TECAPAI IM 4203 natural

Chemical Designation
PAI (Polyamide-imide)

Colour
yellow-brown

Density
1.42 g/cm^3

Main features
- high thermal resistance
- excellent wear properties
- excellent chemical resistance
- excellent impact strength
- high stiffness
- high strength

Target Industries
- electronics
- electrical engineering
- aircraft and aerospace technology
- precision engineering
- mechanical engineering

Mechanical properties	parameter	value	unit	norm		comment
Modulus of elasticity (tensile test)		4480	MPa	ASTM D 638	1)	(1) Resin data (2) Resin data (3) Resin data (4) Resin data (5) Resin data (6) Resin data (7) Resin data (8) Resin data
Tensile strength		152	MPa	ASTM D 638	2)	
Elongation at break		7.6	%	ASTM D 638	3)	
Flexural strength	@ 23°C	241	MPa	ASTM D 790	4)	
Modulus of elasticity (flexural test)	@ 23°C	5030	MPa	ASTM D 790	5)	
Compression strength		221	MPa	ASTM D 695	6)	
Compression modulus		4000	MPa	ASTM D 695	7)	
Notched impact strength (Izod)		140	J/m	ASTM D 256	8)	

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		277			1)	(1) DSC Resin data (2) Resin data (3) Resin data (4) Resin data
Deflection temperature	1.8 MPa, Unannealed	278	°C	ASTM D 638	2)	
Thermal expansion (CLTE)	Flow	3.1 * 10-5 cm/cm/°C		ASTM E 831	3)	
Thermal conductivity		0.26	W/(K*m)	ASTM C 177	4)	

Electrical properties	parameter	value	unit	norm		comment
Dielectric strength		23	kV/mm	ASTM D 257	1)	(1) Resin data (2) Resin data (3) Resin data (4) Resin data (5) Resin data
Dissipation factor	@ 1 MHz	0.031		ASTM D 150	2)	
Dissipation factor	@ 60 Hz	0.026		ASTM D 150	3)	
Dielectric constant	@ 60 Hz	4.2		ASTM D 150	4)	
Dielectric constant	@ 1 MHz	3.90		ASTM D 150	5)	

Other properties	parameter	value	unit	norm		comment
Moisture absorption	24 hr	0.33	%	ASTM D 570	1)	(1) Resin data

Ensinger Precision Components
11 Danco Road
Putnam CT 06260 USA

Phone 860-928-7911
Fax 860-928-2229
Email: info@ensinger-pc.com

Date: 2020/05/13 Version: A0