

FLUOROCARBON



NEW VALVE SEAT MATERIAL

FLUOROCARBON

Excellence in Chemical Protection and Low Friction Technologies

FLUORINOID FL 440

FL440 offers an ideal combination of strength, toughness and flexibility.

FL440 is a specially developed material designed to outperform other polyamide materials, particularly in valve seat applications. This grade has been developed to give high tensile strength, low moisture absorption, better impact strength and lower coefficient of friction than competing materials. It has also been developed to machine more easily leaving a better surface finish. It can be supplied in a form which is more dimensionally stable. The special manufacturing process enables large rings to be produced with predictable uniformity.

Data

Fluorocarbon reference	Fluorinoid FL 440
Colour	dark yellow
Specific gravity (ASTM D792)	1.14
Tensile strength (ASTM D638)	85.4 MPa / 12380 psi
Elongation at break (ASTM D638)	26.4%
Tensile modulus (ASTM D638)	3.74 GPa / 542300 psi
Flexural strength (ASTM D790)	101 MPa / 14650 psi
Flexural modulus (ASTM D790)	2.33GPa / 337850 psi
Compressive strength (ASTM D695)	136 MPa / 19720 psi
Compressive modulus (ASTM D695)	3.12 GPa / 452400 psi
Shore D hardness (ASTM D1706)	83
Izod impact strength (ASTM D256)	5.7kJ/m ² / 2.71 ft lb/in ²
Melting point (ASTM D789)	223°C / 433°F
Maximum intermittent service temperature	180°C / 356°F
Water absorption (ASTM D570) 23°C 1725hrs	3%
Dynamic coefficient of friction 0.17m/s, 5MPa	0.15
Wear rate (K factor)m ³ /Nm x 10 ⁻¹⁶	3.2

These figures are typical values for the material and do not represent a product specification. Properties will vary depending on the source of the raw material, method of processing, physical form of the product, direction of measurement etc.

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