

TECAST T MO black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PA 6 C (Cast polyamide 6)

Colour

black opaque

Density

1.15 g/cm³

Fillers

molybdenum disulfide

Data generated directly after machining
(standard climate Germany).

Main features

- good wear properties
- resistant to many oils, greases and fuels
- high toughness
- good damping
- good slide and wear properties
- high strength

Target Industries

- mechanical engineering
- automotive industry
- heavy duty industry

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	82	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken
Modulus of elasticity (tensile test)	1mm/min	3200	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50mm/min	80	MPa	DIN EN ISO 527-2	
Elongation at yield (tensile test)	50mm/min	4	%	DIN EN ISO 527-2	
Elongation at break (tensile test)	50mm/min	55	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	102	MPa	DIN EN ISO 178	(2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	3000	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	22/38/85	MPa	EN ISO 604	(3)
Compression modulus	5mm/min, 10 N	2800	MPa	EN ISO 604	(4)
Impact strength (Charpy)	max. 7.5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU	(5)
Notched impact strength (Charpy)	max. 7.5J	4	kJ/m ²	DIN EN ISO 179-1eA	
Shore hardness	D	83		DIN EN ISO 868	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		43	°C	DIN EN ISO 11357	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		217	°C	DIN EN ISO 11357	
Service temperature	short term	170	°C		(2)
Service temperature	long term	100	°C		
Thermal expansion (CLTE)	23-60°C, long.	11	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	11	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;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	(1) Due to the black colourant and moisture uptake of the material the electrical insulation properties cannot be 100% guaranteed, despite single measurements suggesting otherwise.
volume resistivity		10 ¹⁴	Ω*cm	DIN IEC 60093	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.2 / 0.5	%	DIN EN ISO 62	(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		(+)		-	
Resistance to weathering		(+)			
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	

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