CUT TO SIZE plastics

TECHNICAL SPECIFICATIONS

OILAMID

Short description of Material:

Oilamid is a nylon with embedded fine distributed oil. Oilamid has self -lubricating properties and an excellent wear resistance with low coefficient of friction.

Applications:

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

MECHANICAL VALUES		Dry/ humid	
Density	ISO 1183	1,14	g/cm³
Yield stress	ISO 527	80 / 55	MPa
Elongtion due to tearing	ISO 527	50 / 120	%
Modulus of elasticity resulting from tensile test	ISO 527	2.800 / 1.700	MPa
Modulus of elasticity resulting from bending test	ISO 178	3.000 / 1.900	MPa
Flexural strength	ISO 178	135 / 55	MPa
Impact strength	ISO 179	o.B.. / w.b.	KJ/m²
Notched-bar impact strength	ISO 179	>5 / >15	KJ/m²
Ball indentation hardness	ISO 2039-1	150 / 100	MPa
Creep rate stress at 1% elongation	DIN 53 444	>7	MPa
Sliding friction coefficient against steel	-	0.15 / 0.2	-
Sliding wear against steel	-	0.03	µm/km
THERMAL VALUES			
Melting temperature	ISO 3146	+220	°C
Thermal conductivity	DIN 52 612	0.23	W/(K*m)
Specific thermal capacity	-	1.7	J/(g*K)
Coefficient of thermal expansion	-	7-8	10-5*K-1
Operating temperature range (longterm)	-	-40 / +105	°C
Operating temperature range(short-term)	-	+160	°C
Fire behaviour	UL 94	HB	-
ELECTRICAL VALUES			
Dielectric constant	IEC 250	3.7	-
Dielectric loss factor	IEC 250	0.03	-
Specific volume resistance	IEC 93	10^15 / 10^12	Ω
Surface resistance	IEC 93	10^13 / 10^12	Ω*cm
Dielectric strength	IEC 243	50 / 20	KV/mm
Creep current resistance	IEC 112	CTI 600	-
Miscellaneous Data			
Moisture absorption in normal climate until saturated	DIN 53 715	1.8	%
Water absorption until saturated	ISO 62	5.5	%

1) Measured with a pendulum impact testing machine 0,1 DIN 51 222
2) Tension resulting in 1% total elongation after 1.000h
3) Against steel, hardened and ground
P = 0,05 Mpa; V = 0,6m/s; t = 60 °C near running surface
4) For a temperature range of + 23 °C up to + 60 °C
5) Experience values established with finished parts that are not under any stress in heated air, depending on the type and form of heat Exposure, short-term = max. 1 h, long-term = months
6) at 106 Hz
w.b. = without breakage
1 Mpa = 1 N/mm^2
1 g/cm^3 = 1.000kg/m^3
1 kV/mm = 1 MV/m

Colours: Yellow and green