

LNP™ THERMOCOMP™ LX09409 compound

Polyetheretherketone

SABIC Innovative Plastics

Technical Data			
Product Description			
LNP* THERMOCOMP* LX09409 is a compound based on Polyetheretherketone resin containing proprietary fillers.			
Also known as: LNP* THERMOCOMP* Compound LX09409			
Product reorder name: LX09409			
General			
Filler / Reinforcement	• Proprietary		
Processing Method	• Injection Molding		
Physical			
	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity			ASTM D792
--	1.52	1.52 g/cm³	
--	1.52 g/cm³	1.52 g/cm³	
Molding Shrinkage			ASTM D955
Flow : 24 hr	7.6E-3 in/in	0.76 %	
Across Flow : 24 hr	0.011 in/in	1.1 %	
Water Absorption			ASTM D570
24 hr, 50% RH	0.070 %	0.070 %	ISO 62
Equilibrium, 73°F (23°C), 50% RH	0.070 %	0.070 %	
Mechanical			
	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			
-- ³	1.20E+6 psi	8310 MPa	ASTM D638
--	1.15E+6 psi	7950 MPa	ISO 527-2/1
Tensile Strength			
Yield ⁴	16100 psi	111 MPa	ASTM D638
Break ⁴	16000 psi	110 MPa	ASTM D638
Break	16200 psi	112 MPa	ISO 527-2/5
Tensile Elongation			
Break ⁴	2.8 %	2.8 %	ASTM D638
Break	2.8 %	2.8 %	ISO 527-2/5
Flexural Modulus			
1.97 in (50.0 mm) Span ⁵	1.03E+6 psi	7080 MPa	ASTM D790
-- ⁶	1.01E+6 psi	6980 MPa	ISO 178
Flexural Stress			
--	26100 psi	180 MPa	ISO 178
Break, 1.97 in (50.0 mm) Span ⁵	25200 psi	174 MPa	ASTM D790
Impact			
	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			
73°F (23°C)	1.6 ft·lb/in	86 J/m	ASTM D256
73°F (23°C) ⁷	3.3 ft·lb/in²	7.0 kJ/m²	ISO 180/1A
Unnotched Izod Impact			
73°F (23°C)	13 ft·lb/in	700 J/m	ASTM D4812
73°F (23°C) ⁷	20 ft·lb/in²	42 kJ/m²	ISO 180/1U

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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Instrumented Dart Impact			
73°F (23°C), Total Energy	69.0 in·lb	7.80 J	ASTM D3763
--	2.95 ft·lb	4.00 J	ISO 6603-2
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed, 0.126 in (3.20 mm)	621 °F	327 °C	ASTM D648
66 psi (0.45 MPa), Unannealed, 2.52 in (64.0 mm) Span ⁸	583 °F	306 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	460 °F	238 °C	ASTM D648
264 psi (1.8 MPa), Unannealed, 2.52 in (64.0 mm) Span ⁸	334 °F	168 °C	ISO 75-2/Af
CLTE			ASTM D696
Flow : -22 to 86°F (-30 to 30°C)	1.4E-5 in/in/°F	2.6E-5 cm/cm/°C	
Transverse : -22 to 86°F (-30 to 30°C)	2.3E-5 in/in/°F	4.2E-5 cm/cm/°C	
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	302 °F	150 °C	
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr	
Rear Temperature	698 to 716 °F	370 to 380 °C	
Middle Temperature	716 to 752 °F	380 to 400 °C	
Front Temperature	716 to 752 °F	380 to 400 °C	
Mold Temperature	347 to 374 °F	175 to 190 °C	
Back Pressure	43.5 to 102 psi	0.300 to 0.700 MPa	
Screw Speed	60 to 100 rpm	60 to 100 rpm	