TECAST T blue - Stock Shapes (rods, plates, tubes)

Chemical Designation
PA 6 C (Cast polyamide 6)

Colour
blue opaque

Density
1.15 g/cm^3

Data generated directly after machining (standard climate Germany).

Main features
- good wear properties
- good mechanical properties
- high fatigue strength
- good damping
- high mechanical load capacity
- resistant to many oils, greases and fuels

Target Industries
- construction industry
- gear manufacturing
- oil and gas industry
- conveyor technology
- agricultural machinery
- heavy duty industry
- mining industry

Mechanical properties	parameter	value	unit	norm		comment
Tensile strength	50mm/min	89	MPa	DIN EN ISO 527-2		(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	3600	MPa	DIN EN ISO 527-2	1)	
Tensile strength at yield	50mm/min	89	MPa	DIN EN ISO 527-2		
Elongation at yield (tensile test)	50mm/min	18	%	DIN EN ISO 527-2		
Elongation at break (tensile test)	50mm/min	25	%	DIN EN ISO 527-2		
Shore hardness	D	82		DIN EN ISO 868		

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		49	°C	DIN EN ISO 11357		(1) Found in public sources. Individual testing regarding application conditions is mandatory. (2) Found in public sources.
Melting temperature		217	°C	DIN EN ISO 11357		
Service temperature	short term	170	°C	-	1)	
Service temperature	long term	100	°C	-		
Thermal expansion (CLTE)	23-60°C, long.	11	10^{-5} K^{-1}	DIN EN ISO 11359-1;2	2)	
Specific heat		1.6	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.33	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm		comment
surface resistivity		10^{14}	Ω	DIN IEC 60093		

Other properties	parameter	value	unit	norm		comment
Moisture absorption	24h / 96h (23°C)	0.2 / 0.5	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		(+)		-		
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)	

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