

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

Chemical Designation

PA 6 (Polyamide 6)

Colour

black

Density

1.15 g/cm³

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	condition	value	unit	test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	350,000	psi	ASTM D 638	(1) Data obtained from public source
Tensile strength at yield	@ 73 °F	12,000	psi	ASTM D 638	(2) Data obtained from public source
Elongation at break (tensile test)	@ 73 °F	30	%	ASTM D 638	
Flexural strength	@ 73 °F	12,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	350,000	psi	ASTM D 790	
Compression strength	@ 1% strain	3,300	psi	ASTM D 695	
Compression strength	@ 10% strain	14,000	psi	ASTM D 695	
Compression modulus		350,000	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	1.20	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F R Scale	120		ASTM D 785	
Coefficient of friction	Dynamic, 40 psi, 50 fpm	0.26		ASTM D 3702	1)
Wear (K) factor	Against Steel, 40 psi, 50 fpm	200*10 ⁻¹⁰	in ³ -min/ft-lbs-hr	ASTM D 3702	2)
Thermal properties	condition	value	unit	test method	comment
Melting temperature		428	°F	ASTM D 2133	(1) Data obtained from public source
Deflection temperature	@ 66 psi	370	°F	ASTM D 648	1)
Deflection temperature	@ 264 psi	200	°F	ASTM D 648	2)
Service temperature	Intermittent	300	°F	-	
Service temperature	Long Term	200	°F	-	
Thermal expansion (CLTE)		4.0*10 ⁻⁵	in/in/°F	ASTM D 696	
Specific heat		0.40	BTU/lb-F°	-	
Thermal conductivity		1.67	BTU-in/hr-ft ² -°F	-	
Electrical properties	condition	value	unit	test method	comment
surface resistivity		10 ¹⁴	Ω/square	ASTM D 257	
Dielectric strength		500	V/mil	ASTM D 149	
Dielectric constant	@ 60 Hz, 73 °F, 50% RH	3.7		ASTM D 150	
Other properties	condition	value	unit	test method	comment
Moisture absorption	@ 24 hrs, 73 °F	1.2	%	ASTM D 570	(1) estimated
Flammability (UL94)		HB		-	1)

→ Resin specification:

Shapes specification:
ASTM D5989-11 S-PA0211

This information reflects the current state of our knowledge and is intended only to assist and advise. It is given without obligation or liability. It does not assure or guarantee chemical resistance, quality of products or their suitability in any legally binding way. Values are not minimum or maximum values, but guidelines that can be used for comparative purposes in material selection. They are within the normal range of product properties and do not represent guaranteed property values. Testing under individual application circumstances is always recommended. Data is obtained from extruded shapes material unless otherwise noted. References to FDA compliance refer to the resins from which the products were made unless otherwise noted. All trade and patent rights should be observed. All rights reserved. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com.

Ensinger Inc. Headquarters
365 Meadowlands Boulevard
Washington, PA 15301, USA

Phone 800-243-3221 Sales
Phone 800-869-4029 Technical
Fax 724-746-9209
sales@ensingerusa.com

Date: 2018/12/07

Version: A1