Thermocomp* Noryl_FM4025 compound is GR/MR 40%, high modulus structural foam. 10% weight reduction, 0.250" wall thickness.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-NorylFM4025-PPEPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.29 g/cc	1.29 g/cc	foam molded; ASTM D792
	1.43 g/cc	1.43 g/cc	ASTM D792
Water Absorption	0.080 %	0.080 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0015 cm/cm	0.0015 in/in	SABIC Method
	@Thickness 6.40 mm	@Thickness 0.252 in	
Linear Mold Shrinkage, Transverse	0.0025 cm/cm	0.0025 in/in	SABIC Method
	@Thickness 6.40 mm	@Thickness 0.252 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ASTM D785
Tensile Strength, Yield	82.0 MPa	11900 psi	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Elongation at Yield	1.5 %	1.5 %	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Flexural Yield Strength	121 MPa	17500 psi	6.4 mm; ASTM D790
Flexural Modulus	7.92 GPa	1150 ksi	6.4 mm; ASTM D790
Poissons Ratio	0.38	0.38	ASTM E 132
Izod Impact, Notched	0.690 J/cm	1.29 ft-lb/in	ASTM D256
	@Thickness 6.40 mm	@Thickness 0.252 in	
Coefficient of Friction, Static	0.52	0.52	steel; ASTM D1894
	0.55	0.55	self; ASTM D1894
Taber Abrasion, mg/1000 Cycles	100	100	CS-17, 1 kg; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	23.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature -40.0 - 95.0 $\text{Å}^\circ\text{C}$	13.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature -40.0 - 203 $\text{Å}^\circ\text{F}$	ASTM E 831
CTE, linear, Transverse to Flow	34.2 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature -40.0 - 95.0 $\text{Å}^\circ\text{C}$	19.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature -40.0 - 203 $\text{Å}^\circ\text{F}$	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	118 $\text{Å}^\circ\text{C}$ @Thickness 6.40 mm	244 $\text{Å}^\circ\text{F}$ @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	110 $\text{Å}^\circ\text{C}$ @Thickness 6.40 mm	230 $\text{Å}^\circ\text{F}$ @Thickness 0.252 in	unannealed; ASTM D648
UL RTI, Electrical	50.0 $\text{Å}^\circ\text{C}$	122 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	50.0 $\text{Å}^\circ\text{C}$	122 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	50.0 $\text{Å}^\circ\text{C}$	122 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	V-1 @Thickness 2.89 mm	V-1 @Thickness 0.114 in	UL 94
	V-0 @Thickness 5.00 mm	V-0 @Thickness 0.197 in	UL 94
	5VA @Thickness 2.89 mm	5VA @Thickness 0.114 in	UL 94

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D257
Surface Resistance	1.00e+17 ohm	1.00e+17 ohm	ASTM D257
Arc Resistance	60 - 120 sec	60 - 120 sec	Tungsten; ASTM D495
Comparative Tracking Index	100 - 175 V	100 - 175 V	UL 746A
Hot Wire Ignition, HWI	≥ 120 sec	≥ 120 sec	UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	≥ 150 mm/min	≥ 5.91 in/min	UL 746A

Descriptive Properties	Value	Comments
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FOAM - ELECTRICAL 6.4 mm Wt Reduction Descriptive Properties	20% Value	Comments
FOAM - Flame Class Minimum Density	1.26g/cm ³	
FOAM - IMPACT 6.4 mm Wt Reduction	10%	
FOAM - MECHANICAL 6.4 mm Wt Reduction	10%	
FOAM - PHYSICAL 6.4mm Wt Reduction	10%	
FOAM - THERMAL 6.4mm Wt Reduction	10%	
Weight Reduction	10%	SABIC Method

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