

TECAMID® 66 IE natural (ST 801) - Stock Shapes (rods, plates, tubes)

Chemical Designation

PA 66 (Polyamide 66)

Colour

natural opaque

Density

1.08 g/cm³

Main features

- high toughness
- excellent impact strength
- good wear resistance
- good mechanical properties

Target Industries

- conveyor technology
- gear manufacturing
- heavy duty industry
- mechanical engineering

Mechanical properties	condition	value	unit	test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	245,000	psi	ASTM D 638	(1) Data from public source (2) Data from public source
Tensile strength at yield	@ 73 °F	6,600	psi	ASTM D 638	
Elongation at break (tensile test)	@ 73 °F	38	%	ASTM D 638	
Flexural strength	@ 73 °F	7,900	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	245,000	psi	ASTM D 790	
Compression strength	@ 1% strain	2,250	psi	ASTM D 695	
Compression strength	@ 10% strain	8,100	psi	ASTM D 695	
Compression modulus		200,000	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	3.17	ft-lbs/in	ASTM D 256	
Rockwell hardness	R Scale	97		ASTM D 785	
Coefficient of friction	Dynamic, 40 psi, 50 fpm	0.28		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		504	°F	DIN EN ISO 11357	1) (1) Data from public source
Deflection temperature	@ 66 psi	315	°F	ISO-R 75 Method B	2) (2) Data from public source
Deflection temperature	@264 psi	147	°F	ISO-R 75 Method A	3) (3) Data from public source
Service temperature	Long Term	185	°F	-	4) (4) Data obtained from public source
Thermal expansion (CLTE)	flow 73 - 140 F	6.7*10 ⁻⁴	in/in/°F	ASTM E 831	5) (5) Data from public source
Other properties	condition	value	unit	test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.30	%	ASTM D 570	(1) Data from public source - resin
Moisture absorption	@ saturation, 73 °F	6.7	%	ASTM D 570	1) (2) Data from public source - resin
Flammability (UL94)	0.81 mm thick	HB		-	2)

→ Resin specification:
ASTM D6779-11 PA0171
Shapes specification:
ASTM D5989-11 S-PA0100

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