

TECAMID® 66 - Stock Shapes

Chemical Designation

PA 66 (Polyamide 66)

Colour

natural opaque

Density

1.14 g/cm³

Main features

- very good slide and wear properties
- good machinability
- broad chemical compatibility
- resistant to cleaning agents

Target Industries

- agricultural machinery
- automotive industry
- business machines
- construction industry
- food engineering
- conveyor technology
- heavy duty industry
- textile industry

Mechanical properties	condition	value		test method	comment
Modulus of elasticity (tensile test)		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
Tensile strength at break	@ 73 °F	12,300	psi	ASTM D 638	(3) Injection molded sample
Elongation at yield	@ 73 °F	7	%	ASTM D 638	(4) Data obtained from public source
Elongation at break	@ 73 °F	25	%	ASTM D 638	
Flexural strength	@ 73 °F	15,500	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	440,000	psi	ASTM D 790	
Compression strength	@1 % Strain	5,000	psi	ASTM D 695	3)
Compression modulus	@ 73 °F	392,000	psi	ASTM D 695	4)
Impact strength (Izod)	@ 73 °F	1.1	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F M Scale	90	%	ASTM D 785	
Coefficient of friction	Dynamic 40 psi, 50 fpm	0.26		ASTM D 3702	
Wear rate	40 psi, 50 fpm	200*10 ⁻⁷	in ³ -min/ft-lbs-hr	ASTM D 3702	

Thermal properties	condition	value		test method	comment
Melting temperature		491	°F	ASTM D 2133	
Deflection temperature	@264 psi	194	°F	ASTM D 648	
Deflection temperature	@ 66 psi	450	°F	ASTM D 648	
Service temperature	short term	300	°F	-	
Service temperature	Long Term Short Term	185	°F	-	
Thermal expansion (CLTE)		4.5*10 ⁻⁵	in/in/°F	ASTM D 696	
Specific heat		0.4	BTU/lb-F°	-	

Electrical properties	condition	value		test method	comment
Volume resistivity		10 ⁻¹⁵	Ω*cm	ASTM D 257	
Dissipation factor	@ 60 Hz, 70 °F	0.01	%	ASTM D 150	
Dielectric constant	@ 60 Hz, 70 °F, 50% RH	4	%	ASTM D 150	
Dielectric constant	@ 1 MHz	3.6		ASTM D 150	

Other properties	condition	value		test method	comment
Water absorption	@ 24 hrs, 73 °F	1.2	%	ASTM D 570	(1) 6.0 mm sample extruded
Moisture absorption	@ saturation, 73 °F	8.5	%	ASTM D 570	
Flammability (UL94)		V-2		-	1)

→ Resin specification:
ASTM D6779 PA0110 B54220 or ASTM D6779 PA0114 and ASTM D4066 PA0114
Shapes specification: ASTM D5989-11 S-PA0111

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