

LUBMER™ L5000

High Molecular Weight Polyethylene

Mitsui Chemicals America, Inc.

Message:

LUBMER™L5000 is a high molecular weight polyethylene material. This product is available in North America.

LUBMER™The main features of L5000 are:

flame retardant/rated flame

Impact resistance

Wear-resistant

Typical application areas include:

engineering/industrial accessories

Automotive Industry

General Information			
Features	Low friction coefficient		
	Noise reduction		
	Impact resistance, good		
	Good wear resistance		
Uses	Thin wall parts		
	Gear		
	Car interior parts		
	Bearing		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.966	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow: 2.00mm	1.8	%	ASTM D955
Transverse flow: 2.00mm	1.6	%	ASTM D955
Water Absorption (24 hr)	0.010	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	51		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Break, 23°C)	47.0	MPa	ASTM D638
Tensile Elongation ² (Break, 23°C)	10	%	ASTM D638
Flexural Modulus ³ (23°C, 3.00mm, 48.0mm span)	1620	MPa	ASTM D790
Flexural Strength ⁴ (yield, 23°C, 3.00mm, 48.0mm span)	38.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 2.00 mm)	190	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load (0.45 MPa, Unannealed)	80.0	°C	ASTM D648
Vicat Softening Temperature	130	°C	ASTM D1525 ⁵
CLTE - Flow	1.3E-4	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+17	ohms·cm	ASTM D257
Dielectric Strength	44	kV/mm	ASTM D149
Dielectric Constant (23°C)	2.40		ASTM D150
Dissipation Factor (1 MHz)	1.0E-4		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.59 mm)	HB		UL 94

Additional Information

Kinetic Coefficient of Friction, MCI Method, Lubmer-contact material, SUS 304, surface roughness, 6S: 0.09Heat generation temp, MCI Method, Lubmer-contact material, SUS 304, surface roughness, 6S: 67°C (30 MPa m/min)Critical PV value, MCI Method, Lubmer-contact material, SUS 304, surface roughness, 6S: >/= 30 MPa m/minAbrasion Loss, MCI Method, Lubmer-contact material, SUS 304, surface roughness, 6S: 150E-10 cm³/kg-mVolume Resistivity, ASTM D257: 1E17 to 1E18 ohm-cmDissipation Factor, ASTM D150, 1MHz: 1E-4 to 2E-4Spiral Flow, MCI method, 4.8mm radius: 30 cm (270°C)The values listed as Mold Shrink, Linear Flow and Trans, ASTM D955, were tested in accordance with MCI methods.

Injection	Nominal Value	Unit
Rear Temperature	210	°C
Middle Temperature	245	°C
Front Temperature	270	°C
Nozzle Temperature	270	°C
Mold Temperature	24.0 - 40.0	°C
Injection Pressure	98.1	MPa
Injection Rate	Moderate	

NOTE

1. Type 5, 50mm/min
2. Type 5, 50mm/min
3. 5.0 mm/min
4. 5.0 mm/min
5. 压力1 (10N)

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