

TECAST® 6XAU - Stock Shapes (rods, plates, tubes)

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	unit	test method	comment
Tensile strength	@ 73 °F	10,800	psi	ASTM D 638	
Modulus of elasticity (tensile test)	@ 73 °F	450,000	psi	ASTM D 638	
Elongation at break (tensile test)	@ 73 °F	50	%	ASTM D 638	
Flexural strength	@ 73 °F	13,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	430,000	psi	ASTM D 790	
Impact strength (Izod)	@ 73 °F	0.90	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F, M scale (R scale)	79 (115)		ASTM D 785	

Thermal properties	condition	value	unit	test method	comment
Melting temperature		428	°F	ASTM D 2133	(1) data from public sources
Deflection temperature	@ 66 psi	370	°F	ASTM D 648	(2) data from public sources
Deflection temperature	@ 264 psi	200	°F	ASTM D 648	(3) data from public sources
Service temperature	Intermittent	350	°F	-	
Service temperature	Long Term	260	°F	-	
Thermal expansion (CLTE)		4.0	*10 ⁻⁵ in/in/°F	ASTM D 696	3)

Electrical properties	condition	value	unit	test method	comment
surface resistivity		10 ¹⁴	Ω/square	ASTM D 257	

Other properties	condition	value	unit	test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.69	%	ASTM D 570	

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

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