TECASINT 1061 black - Stock Shapes (rods, plates, tubes)

Chemical Designation
PI (Polyimide)

Colour
black

Density
1.48 g/cm^3

Fillers
15% graphite, 10% PTFE

Main features
- very good slide and wear properties
- high thermal and mechanical capacity
- good wear resistance
- resistance against high energy radiation
- good chemical resistance
- sensitive to hydrolysis in higher thermal range

Target Industries
- automotive industry
- aircraft and aerospace technology
- conveyor technology
- mechanical engineering
- precision engineering
- textile industry
- vacuum technology

Mechanical properties	condition	value	unit	test method		comment
Tensile strength	50 mm/min	77	MPa	DIN EN ISO 527-1		(1) eU (2) eA
Modulus of elasticity (tensile test)	50 mm/min	4400	MPa	DIN EN ISO 527-1		
Elongation at break (tensile test)	50 mm/min	2.9	%	DIN EN ISO 527-1		
Flexural strength	10 mm/min	120	MPa	DIN EN ISO 178		
Modulus of elasticity (flexural test)	10 mm/min	4000	MPa	DIN EN ISO 178		
Elongation at break (flexural test)	10 mm/min	3.6	%	DIN EN ISO 178		
Compression strength	10 mm/min	170	MPa	EN ISO 604		
Impact strength (Charpy)	max 7.5 J	25.8	kJ/m^2	DIN EN ISO 179-1	1)	
Notched impact strength (Charpy)	max 7.5 J	3.9	kJ/m^2	DIN EN ISO 179-1	2)	
Shore hardness	Shore D	85		DIN EN ISO 868		

Thermal properties	condition	value	unit	test method		comment
Glass transition temperature		667	°F	-	1)	(1) DMA, maximum loss factor tan d

Other properties	condition	value	unit	test method		comment
Water absorption	24 h in water, 73°F	0.64	%	DIN EN ISO 62		(1) 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.
Water absorption	24 h in water, 176°F	1.82	%	DIN EN ISO 62		
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	1)	

- TECASINT 1000 series show significant water uptake. Parts have to be pre-dried before fast heating to above 200 °C (drying process: 2 h per 3 mm wall thickness at 150 °C).

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