

LNP Lubricomp* RAL-4023

SABIC Innovative Plastics Asia Pacific - Polyamide 66

General Information

General

Filler / Reinforcement	• Aramid fiber
Additive	• Lubricant, PTFE
Features	• Lubricated
Forms	• Pellets
Processing Method	• Injection Molding

ASTM and ISO Properties¹

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity (Method A)	1.24	1.24	ASTM D792
Density	1.23 g/cm ³	1.23 g/cm ³	ISO 1183
Molding Shrink (Flow, 24 hr)	0.017 to 0.018 in/in	1.7 to 1.8 %	ASTM D955
Molding Shrink (Across Flow, 24 hr)	0.020 to 0.021 in/in	2.0 to 2.1 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	534000 psi	3680 MPa	ASTM D638
Tensile Modulus	551000 psi	3800 MPa	ISO 527-1, -2
Tensile Strength (Break)	13000 psi	89.6 MPa	ASTM D638
Tensile Stress (Break)	12300 psi	85.0 MPa	ISO 527-1, -2
Tensile Elongation (Break)	5.9 %	5.9 %	ASTM D638
Tensile Strain (Break)	6.3 %	6.3 %	ISO 527-1, -2
Flexural Modulus	571000 psi	3940 MPa	ASTM D790
Flexural Modulus	508000 psi	3500 MPa	ISO 178
Flexural Strength	19000 psi	131 MPa	ASTM D790
Flexural Strength	15500 psi	107 MPa	ISO 178
Coefficient of Friction			ASTM D1894
vs. Steel - Dynamic	0.38	0.38	
vs. Steel - Static	0.32	0.32	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (0.125 in (3.18 mm))	0.800 ft-lb/in	42.7 J/m	ASTM D256
Notched Izod Impact Strength	1.90 ft-lb/in ²	4.00 kJ/m ²	ISO 180
Unnotched Izod Impact (0.125 in (3.18 mm))	10.0 ft-lb/in	534 J/m	ASTM D256
Unnotched Izod Impact Strength	17.6 ft-lb/in ²	37.0 kJ/m ²	ISO 180

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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed	475 °F	246 °C	ISO 75B-1, -2
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed	340 °F	171 °C	ASTM D648
Heat Deflection Temperature 264 psi (1.8 MPa), Unannealed	320 °F	160 °C	ISO 75A-1, -2
CLTE, Flow (TMA)	0.000037 in/in/°F	0.000067 cm/cm/°C	ASTM E831
Coefficient of Linear Thermal Expansion, Flow --	0.000038 in/in/°F	0.000068 cm/cm/°C	ISO 11359-1, -2
CLTE, Transverse (TMA)	0.000054 in/in/°F	0.000097 cm/cm/°C	ASTM E831
Coefficient of Linear Thermal Expansion, Transverse --	0.000054 in/in/°F	0.000098 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: 0.38

COEFFICIENT OF FRICTION vs. Steel, Static @ 40 psi, SABIC WI-0687: 0.32

WEAR FACTOR @ 40 psi, 50 ft/min, SABIC WI-0687: 23 10⁻¹⁰ in⁵-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
Suggested Max Moisture	0.20 %	0.20 %
Processing (Melt) Temp	525 to 550 °F	274 to 288 °C
Mold Temperature	175 to 200 °F	79.4 to 93.3 °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.