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Datasheet

Black Nylon Rod, 1m x 12mm Diameter

RS Stock number 282-0632

Description

TECAM 6 MO
Black extruded Nylon 6 containing MoS_2

Features:

Chemical Designation: Polyamide 6 (Nylon 6)
DIN Abbreviation: PA 6
Colour, Filler: Black Molybdenum disulphide
Availability: Rod 4 - 300 mm dia
Plate 1 - 100 mm thick
Tube 25 - 300 mm OD
Profile
Finished parts, machined or injection moulded

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

- 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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Properties	Unit	Test method DIN EN ISO / ASTM	Dry/ Wet*
Mechanical			
Density	g/cm³	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^2	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/mm², v = 0,6 m/s	–		0.32 - 0.37
Wear conditions as above	µm/km		0.16
Thermal			
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 1S0 / ASTM	Dry / Wet*
Thermal			
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^{-5}/K	DIN 53 483 / D 696	8
Electrical			
Dielectric constant at 10^5 Hz		DIN 53 483	
Dielectric loss factor at 10^6 Hz		DIN 53 483	
Specific volume resistance	Ω · cm	DIN 60093	6×10^{13}
Surface resistance	Ω	DIN 60093	3×10^{13}
Dielectric strength 1 mm	kV/mm	ASTM 149	
Tracking resistance		53 480	
Miscellaneous			
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