

QUADRANT EPP PRODUCT DATA SHEET

TORLON® PAI 4203

May 1999

Polyamide-imide (PAI)

TORLON® PAI 4203 offers the best toughness and impact resistance of all TORLON® PAI grades. Because of its intrinsic high temperature resistance, high dimensional stability and good machinability, TORLON® PAI 4203 is very popular for precision parts in hi-tech equipment. In addition, its good electrical insulating ability provides numerous possibilities in the field of electrical components.

- High maximum service temperature (250°C)
- Excellent resistance against high energy radiation
- Inherent low flammability
- Exceptional wear resistance
- Outstanding dimensional stability (to +250°C)
- Excellent dielectric and insulating properties
- Excellent retention of mechanical strength / stiffness over a wide range of temperatures

Common applications: Connectors; Switches; Relays; Thrust washers; Valve seats; Piston rings; Mechanical linkages; Bushes; Electrical and thermal insulators.

Delivery Programme

Rod 2440mm long
 Diameter (mm): 2.36 (Min) 50.8 (Max)

Plate 305mm wide
 Lengths (mm): 305, 610, 1220
 Thickness (mm): 4.76 (Min) 25.4 (Max)

Technical Specification

Property	ISO Methods	Units	TORLON® PAI 4203
Colour	-	-	Yellow
Specific gravity	1183	g/cm ³	1.41
Water absorption			
Saturation in air (23°C / 50% RH)	-	%	2.50
Saturation in water (23°C)	-	%	4.50
Tensile strength* ¹	527	N/mm ²	120
Tensile modulus of elasticity* ¹	527	N/mm ²	4500
Elongation at break* ¹	527	%	10
Impact - Charpy* ¹	179/1eU	kJ/m ²	no break
Impact - Charpy notched* ¹	179/1eA	kJ/m ²	10
Hardness	Rockwell Shore D	- -	E79 -
Melt Point	-	°C	T _G = 285
Max allowable service temp in air			
for short periods	-	°C	270
continuously for 20000hrs	-	°C	250
Linear thermal expansion coefficient	-	K ⁻¹ x 10 ⁻⁵	3.0
Thermal Conductivity	-	W/(K.m)	0.26
Flammability* ² (3mm thickness)	-	-	V-0
Volume Resistivity* ¹	IEC93	Ohm.cm	10 ¹⁷
Dielectric Strength* ¹	IEC243	kV/mm	24
Outside applications - UV resistance	-	-	A
Acids - Strong (pH < 3)	-	-	B/C
Alkalis - Strong (pH > 11)	-	-	B/C
Chlorinated Hydrocarbons	-	-	A
Hot Water	-	-	C

Distributor

**Gilbert Curry
 Industrial Plastics Co Ltd**

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'A' - Acceptable service; 'B' - Limited service; 'C' - Unacceptable.

*¹ Measured on dry test specimens (where applicable)

*² Tests completed by Quadrant EPP, using UL test methods

Not all material sizes shown within the delivery programme section of this data sheet are available as standard. Please contact Quadrant Engineering Plastic Products UK for further details.

The data shown are typical values and are not intended to represent specifications. Their aim is to guide the user toward a material choice.