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Chemical Designation

PA 6 (Polyamide 6)

Colour

ivory opaque

Density

1.19 g/cm³

Fillers

flame retardant (halogen free)

Data generated directly after machining (standard climate Germany).

Main features

- flame retardant according to UL94 V-0
- resistant to many oils, greases and fuels
- good wear properties
- good slide and wear properties
- high strength
- good machinability

Target Industries

- transportation
- electrical engineering
- mechanical engineering
- automotive industry
- conveyor technology
- packaging and paper machinery
- textile industry

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1mm/min	3900	MPa	DIN EN ISO 527-2	1)
Tensile strength	50mm/min	79	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50mm/min	79	MPa	DIN EN ISO 527-2	
Elongation at yield	50mm/min	3	%	DIN EN ISO 527-2	
Elongation at break	50mm/min	3	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	121	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	3900	MPa	DIN EN ISO 178	
Compression strength	1% / 2% 5mm/min, 10 N	15 / 34	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	3300	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	53	kJ/m ²	DIN EN ISO 179-1eU	5)
Ball indentation hardness		175	MPa	ISO 2039-1	6)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		45	°C	DIN 53765	1)
Melting temperature		221	°C	DIN 53765	
Service temperature	short term	160	°C		2)
Service temperature	long term	100	°C		
Electrical properties	parameter	value	unit	norm	comment
Specific surface resistance	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω	DIN IEC 60093	1)
Specific volume resistance	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω*cm	DIN IEC 60093	
Other properties	parameter	value	unit	norm	comment
Resistance to hot water/ bases		(+)	-		1)
Resistance to weathering		-	-		2)
Flammability (UL94)	listed (value at 1.5mm)	V0		DIN IEC 60695-11-10;	
Flammability	value 6-20mm	S-4 / SR-2		DIN 5510-2:2007	