ENSINGER
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Material Data Sheet, December 2007

TECAMID 66 LA

Chemical Designation :	Polyamide 66
DIN-Abbreviation:	PA 66
Colours, fillers:	creme, lubricant

Main features

- very good sliding properties
- resistant to cleaning agents
- very abrasion resistant
- easily machined
- resistant to many oils, greases, diesels and petrol
- very tough
- electrically insulating

Preferred Fields

- mechanical engineering
- transport and conveyor technology
- textile machinery
- packaging and paper processing machinery
- drinks dispensing machinery
- electrical tools
- automotive engineering
- gears, couplings and engine construction
- printing machinery
- packaging and paper processing machinery
- precision engineering

Applications

Friction bearings, spindle nuts, friction strips, gears, castors, wiper blades, pulleys, chain wheels, piston rings, wiper blades

Properties

Mechanical	dry / moist		standard
Tensile strength at yield	60 / 50	MPa	DIN EN ISO 527
Elongation at yield		%	
Tensile strength at break		MPa	
Elongation at break	10 / 40	%	DIN EN ISO 527
Modulus of elasticity in tension	2000 / 1600	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test		MPa	
Hardness	117 / 100		ISO 2039/1 (Kugeldruck−Härte, 358N)
Impact strength 23° C (Charpy)	50	KJ/m²	DIN EN ISO 179 (Charpy)
Creep rupture strength after 1000 h with static load		MPa	
Time yield limit for 1% elongation after 1000 h	3	MPa	
Co−efficient of friction p = 0,05 N/mm²v=0,6 m/s on steel, hardened and ground	0,18−0,20		
Wear p = 0,05 N/mm²v=0,6 m/s on steel, hardened and ground	0,08	µm/km	

Thermal	dry / moist		standard
Crystalline melting point		°C	
Glass transition temperature	72 / 5	°C	DIN 53 765
Heat distortion temperature HDT, Method A	85	°C	ISO−R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B	185	°C	ISO−R 75 Verfahren B (DIN 53 461)
Max. service temperature			
short term	120	°C	
long term	90	°C	
Thermal conductivity (23° C)	0,23	W/(K·m)	
Specific heat (23° C)	1,7	J/g.K	
Coefficient of thermal expansion (23−55°C)	15	10^{-5}1/K	DIN 53 752

Properties

Electrical	dry / moist		standard
Dielectric constant (10^6 Hz)	3,3		DIN 53 483, IEC−250
Dielectric loss factor (10^6 Hz)	0,015		DIN 53 483, IEC−250
Specific volume resistance	6*10^13	Ω*cm	DIN IEC 60093
Surface resistance	10^14	Ω	DIN IEC 60093
Dielectric strength	80−120	kV/mm	DIN 53 481, IEC−243, VDE 0303 Teil 2
Resistance to tracking	CTI>600		DIN 53 480, VDE 0303 Teil 1

Miscellaneous	dry / moist		standard
Density	1,11	g/cm^3	DIN 53 479
Moisture absorption (23°C/50RH)	2,5	%	DIN EN ISO 62
Water absorption to equilibrium	7,5	%	DIN EN ISO 62
Flammability acc. to UL standard 94	HB		

(1) Testing of semi−finished products

The above information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of chemical resistance, of certain properties and the suitability of our products and their applications. Our products are not destined for use in medical and dental implants. Existing commercial patents must be observed. Unless otherwise stated, these values represent averages taken from injection moulding samples, dry as moulded. We reserve the right to make technical alterations.