

LUBMER™ L4000

High Molecular Weight Polyethylene

Mitsui Chemicals America, Inc.

Message:

LUBMER™L4000 is a high molecular weight polyethylene material. This product is available in North America. LUBMER™The main characteristics of L4000 are: flame retardant/rated flame.
Typical application areas include:
engineering/industrial accessories
Automotive Industry

General Information			
Uses	Gear		
	Car interior parts		
	Bearing		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.967	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow: 2.00mm	1.8	%	ASTM D955
Transverse flow: 2.00mm	1.5	%	ASTM D955
Water Absorption (24 hr)	0.010	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	53		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Break, 23°C)	41.0	MPa	ASTM D638
Tensile Elongation ² (Break, 23°C)	12	%	ASTM D638
Flexural Modulus ³ (23°C, 3.00mm, 48.0mm span)	1590	MPa	ASTM D790
Flexural Strength ⁴ (yield, 23°C, 3.00mm, 48.0mm span)	37.0	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	45	kV/mm	ASTM D149
Dielectric Constant (23°C)	2.30		ASTM D150

Dissipation Factor (1 MHz)	1.5E-4	ASTM D150
Flammability	Nominal Value	Unit
Flame Rating (1.59 mm)	HB	UL 94

Additional Information

Kinetic Coefficient of Friction, MCI Method, Lubmer-contact material, SUS 304, surface roughness, 6S: 0.1Heat generation temp, MCI Method, Lubmer-contact material, SUS 304, surface roughness, 6S: 70°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: 160E-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: 36 cm (270°C)The values listed as Mold Shrink, Linear Flow and Trans, ASTM D955, were tested in accordance with MCI methods.

NOTE

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| 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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