

TECAST® 6XAU - Stock Shapes

Chemical Designation

PA 6 (Polyamide 6)

Colour

black

Density

1.15 g/cm³

Main features

- high thermal and mechanical capacity
- very good slide and wear properties
- improved surface hardness
- high mechanical load capacity
- excellent strength and stiffness

Target Industries

- construction industry
- agricultural machinery
- gear manufacturing
- mining industry
- conveyor technology
- oil and gas industry

Mechanical properties	condition	value		test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	450,000	psi	ASTM D 638	
Tensile strength at yield	@ 73 °F	12,000	psi	ASTM D 638	
Elongation at break	@ 73 °F	20	%	ASTM D 638	
Flexural strength	@ 73 °F	13,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	450,000	psi	ASTM D 790	
Impact strength (Izod)	@ 73 °F	0.7	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F	115		ASTM D 785	
Thermal properties	condition	value		test method	comment
Melting temperature		428	°F	ASTM D 2133	
Deflection temperature	@ 66 psi	370	°F	ASTM D 648	
Deflection temperature	@264 psi	200	°F	ASTM D 648	
Service temperature	Intermittent	350	°F	-	
Service temperature	Long Term	260	°F	-	
Thermal expansion (CLTE)		4.0*10 ⁻⁵	in/in/°F	ASTM D 696	
Electrical properties	condition	value		test method	comment
Volume resistivity		10 ¹⁴	Ω*cm	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		test method	comment
Moisture absorption	@ 24 hrs, 73 °F	1.2	%	ASTM D 570	

→ Resin specification:
NONE
Shapes specification:
ASTM D5989-11 S-PA0230

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.ensinger-inc.com.