

FPG (SYNTHETIC FIBER-REINFORCED POLYESTER + GRAPHITE)

MATERIAL DATA SHEET

- High wear resistance
- Near zero moisture absorption
- Impact and shock resistant
- Self-lubricating
- High load capacity

FPG is typically used in marine, petroleum and chemical plant, railway, agriculture, hydraulics, water/sewage treatment. FPG is available in tubes, cylindrical bushes, flange bushes, plates and machined parts.

PROPERTIES	Direction	Units	VALUES
Color		-	Sky blue
Density		g/cm ³	1.21
Material swell in water at 20% C		%	0.1
Ultimate compressive strength	Normal to laminate	MPa	330
	Parallel to laminate	MPa	100
Impact strength (Charpy notched)		kJ/m ²	50
Hardness		HRM	98
Shear Strength		MPa	80
Max working compressive stress	Radial	MPa	75
	Axial	MPa	25
Max working temperature	Continuous	°C	120
	Intermittent	°C	140
Coefficient of linear thermal expansion	Normal to laminate	10 ⁻⁵ /°C	7
	Parallel to laminate	10 ⁻⁵ /°C	6

BEARING OPERATING LIMITS	Notes	Units	VALUES
Maximum temperature		°C	120
Minimum temperature		°C	-40
Maximum sliding speed		m/s	2.2
Maximum load	Static	MPa	330
	Dynamic	MPa	80
Maximum PV factor	Dry	MPa * m/s	0.23
	Oil lubricated	MPa * m/s	0.40
	Regular greased	MPa * m/s	0.60
Frictional coefficient		-	0.08~0.13

Note: 1 g/cm³ = 1,000 kg/m³ ; 1 MPa = 1 N/mm² ; 1 kV/mm = 1 MV/m.

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