



## TECHNICAL DATA SHEET OIL FILLED NYLON (OILAMID®)

	Unit	Test method	Dry	Humid
<b>Mechanical properties</b>				
Density	g/cm <sup>3</sup>	ISO 1183	1.14	
Yield stress	MPa	ISO 527	80	55
Elongation due to tearing	%	ISO 527	50	120
Modulus of elasticity resulting from tensile test	MPa	ISO 527	2.8	1.7
Modulus of elasticity resulting from bending test	MPa	ISO 178	3	1.9
Flexural strength	MPa	ISO 178	135	55
Impact strength	KJ/m <sup>2</sup>	ISO 179	o.B..	w.b.
Notched-bar impact strength	KJ/m <sup>2</sup>	ISO 179	>5	>15
Ball indentation hardness	MPa	ISO 2039-1	150	100
Creep rate stress at 1% elongation after 60 minutes	MPa	DIN 53 444	>7	
Sliding friction coefficient against hardened and ground steel (P=0.05 Mpa, V=0.6 m/sec., T=40 °C (near sliding surface))	-	-	0.15	0.2
Sliding wear against steel	µm/km	-	0.03	
<b>Thermal properties</b>				
Melting temperature	°C	ISO 3146	220	
Thermal conductivity	W/(K*m)	DIN 52 612	0.23	23
Specific thermal capacity	J/(g*K)	-	1.7	
Coefficient of thermal expansion in 23°C - 60°C range	10 <sup>-5</sup> *K <sup>-1</sup>	-	7 - 8	
Operating temperature range (long-term)	°C	-	-40 - 105	
Operating temperature range (short-term) upto 60mins.	°C	-	160	
Fire behaviour	-	UL 94	HB	
<b>Electrical properties</b>				
Dielectric constant	-	IEC 250	3.7	
Dielectric loss factor	-	IEC 250	0.03	
Specific volume resistance	Ω	IEC 93	10 <sup>15</sup>	10 <sup>12</sup>
Surface resistance	Ω*cm	IEC 93	10 <sup>13</sup>	10 <sup>12</sup>
Dielectric strength	KV/mm	IEC 243	50	20
Creep current resistance	-	IEC 112	CTI 600	
<b>Miscellaneous Data</b>				
Moisture absorption in 23 °C / 50 % RH	%	DIN 53 715	1.8	8
Moisture absorption in water until saturated	%	ISO 62	5.5	5

### Application

- Gears.
- Sliding bearings.
- Sliding strips & -plates.
- Castors.
- Telescopic guide.
- Chain guiding strips / chain deflections.

### Standard Options

SHEET: Yellow – 2000mm x 1000mm in 8mm to 100mm thick.

ROD: Yellow – Ø20mm to Ø350mm in 1000mm lengths.

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