LAMIGAMID® 700

Ultra High Molecular Weight Polyethylene

Schwartz Technical Plastic

Message:

Applications:
Wear liners
Sliding Plates

General Information			
Uses	Lining		
Forms	Particle		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	0.950	g/cm³	ISO 1183
Water Absorption			ISO 62
23°C, 24 hr	0.0	%	ISO 62
Saturated, 23°C	> 0.10	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness	57.0	MPa	ISO 2039-1
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1100	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Yield	39.0	MPa	ISO 527-2
Fracture	40.0	MPa	ISO 527-2
Tensile Strain (Break)	450	%	ISO 527-2
Flexural Modulus	790	MPa	ISO 178
Compressive Stress			ISO 604
20% strain	32.0	MPa	ISO 604
10% strain	25.0	MPa	ISO 604
5% strain	16.0	MPa	ISO 604
Coefficient of Friction			ASTM D1894
With steel-dynamic	0.020 - 0.080		ASTM D1894
With steel-static	0.29		ASTM D1894
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	No Break		ISO 180
Unnotched Izod Impact Strength	No Break		ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Melting Temperature (DSC)	136	°C	ISO 3146
CLTE - Flow (20 to 100°C)	2.0E-4	cm/cm/°C	ISO 11359-2
Specific Heat	2300	J/kg/°C	ASTM C351
Thermal Conductivity	0.33	W/m/K	ISO 8302
Electrical	**Nominal Value**	**Unit**	**Test Method**

Surface Resistivity	1.0E+14	ohms	IEC 60093
Dielectric Strength	100	kV/mm	IEC 60243-1
Dielectric Constant	2.30		IEC 60250
Dissipation Factor	1.0E-4		IEC 60250

Additional Information

Creep Rate Stress, DIN 53444, 1% Elongation: 3.2 N/mm²Creep Rate Stress, DIN 53444, 2% Elongation: 5 N/mm²Friction Wear: 1.0 µm/KmCoef of Friction, ASTM D1894, vs. Steel-Dynamic: 0.02 to 0.08Penetration Resistance, DIN 53482: 1E17 ohm-cmCreepage/leakage Resistance: KA3cThermal Expension: 0.1 %/10°CSafe Temperature Range, short periods: 120°CSafe Temperature Range, permanent: -100° to 80°C

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

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