



## Material: PAI + Graphite & PTFE

The addition of PTFE and graphite provides higher wear resistance and lower coefficient of friction compared to the unfilled grade. It also offers excellent dimensional stability over a wide temperature range. This grade excels in severe wear applications such as non-lubricated bearings, seals, bearing cages and reciprocating compressor parts. Also available in Black 5530 grade (30% glass fibre reinforced) which gives higher stiffness, strength and creep resistance than the 4203 grade.

### Technical Specification

Property	Test Method	Units	Value
Colour	-	-	Black
Density	ISO 1183	g/cm <sup>3</sup>	1.45
Water Absorption - saturation in air (23°C/50%RH)	-	%	1.9
Water Absorption - saturation in water (23°C)	-	%	3.5
Tensile strength* <sup>1</sup>	ISO 527	N/mm <sup>2</sup>	80
Tensile modulus of elasticity* <sup>1</sup>	ISO 527	N/mm <sup>2</sup>	5800
Elongation at break* <sup>1</sup>	ISO 527	%	5
Impact - Charpy* <sup>1</sup>	179/1eU	kJ/m <sup>2</sup>	-
Impact – Charpy notched* <sup>1</sup>	179/1eA	kJ/m <sup>2</sup>	4
Hardness	Rockwell Shore D	-	M105
Glass transition temperature	-	°C	285
Max service temp in air short periods	-	°C	270
Max service temp continuously for 20000hrs	-	°C	250
Linear thermal expansion coefficient	-	K <sup>-1</sup> x10 <sup>-5</sup>	2.5
Thermal Conductivity	-	W/(K.m)	0.54
Flammability (3mm thickness)	-	-	V-0
Volume resistivity* <sup>1</sup>	IEC93	Ohm.cm	10 <sup>15</sup>
Dielectric strength* <sup>1</sup>	IEC243	Kv/mm	-
Outside applications – UV resistance	-	-	A
Acids – strong (Ph<3)	-	-	B/C
Alkalis – strong (pH>11)	-	-	B/C
Chlorinated Hydrocarbons	-	-	A
Hot Water	-	-	C
‘A’ – Acceptable service, ‘B’ – Limited, ‘C’ – Unacceptable			
* <sup>1</sup> Measured on dry test specimens (where applicable)			

#### Availability:

Rod, 2440mm long – 2.36-50.8mm diameter

Plate, 305, 610 & 1220mm long x 305 wide – 4.76-25.4mm thickness

#### Applications:

Bearings, Seals, Bearing Cages, Thrust Washers, Valve Seats, Piston Rings, Vanes, Bushes, Wear Pads, Reciprocating Compressor Parts.

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

Not all material sizes shown within the availability programme of this data sheet are available as standard.

Please contact ABG Rubber and Plastics Ltd for further details.