

## TECAM 6 MO

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Chemical Designation:	Polyamide 6 ( Nylon 6 )
DIN Abbreviation:	PA 6
Colour, Filler:	Black Molybdenum disulphide
Availability:	<ul style="list-style-type: none"><li>• Rod 4 - 300 mm dia</li><li>• Plate 1 - 100 mm thick</li><li>• Tube 25 - 300 mm OD</li><li>• Profile</li><li>• Finished parts, machined or injection moulded</li></ul>

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TECAM 6 MO is a semi-crystalline engineering thermoplastic with high toughness for varied applications.

- Main characteristics:
- Very tough
  - Good sliding properties, even in dry running conditions
  - Very abrasion resistant
  - Resistant to many oils, greases, diesel, petrol, cleaning fluids
  - Rigid
  - UV and weather resistant
  - Not electrically insulating
  - Easily machined
  - Easily machined and bonded

Preferred fields: Mechanical engineering, automotive engineering, transport and conveyor technology, textile, packaging and paper processing machinery, printing and drinks dispensing machinery, household articles, building machinery, agricultural machinery

- Applications:
- Gear wheels
  - Friction strips
  - Bushes, spindle nuts
  - Piston guides
  - Castors
  - Impact plates
  - Friction bearings
  - Conveyor screws
  - Cam discs
  - Rope pulleys
  - Plug parts
  - Damping plates

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Ensinger Ltd  
Wilfried Way  
Tonyrefail  
Mid Glam CF39 8JQ

Tel: 01443 678400  
Fax: 01443 675777  
Web: [www.ensinger.ltd.uk](http://www.ensinger.ltd.uk)  
Email: [sales@ensinger.ltd.uk](mailto:sales@ensinger.ltd.uk)

# TECAM 6 MO

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*
<b>Mechanical</b>			
Density	g/cm <sup>3</sup>	527 / D 792	1.14
Tensile strength at yield	MPa	527 / D 638	75
Tensile strength at break	MPa	527 / D 638	
Elongation at break	%	527 / D 638	>25
Modulus of elasticity in tension	MPa	527 / D 638	2700
Modulus of elasticity in flexure	MPa	178 / D 790	
Ball indentation hardness	MPa	2039 /1	107/ 85*
Impact strength	kJ/m <sup>2</sup>	179 / D 256	no. br.
Creep rupture strength after 1000 hrs with static load	MPa		
Time yield limit for 1% elongation after 1000 hrs.	MPa		5
Coefficient of friction against hardened and ground steel p = 0,05 N/mm <sup>2</sup> , v = 0,6 m/s	-		0.32 - 0.37
Wear conditions as above	µm/km		0.16
<b>Thermal</b>			
Crystalline melting point	°C	DIN 53 736	220
Glass transition temperature	°C	DIN 53 736	40
Heat distortion temperature Method A Method B	°C °C	R 75 R 75	100 195

Properties	Unit	Test method DIN EN 150 / ASTM	Dry / Wet*
<b>Thermal</b>			
Max. service temperature short term long term	°C °C		160 100
Coefficient of thermal conductivity	W/(m · K)		0.23
Specific heat	J/(g · K)		1.7
Coefficient of thermal expansion	10 <sup>-5</sup> /K	DIN 53 483 / D 696	8
<b>Electrical</b>			
Dielectric constant at 10 <sup>5</sup> Hz		DIN 53 483	
Dielectric loss factor at 10 <sup>5</sup> Hz		DIN 53 483	
Specific volume resistance	Ω · cm	DIN 60093	6 x 10 <sup>13</sup>
Surface resistance	Ω	DIN 60093	3 x 10 <sup>13</sup>
Dielectric strength 1 mm	kV/mm	ASTM 149	
Tracking resistance		53 480	
<b>Miscellaneous</b>			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%	62	3
Water absorption at saturation at 23 °C	%	62	8 – 9
Resistance to hot water, washing soda			limited resistant
Flammability according to UL standard 94			HB
Resistance to weathering			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, MoS<sub>2</sub>, graphite, PTFE, PE, silicone oil, internal lubrication