

TECASINT 6032 black - Direct Forming

Chemical Designation

PI (Polyimide)

Colour

black

Density

1.57 g/cm³

Fillers

graphite

Production process: direct forming

Main features

- very good thermal stability
- very good bearing and wear properties
- good wear resistance
- low thermal expansion
- high creep resistance
- high dimensional stability
- sensitive to hydrolysis in higher thermal range

Target Industries

- hot glass technology
- mechanical engineering
- aircraft and aerospace technology
- automotive industry

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50 mm/min	51	MPa	DIN EN ISO 527-1	
Modulus of elasticity (tensile test)	1 mm/min	5200	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)	50 mm/min	1.3	%	DIN EN ISO 527-1	
Flexural strength	10 mm/min	70	MPa	DIN EN ISO 178	
Modulus of elasticity (flexural test)	2 mm/min	5500	MPa	DIN EN ISO 178	
Elongation at break (flexural test)	10 mm/min	1.3	%	DIN EN ISO 178	
Compression strength	10 mm/min	125	MPa	EN ISO 604	
Compression strength	10mm/min, 10% strain	120	MPa	EN ISO 604	
Compressive strain at break	10 mm/min	12	%	EN ISO 604	
Shore hardness	Shore D	83		DIN EN ISO 868	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		288	°C	-	1) (1) DMA, maximum loss factor tan d
Thermal expansion (CLTE)	50-200°C	1.5 / -	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	2) (2) Thermal expansion XY/Z axis
Thermal expansion (CLTE)	200-300°C	2.7 / -	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	3) (3) Thermal expansion XYZ axis
Specific heat		0.97	J/(g*K)	-	
Thermal conductivity	40°C	1.66	W/(K*m)	DIN EN 821	
Other properties	parameter	value	unit	norm	comment
Water absorption	24 h in water, 23°C	0,3	%	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.
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	1)

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