DATASHEET

DURATRON T5530 PAI

This 30% glass fibre reinforced grade offers higher stiffness, strength and creep resistance than Duratron T4203 PAI and Duratron T4301 PAI. It is well suited for structural applications supporting static loads for long periods of time at high temperatures. In addition, Duratron T5530 PAI exhibits superb dimensional stability up to 250°C making it extremely popular for precision parts in the electronical and semiconductor industries.

Applications

- High Temperature Electrical Connectors
- Bearing Cages
- Can Mandrel
- Chip Nests & Sockets

Availability

- Colour – Brownish
- Type – Sheets, Rods & Tubes
- Regularly produced in a wide variety of thicknesses

Typical Properties

General Properties	Method	Unit	Test Result
Physical Properties			
Colour	-	-	Brownish
Density	ISO 1183-1	g/cm2	1.61
Water Absorption:			
- After 24h immersion in water of 23°C	ISO 62	mg	0.26
- At saturation in water of 23°C	-	%	3.2
Thermal Properties			
Melting Temperature (DSC, 10°C/min)	ISO 11357 – 1/-3	°C	-
Glass Transition Temperature (DSC, 10°C/min)	ISO 11357 – 1/-2	°C	280
Thermal Conductivity at 23°C	-	W/(K.m)	0.36
Coefficient of Linear Thermal Expansion:			
- Average value between 23 and 100°C	-	W/(K.m)	35x10 -6
- Average value between 23 and 150°C	-	W/(K.m)	35x10 -6
- Average value above 150°C	-	W/(K.m)	40x10 -6
Temperature of Deflection Under Load:			
- Method A: 1.8 MPa	ISO 75-1/-2	°C	280
Max Allowable Service Temperature in Air:			
- Continuously: for 5,000 to 20,000h	-	°C	250
Minimum Service Temperature	-	°C	-20

Flammability:			
- According to UL94 (3/6mm thickness)	-	-	V-0
Mechanical Properties			
Tension Test:			
- Tensile Strength	ISO 527-1/-2	MPa	125
- Tensile Strain at Yield	ISO 527-1/-2	%	-
- Tensile Strain at Break	ISO 527-1/-2	%	3
- Tensile Modulus of Elasticity	ISO 527-1/-2	MPa	6400
Flexural Test:			
- Flexural Strength	ISO 178	MPa	170
- Flexural Modulus of Elasticity	ISO 178	MPa	170
Compression Test:			
- Compressive Stress @ 1/2/5% Nominal Strain	ISO 604	MPa	55 / 104 / 190
Charpy Impact Strength - Unnotched	ISO 179-1-1eU	kJ/m2	30
Charpy Impact Strength - Notched	ISO 179-1-1eU	kJ/m2	3.5
Rockwell Hardness	ISO 2039-2	-	-
Dynamic Coefficient of Friction	ISO 7148-2(15)	-	0.35 – 0.60
Wear Rate	ISO 7148-2(15)	Um/km	
Electrical Properties			
Electric Strength	EC 60243-1	kV/mm	28
Volume Resistivity	IEC 60093	Ohm.cm	> 10E 14
Surface Resistivity	IEC 60093	Ohm	> 10E 13
Relative Permittivity – at 1MHz	IEC 60250	-	4.20
Dielectric Dissipation Factor – at 1 MHz	IEC 60250	-	0.05