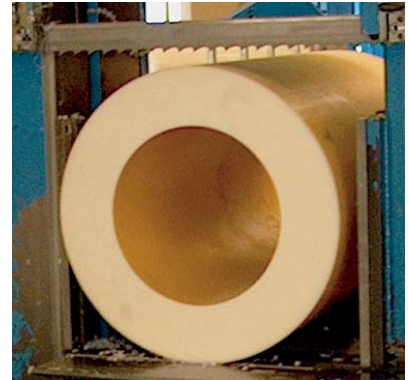


**Large portfolio.
Rods from TECAST in a wide range of dimensions.**



TECAST

TECAST is the name of the group of cast polyamide products from ENSINGER. Subsequent annealing renders possible the production of parts which are almost free of internal stress.

The addition of MoS₂ considerably enlarges the possible fields of applications, especially if there are high demands for sliding and friction behaviour.

For applications where hardness and toughness are especially important, ENSINGER offers cast rods and spun tubes in many different dimensions, from very small to very large.

Preferred fields

Packaging and paper machines, agricultural machines, automotive industry, gear and clutch manufacturing, etc.

Applications

Calender rolls, bushes, crane sheaves, rollers, wheels, racks and pinions, boom wear pads, gaskets, drives, etc.

Plastic & Metal Center, Inc.

23162 La Cadena Drive

Laguna Hills, CA 92653

USA

Tel: 949-770-8230

Fax: 949-770-8478

Email: sales@plastic-metal.com

www.plastic-metal.com

TECAST T

TECAST T is the approved standard grade. The low-stress cast semi-finished product can be easily machined. High toughness – even in dry conditions – and high resistance to stress cracking are characteristic features.

TECAST T is also available in blue.

TECAST TM

Main features are good UV stability and high surface hardness. The degree of crystallization is improved by the addition of MoS₂. In this way, higher ultimate stress values are reached without impairing toughness properties. On account of the high degree of crystallization, the surface hardness increases and the sliding properties are improved. The high degree of crystallization of about 60 % helps maintain these properties even under thermal stress. This is due to the fact that the distinct crystal structure does not break down before the melting point is reached.

Dimensions and availability

ENSINGER has a broad portfolio of TECAST tubes:

Outside diameter: 50 – 710 mm
Inside diameter: 30 – 500 mm

The standard length is 1000 and 2000 mm for outside diameters under 200 mm.

From 200 mm, delivery length depends on the nominal sizes and ranges from 2000 to 4200 mm.

For outside diameters under 200 mm, the minimum order quantity is very low. Further dimensions are available on demand.

Technical Properties		TECAST T	TECAST TM
DIN abbreviation		PA 6 G	PA 6 G
Density (ASTM D 792, DIN 53 479)	ρ g/cm ³	1,15	1,15
Tensile strength at yield (ASTM D 638, DIN EN ISO 527)	σ_s MPa	85 / 60*	75
Tensile strength at break (ASTM D 638, DIN EN ISO 527, ASTM D 1708 (a))	ϵ_R %	3 / 50*	40 / 60*
Modulus of elasticity after tensile test (ASTM D 638, DIN EN ISO 527)	E_z MPa	3300 / 1700*	2800
Hardness (Rockwell: ASTM D 785)	H_k MPa	160 / 90*	145
Impact resistance (Charpy: DIN EN ISO 179)	a_n kJ/m ²	no break	
Glass transition temperature (DIN 53 765)	T_g °C	40 / 5*	40 / 5*
Heat distortion temperature (DIN 53 461 acc. ISO R 75 method B)	HDT/B °C	195	
Service temperatur short term long term	°C °C	180 100	170 100
Thermal conductivity (23 °C)	λ W/(K·m)	0,24	
Specific heat (23 °C)	c J/(g·K)	1,7	
Coefficient of linear thermal expansion (23 °C, ASTM D 696, DIN 53 752, ASTM E 831)	α 10 ⁻⁵ 1/K	7,5-9,5	9,5
Dielectric constant (ASTM D 150)	ϵ_R -	3,7	
Dielectric loss factor (106 Hz, ASTM D 150, DIN 53 483, IE-250)	$\tan \delta$	0,03-0,30	
Specific volume resistance (ASTM D 257, EC 93, DIN IEC 60093)	ρ_D Ω·cm	10 ¹² -5*10 ¹⁴	
Surface resistance (DIN IEC 93 / DIN 54 345 T1)	R_o Ω	5*10 ¹²	
Dielectric strength (ASTM D 149)	E_d kV/mm	25-50	
Resistance to tracking (DIN EN 60112, VDE 0303 part 1)	Grade	KA 3c KA 3b	
Moisture absorption to equilibrium 23 °C / 50 % rel. humidity (DIN EN ISO 62)	$W(H_2O)$ %	2,5	2,5
Water absorption at saturation (DIN EN ISO 62)	W_s %	6-7	6-7
Flammability according to UL-Standard 94		HB	HB

* dry / humid

Please find information concerning the exclusion of liability and Terms and Conditions of Delivery in our Semi-finished products catalogue or at www.ensinger-online.com.

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Email: sales@plastic-metal.com
www.plastic-metal.com

I ENSINGER GmbH
Rudolf-Diesel-Straße 8
71154 Nufringen

Phone +49 (0) 7032 / 819-0
Fax +49 (0) 7032 / 819-100
info@ensinger-online.com
www.ensinger-online.com

Tel: 949-770-8230
Fax: 949-770-8478

