TECASINT 2021 black - Stock Shapes

Chemical Designation
PI (Polyimide)

Colour
black

Density
1.46 g/cm^3

Fillers
15% graphite

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

Target Industries
- automotive industry
- aircraft and aerospace technology
- cryogenic engineering
- conveyor technology
- hot glass technology
- mechanical engineering
- precision engineering

Mechanical properties	condition	value		test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	638,000	psi	ASTM D 638	
Tensile strength at yield	@ 73 °F	14,645	psi	ASTM D 638	
Elongation at break	@ 73 °F	3.7	%	ASTM D 638	
Flexural strength	@ 73 °F	20,700	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	587,000	psi	ASTM D 790	
Impact strength (Charpy)	@ 73 °F, notched	17.5	ft-lbs/in	DIN EN ISO 179-1eA	
Thermal properties	**condition**	**value**		**test method**	**comment**
Deflection temperature	@264 psi	>600	°F	ASTM D 648	
Service temperature	Long Term	536	°F	-	
Service temperature	Intermittent	626	°F	-	
Thermal expansion (CLTE)		$2.3*10^{-5}$	in/in/°F	ASTM D 696	
Other properties	**condition**	**value**		**test method**	**comment**
Moisture absorption	@ 24 hrs, 73 °F	0.44	%	ASTM D 570	
Flammability (UL94)		V0		-	

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