

TECATOR TI5013 - Stock Shapes

Chemical Designation

PAI (Polyamidimide)

Colour

yellow-brown

Density

1.41 g/cm³

Main features

- high gamma radiation resistance
- excellent wear properties
- excellent strength and stiffness
- good chemical resistance
- high thermal resistance

Target Industries

- semiconductor technology
- electrical engineering
- cryogenic engineering
- power engineering
- hot glass technology

Mechanical properties	condition	value		test method	comment
Tensile strength at break	@ 73 °F	21,000	psi	ASTM D 638	
Elongation at break	@ 73 °F	15	%	ASTM D 638	
Flexural strength	@ 73 °F	33,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	711,000	psi	ASTM D 790	
Compression strength	1 % offset	30,000	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	2.3	ft-lbs/in	ASTM D 256	
Rockwell hardness	M Scale	119		ASTM D 785	
Thermal properties	condition	value		test method	comment
Deflection temperature	@264 psi	532	°F	ASTM D 648	
Service temperature	Long Term	500	°F	-	
Thermal expansion (CLTE)		1.66*10 ⁻⁵	in/in/°F	ASTM D 696	
Electrical properties	condition	value		test method	comment
Specific surface resistance		5*10 ¹⁵	Ω	ASTM D 257	
Dielectric strength		600	V/mil	ASTM D 149	
Dissipation factor	@ 10 ⁶ hertz	0.0009		ASTM D 150	
Dissipation factor	@ 20 ghz	0.0009		ASTM D 150	
Dissipation factor	@ 30 ghz	0.0005		ASTM D 150	
Dielectric constant	@ 10 ⁶ hertz	3.9		ASTM D 150	
Dielectric constant	@ 20 ghz	3.2		ASTM D 150	
Dielectric constant	@ 30 ghz	3.7		ASTM D 150	
Other properties	condition	value		test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.3	%	ASTM D 570	
Flammability (UL94)		V-0		-	

→ Resin specification:
ASTM D5204-11 PAI0210
Shapes specification:
NONE

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