

TECAMID 66 LA

Chemical Designation: Polyamide 66
(Nylon 66)

DIN Abbreviation: PA 66

Colour, Filler: Opaque
Lubricant

TECAMID 66 LA is a semi-crystalline thermoplastic bearing material with high p-v value and dry running properties

Main characteristics:

- Very good sliding properties
- Elevated p-v value
- Resistant to many oils, greases, diesel, petrol, cleaning fluids
- Very abrasion resistant
- Very tough
- Electrically insulating
- Easily machined

Preferred fields: Mechanical engineering, automotive engineering, transport and conveyor technology, gears, couplings and engine construction, textile, printing and paper processing machinery, packaging and drinks dispensing machinery, precision engineering, electrical tools

Applications:

- Friction bearings
- Spindle nuts
- Wiper blades
- Pistons
- Chain guides
- Friction strips
- Slide seals
- Piston guides
- Piston rings
- Pulleys

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The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.

Properties	Unit	Test method DIN EN ISO / ASTM	Dry / Wet*
Mechanical			
Density	g/cm ³	527 / D 792	1.11
Tensile strength at yield	MPa	527 / D 638	60 / 50*
Tensile strength at break	MPa	527 / D 638	
Elongation at break	%	527 / D 638	10 / 40*
Modulus of elasticity in tension	MPa	527 / D 638	2000 / 1600*
Modulus of elasticity in flexure	MPa	178 / D 790	
Ball indentation hardness	MPa	2039 / 1	117 / 100*
Impact strength (Charpy)	kJ/m ²	179 / D 256	50
Creep rupture strength after 1000 hrs with static load	MPa		
Time yield limit for 1% elongation after 1000 hrs.	MPa		3
Coefficient of friction against hardened and ground steel p = 0,05 N/mm ² , v = 0,6 m/s	–		0.18 - 0.2
Wear conditions as above	µm/km		0.08
Thermal			
Crystalline melting point	°C	DIN 53 736	260
Glass transition temperature	°C	DIN 53 736	72 / 5*
Heat distortion temperature Method A Method B	°C °C	R 75 R 75	85 185

Properties	Unit	Test method DIN EN 150 / ASTM	Dry / Wet*
Thermal			
Max. service temperature short term long term	°C °C		120 90
Coefficient of thermal conductivity	W/(m · K)		0.23
Specific heat	J/(g · K)		1.7
Coefficient of thermal expansion	10 ⁻⁵ /K	DIN 53 483 / D 696	15
Electrical			
Dielectric constant at 10 ⁵ Hz		DIN 53 483	3.3
Dielectric loss factor at 10 ⁵ Hz		DIN 53 483	0.015
Specific volume resistance	Ω · cm	DIN 60093	6 x 10 ¹³
Surface resistance	Ω	DIN 60093	10 ¹⁴
Dielectric strength 1 mm	kV/mm	ASTM 149	80 - 120
Tracking resistance		53 480	CTI >600
Miscellaneous			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%	62	2.5
Water absorption at saturation at 23 °C	%	62	7.5
Resistance to hot water, washing soda			limited resistance
Flammability according to UL standard 94			HB
Resistance to weathering			not resistant

* after storage in a standard 23/50 atmosphere (DIN 50 014) to equilibrium

ENSINGER: Production and stock programme

- Semi-finished product, finished parts, injection moulded parts and profiles in more than 500 materials and modifications.
- Engineering plastics: PA extruded or cast, POM, PC, PET, PBT, PPE, PP, PE
- High temperature plastics: PI, TPI, PEEK, PPS, PES, PPSU, PEI, PSU, PVDF, PCTFE, PTFE
- Stock length: Standard 3 metres. Cast rod and sheet 2 mts. Tube up to 3.5 mts. PE, PP, PVC, and PTFE 2 mts
- Pressed/sintered semi-finished product: PI, PEEK, PPS, PTFE/PI and modifications, as well as PCTFE in special sizes ie, large discs, tubes and rings with diameters up to about 1400 mm
- Material modifications: eg. glass, carbon and aramid fibre, talc, MoS₂, graphite, PTFE, PE, silicone oil, internal lubrication