

TECAMID® 66 black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PA 66 (Polyamide 66)

Colour

black

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	unit	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) Data obtained from public source
Elongation at yield (tensile test)	@ 73 °F	7	%	ASTM D 638	
Elongation at break (tensile test)	@ 73 °F	50	%	ASTM D 638	
Flexural strength	@ 73 °F	16,500	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	440,000	psi	ASTM D 790	
Compression strength	@ 73 °F, 1% strain	1,500	psi	ASTM D 695	
Compression modulus	@ 73 °F	392,000	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	1.2	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F M Scale	85		ASTM D 785	
Coefficient of friction	Dynamic 40 psi, 50 fpm	0.26		ASTM D 3702	
Wear rate	40 psi, 50 fpm	200*10 ⁻¹⁰	in ³ -min/ft-lbs-hr	ASTM D 3702	
Thermal properties	condition	value	unit	test method	comment
Melting temperature		491	°F	ASTM D 2133	(1) publicly sourced data
Deflection temperature	@ 264 psi	194	°F	ASTM D 648	(2) publicly sourced data
Deflection temperature	@ 66 psi	450	°F	ASTM D 648	(3) publicly sourced data
Service temperature	short term	300	°F	-	(4) publicly sourced data
Service temperature	Long Term Short Term	185	°F	-	(5) publicly sourced data
Thermal expansion (CLTE)		4.5*10 ⁻⁵	in/in/°F	ASTM D 696	(6) publicly sourced data
Specific heat		0.4	BTU/lb-F°	-	
Electrical properties	condition	value	unit	test method	comment
volume resistance		10 ¹⁵	Ω*cm	ASTM D 257	(1) publicly sourced data
Dissipation factor	@ 60 Hz, 70 °F	0.01		ASTM D 150	(2) publicly sourced data
Dielectric constant	@ 60 Hz, 70 °F, 50% RH	4		ASTM D 150	(3) publicly sourced data
Dielectric constant	@ 1 MHz	3.6		ASTM D 150	(4) publicly sourced data
Other properties	condition	value	unit	test method	comment
Water absorption	@ 24 hrs, 73 °F	0.45	%	ASTM D 570	(1) publicly sourced data
Moisture absorption	@ saturation, 73 °F	8.5	%	ASTM D 570	

→ Resin specification:
ASTM D6779-11 PA 0114 or ASTM D6779-11 PA0110B54220
Shapes specification:
ASTM D5989-11 S-PA0111

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.