

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	condition	value	unit	test method	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	condition	value	unit	test method	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 XY/Z axis
Specific heat		0.97	J/(g*K)	-		
Thermal conductivity	40°C	1.66	W/(K*m)	DIN EN 821		
Other properties	condition	value	unit	test method	comment	
Water absorption	24 h in water, 23°C	0,3	%	DIN EN ISO 62		
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	1)	(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.

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