

SABIC Innovative Plastics LNP Lubricomp LL003E PEEK

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK)

Material Notes:

LNP* Lubricomp* LL003E is a compound based on Polyetheretherketone (PEEK) containing PTFE. Characteristics of this grade are: Easy Molding and Internally Lubricated. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Lubricomp-LL003E-PEEK.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.39 g/cc	1.39 g/cc	ASTM D 792
Density	1.39 g/cc	0.0502 lb/in ³	ASTM D 792
Moisture Absorption at Equilibrium	0.080 %	0.080 %	23Â°C / 50% RH; ISO 62
	0.070 %	0.070 %	50% RH; ASTM D 570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0090 - 0.020 cm/cm	0.0090 - 0.020 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.010 - 0.030 cm/cm	0.010 - 0.030 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	62.0 MPa	8990 psi	5 mm/min; ISO 527
	64.0 MPa	9280 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	62.0 MPa	8990 psi	5 mm/min; ISO 527
	64.0 MPa	9280 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	3.3 %	3.3 %	5 mm/min; ISO 527
	4.5 %	4.5 %	Type I, 5 mm/min; ASTM D 638
Elongation at Yield	3.3 %	3.3 %	5 mm/min; ISO 527
	4.5 %	4.5 %	Type I, 5 mm/min; ASTM D 638
Tensile Modulus	3.00 GPa	435 ksi	50 mm/min; ASTM D 638
	3.07 GPa	445 ksi	1 mm/min; ISO 527
Flexural Strength	92.0 MPa	13300 psi	ISO 178

Flexural Modulus Mechanical Properties	2.75 GPa Metric	399 ksi English	2 mm/min* ISO 178 Comments
	2.94 GPa	426 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.480 J/cm @Temperature 23.0 Â°C	0.899 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	7.23 J/cm @Temperature 23.0 Â°C	13.5 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	5.00 kJ/mÂ² @Temperature 23.0 Â°C	2.38 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	37.0 kJ/mÂ² @Temperature 23.0 Â°C	17.6 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
Impact Test	3.00 J @Temperature 23.0 Â°C	2.21 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763
Coefficient of Friction, Dynamic	0.42	0.42	ASTM D 3702 Modified
Coefficient of Friction, Static	0.32	0.32	ASTM D 3702 Modified
K (wear) Factor	36.3 x 10 ⁻⁸ mmÂ³/N-M	18.0 x 10 ⁻¹⁰ inÂ³- min/ft-lb-hr	Washer; ASTM D 3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	47.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	26.1 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D 696
CTE, linear, Transverse to Flow	57.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	31.7 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D 696
Deflection Temperature at 0.46 MPa (66 psi)	156 Â°C	313 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	156 Â°C @Thickness 3.20 mm	313 Â°F @Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	147 Â°C	297 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	146 Â°C	295 Â°F	unannealed; ASTM D 648

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
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