TECAST T

Chemical Designation:	Polyamide 6 (cast)
DIN Abbreviation:	PA6 G
Colour, Filler:	Opaque / yellowish

TECAST T is a semi-crystalline cast nylon with good machinability and universal applications.

Main characteristics:

- Very good machinability
- Good sliding properties even in dry running conditions
- Resistant to many oils, greases, diesel, petrol.
- Tough and strong
- Good vibration damping
- Electrically insulating
- Abrasion resistant

Preferred fields: Mechanical engineering, automotive engineering, transport and conveyor technology, gears, couplings and engine construction, textile, packaging and paper processing machinery, machine parts, agricultural machinery, printing machinery

Applications:

- Diverse machine parts
- Slide rails
- Castors
- Pulleys
- Friction strips
- Slide bearings
- Gears
- Wiper blades
- Chain wheels
- Chain guides

Ensinger Ltd
Wilfried Way
Tonyrefail
Mid Glam CF39 8JQ

Tel: 01443 678400
Fax: 01443 675777
Web: www.ensinger.ltd.uk
Email: sales@ensinger.ltd.uk

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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	
Mechanical			
Density	g/cm³	527 / D 792	1.15
Tensile strength at yield	MPa	527 / D 638	85 / 60*
Tensile strength at break	MPa	527 / D 638	
Elongation at break	%	527 / D 638	3 / 50*
Modulus of elasticity in tension	MPa	527 / D 638	3300 / 1700*
Modulus of elasticity in flexure	MPa	178 / D 790	
Ball indentation hardness	MPa	2039 /1	90 - 160
Impact strength	kJ/m²	179 / D 256	no. br.
Creep rupture strength after 1000 hrs with static load	MPa		50
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	–		0.4
Wear conditions as above	µm/km		
Thermal			
Crystalline melting point	°C	DIN 53 736	220
Glass transition temperature	°C	DIN 53 736	40 / 5*
Heat distortion temperature Method A Method B	 °C °C	 R 75 R 75	 95 195

Properties	Unit	Test method DIN EN 1S0 / ASTM	
Thermal			
Max. service temperature short term long term	°C °C		180 100
Coefficient of thermal conductivity	W/(m · K)		0.24
Specific heat	J/(g · K)		1.7
Coefficient of thermal expansion	10^{-5}/K	DIN 53 483 / D 696	6
Electrical			
Dielectric constant at 10^5 Hz		DIN 53 483	3.7
Dielectric loss factor at 10^5 Hz		DIN 53 483	0.03 – 0.30
Specific volume resistance	Ω · cm	DIN 60093	10^{12} - 5 x 10^{14}
Surface resistance	Ω	DIN 60093	5 x 10^{12}
Dielectric strength 1 mm	kV/mm	ASTM 149	50
Tracking resistance		53 480	KA 3c KA 3b
Miscellaneous			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%	62	2.5
Water absorption at saturation at 23 °C	%	62	6 – 7
Resistance to hot water, washing soda			limited resistant
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
- 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_2, graphite, PTFE, PE, silicone oil, internal lubrication