ENSINGER
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Material Data Sheet, December 2007

TECAMID 66 MH

Chemical Designation :	Polyamide 66
DIN-Abbreviation:	PA 66
Colours, fillers:	black, MoS2

Main features

- good sliding properties
- rigid
- resistant to many oils, greases, diesels and petrol
- increased surface hardness
- UV and weather resistant
- strong
- very abrasion resistant
- resistant to cleaning agents
- not electrically insulating
- easily machined

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

Diverse machine parts, friction bearings, friction strips, gears, castors, wiper blades, pulleys, chain wheels

Properties

Mechanical	dry / moist		standard
Tensile strength at yield	75	MPa	DIN EN ISO 527
Elongation at yield		%	
Tensile strength at break		MPa	
Elongation at break	> 25	%	DIN EN ISO 527
Modulus of elasticity in tension	2500	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test		MPa	
Hardness	107		DIN 53 456 (Kugeldruckhärte, 358N)
Impact strength 23° C (Charpy)	n.b.	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	8,5	MPa	
Co−efficient of friction p = 0,05 N/mm²v=0,6 m/s on steel, hardened and ground	0,20−0,25		
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	105	°C	ISO−R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B	>200	°C	ISO−R 75 Verfahren B (DIN 53 461)
Max. service temperature			
short term	170	°C	
long term	100	°C	
Thermal conductivity (23° C)	0,23	W/(K·m)	
Specific heat (23° C)	1,8	J/g.K	
Coefficient of thermal expansion (23−55°C)	12	10^{-5}1/K	DIN 53 752

Properties

Electrical	dry / moist		standard
Dielectric constant (10^6 Hz)			
Dielectric loss factor (10^6 Hz)			
Specific volume resistance	7*10^13	Ω*cm	DIN IEC 60093
Surface resistance	5*10^13	Ω	DIN IEC 60093
Dielectric strength		kV/mm	
Resistance to tracking			

Miscellaneous	dry / moist		standard
Density	1,14	g/cm^3	DIN 53 479
Moisture absorption (23°C/50RH)	2,6	%	DIN EN ISO 62
Water absorption to equilibrium	7	%	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.