

BOULDEN B-835



B-835 is a proprietary blend of PEEK reinforced with carbon fibers recommended primarily for clean services up to 275°F (135°C). Its high strength makes it ideal for demanding, high pressure applications. It has a radial coefficient of thermal expansion similar to the metal parts used in pumps, which simplifies installation and improves component reliability.

B-835 Typical Properties

Property	Unit of Measure	Test Method	Typical Values
Color			Black
Specific Gravity		ASTM D-792	1.43
Hardness	Shore D	ASTM D-2240	85.9
Mechanical (x-y direction)			
Flexural Strength	ksi (MPa)	ASTM D-790	25.8 (178)
Flexural Modulus	ksi (MPa)	ASTM D-790	1,990 (13,720)
Tensile Strength	ksi (MPa)	ASTM D-3039	16.6 (114)
Tensile Modulus	ksi (MPa)	ASTM D-3039	1,830 (12,617)
Shear Strength	ksi (MPa)	ASTM D732-17	9.44 (65.1)
Compressive Strength (x-y direction)	ksi (MPa)	ASTM D-695	26.8 (185)
Compressive Strength (z direction)	ksi (MPa)	ASTM D-695	22.6 (156)
Compressive Modulus (x-y direction)	ksi (MPa)	ASTM D-695	2,160 (14,893)
Compressive Modulus (z direction)	ksi (MPa)	ASTM D-695	826 (5695)
Coefficient of Friction	N/A	ASTM D1894-14	0.209*
Thermal			
Coefficient of Thermal Expansion (x-y)	10 ⁻⁶ in/in/° F (10 ⁻⁶ m/m/° C)	ASTM D-831	8.7 (15.7)
Coefficient of Thermal Expansion (z)	10 ⁻⁶ in/in/° F (10 ⁻⁶ m/m/° C)	ASTM D-831	30.8 (55.4)
Maximum Service Temperature	° F (° C)	UL 746B	275 (135)

*Against a #8 mirror finish stainless steel substrate

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