

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

### Chemical Designation

PI (Polyimide)

### Colour

black

### Density

1.48 g/cm<sup>3</sup>

### 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

<b>Mechanical properties</b>	<b>parameter</b>	<b>value</b>	<b>unit</b>	<b>norm</b>	<b>comment</b>
Tensile strength	50 mm/min, 23°C	77	MPa	DIN EN ISO 527-1	(1) eU (2) eA (3) Ensinger Standard
Modulus of elasticity (tensile test)	50 mm/min, 23°C	4400	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)	50 mm/min, 23°C	2.9	%	DIN EN ISO 527-1	
Elongation at break (tensile test)	10 mm/min, 23°C	3.6	%	DIN EN ISO 178	
Flexural strength	10 mm/min, 23°C	120	MPa	DIN EN ISO 178	
Modulus of elasticity (flexural test)	10 mm/min, 23°C	4000	MPa	DIN EN ISO 178	
Compression strength	10 mm/min, 23°C	170	MPa	EN ISO 604	
Impact strength (Charpy)	max 7.5 J, 23°C	25.8	kJ/m <sup>2</sup>	DIN EN ISO 179-1	1)
Notched impact strength (Charpy)	max 7.5 J, 23°C	3.9	kJ/m <sup>2</sup>	DIN EN ISO 179-1	2)
Shore hardness	Shore D, 23°C	85		-	3)
<b>Thermal properties</b>	<b>parameter</b>	<b>value</b>	<b>unit</b>	<b>norm</b>	<b>comment</b>
Glass transition temperature		353	°C	-	1)
Service temperature	long-term	260	°C	-	2)
					(1) DMA, maximum loss factor tan δ (2) Found in public sources. Individual testing regarding application conditions is mandatory.
<b>Other properties</b>	<b>parameter</b>	<b>value</b>	<b>unit</b>	<b>norm</b>	<b>comment</b>
Water absorption	24 h in water, 23°C	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, 80°C	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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