TECAMID 66 LA natural - Stock Shapes (rods, plates, tubes)

Chemical Designation
PA 66 (Polyamide 66)

Colour
ivory opaque

Density
1.11 g/cm^3

Fillers
lubricant

Data generated directly after machining (standard climate Germany).

Main features
- good slide and wear properties
- good chemical resistance
- good wear properties
- resistant to many oils, greases and fuels
- high toughness
- good weldable and bondable

Target Industries
- mechanical engineering
- automotive industry

Mechanical properties	parameter	value	unit	norm		comment
Tensile strength	50mm/min	76	MPa	DIN EN ISO 527-2		(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Modulus of elasticity (tensile test)	1mm/min	3100	MPa	DIN EN ISO 527-2	1)	
Tensile strength at yield	50mm/min	76	MPa	DIN EN ISO 527-2		
Elongation at yield (tensile test)	50mm/min	11	%	DIN EN ISO 527-2		
Elongation at break (tensile test)	50mm/min	14	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	102	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	2800	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	20/35/75	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	2400	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	37	kJ/m^2	DIN EN ISO 179-1eU	5)	
Ball indentation hardness		145	MPa	ISO 2039-1	6)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		54	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		261	°C	DIN EN ISO 11357		
Service temperature	short term	120	°C		2)	
Service temperature	long term	90	°C			
Thermal expansion (CLTE)	23-60°C, long.	11	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	12	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Specific heat		1.6	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.36	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10^{14}	Ω	-	
volume resistivity		10^{14}	Ω*cm	-	

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.2 / 0.4	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

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