

LNP Lubricomp* KL-4540

SABIC Innovative Plastics - Acetal (POM) Copolymer

General Information

General

Additive	• PTFE + Silicone Lubricant
Features	• Lubricated
Forms	• Pellets
Processing Method	• Injection Molding

ASTM and ISO Properties ¹

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity (Method A)	1.48	1.48	ASTM D792
Density	1.48 g/cm ³	1.48 g/cm ³	ISO 1183
Molding Shrinkage (Flow, 24 hr)	0.021 to 0.029 in/in	2.1 to 2.9 %	ASTM D955
Molding Shrinkage (Across Flow, 24 hr)	0.021 to 0.029 in/in	2.1 to 2.9 %	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow, 24 hr	2.1 to 2.9 %	2.1 to 2.9 %	
Flow, 24 hr	2.1 to 2.9 %	2.1 to 2.9 %	
Water Absorption (24 hr)	0.10 %	0.10 %	ASTM D570
Water Absorption (73 °F (23 °C), 24 hr)	0.43 %	0.43 %	ISO 62
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	266000 psi	1830 MPa	ASTM D638
Tensile Modulus	293000 psi	2020 MPa	ISO 527-1, -2
Tensile Strength (Yield)	6200 psi	42.7 MPa	ASTM D638
Tensile Stress (Yield)	5660 psi	39.0 MPa	ISO 527-1, -2
Tensile Strength (Break)	6200 psi	42.7 MPa	ASTM D638
Tensile Stress (Break)	5660 psi	39.0 MPa	ISO 527-1, -2
Tensile Elongation (Yield)	14 %	14 %	ASTM D638
Tensile Strain (Yield)	22 %	22 %	ISO 527-1, -2
Tensile Elongation (Break)	30 %	30 %	ASTM D638
Tensile Strain (Break)	43 %	43 %	ISO 527-1, -2
Flexural Modulus	294000 psi	2030 MPa	ASTM D790
Flexural Modulus	302000 psi	2080 MPa	ISO 178
Flexural Strength	9000 psi	62.1 MPa	ASTM D790
Flexural Strength	8830 psi	60.9 MPa	ISO 178
Coefficient of Friction			ASTM D1894
vs. Steel - Dynamic	0.25	0.25	
vs. Steel - Static	0.14	0.14	

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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (0.125 in (3.18 mm))	1.00 ft-lb/in	53.4 J/m	ASTM D256
Notched Izod Impact Strength	2.43 ft-lb/in ²	5.10 kJ/m ²	ISO 180
Unnotched Izod Impact (0.125 in (3.18 mm))	11.6 ft-lb/in	619 J/m	ASTM D256
Unnotched Izod Impact Strength	20.2 ft-lb/in ²	42.4 kJ/m ²	ISO 180
Instrumented Dart Impact	34.5 in-lb	3.90 J	ASTM D3763
Multi-Axial Instrumented Impact Energy	0.782 ft-lb	1.06 J	ISO 6603-2
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed	189 °F	87.2 °C	ASTM D648
Heat Deflection Temperature 264 psi (1.8 MPa), Unannealed	174 °F	79.0 °C	ISO 75A-1, -2
CLTE, Flow (TMA)	0.000061 in/in/°F	0.00011 cm/cm/°C	ASTM E831
Coefficient of Linear Thermal Expansion, Flow --	0.000062 in/in/°F	0.00011 cm/cm/°C	ISO 11359-1, -2
CLTE, Transverse (TMA)	0.000063 in/in/°F	0.00011 cm/cm/°C	ASTM E831
Coefficient of Linear Thermal Expansion, Transverse --	0.000063 in/in/°F	0.00011 cm/cm/°C	ISO 11359-1, -2

Additional Properties

The values displayed above as Coef. of Friction and Wear Factor were tested in accordance with SABIC WI-0687.

COEFFICIENT OF FRICTION vs. Steel, Dynamic @ 40 psi, 50 ft/min, SABIC WI-0687: 0.25

COEFFICIENT OF FRICTION vs. Steel, Static @ 40 psi, SABIC WI-0687: 0.14

WEAR FACTOR @ 40 psi, 50 ft/min, SABIC WI-0687: 9×10^{-10} in³-min/ft-lb-hr

Processing Information		
Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	180 °F	82.2 °C
Drying Time	4.0 hr	4.0 hr
Processing (Melt) Temp	390 to 415 °F	199 to 213 °C
Mold Temperature	180 to 225 °F	82.2 to 107 °C
Back Pressure	25.0 to 50.0 psi	0.172 to 0.345 MPa

Notes

¹ Typical properties: these are not to be construed as specifications.