



UHMW PE / Ultra-high-molecular-weight polyethylene

Alternative Designations

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Key Features

Self-lubricating • Resistant to abrasion • Corrosion resistant • Durable • Low coefficient of friction

Description

It is a type of thermoplastic made from ultrafine particles of polyethylene. It is used in a variety of applications where high wear resistance, low friction, and impact resistance are required. This plastic is extremely tough and has high resistance to abrasion and wear. It is corrosion resistant and self-lubricating. It has excellent mechanical properties even in sub-zero conditions. It is used in conveyor guides, wear pads, chemical tanks etc. it is available in either sheet or rod form and has easy machinability.

Mechanical Properties

Tensile modulus	551.5 MPa
Tensile strength	39.9 MPa
Elongation at break	300%
Flexural strength	24.13 MPa
Flexural modulus	0.606 GPa
Hardness (Shore D)	64

Thermal Properties

Melting temperature (20°C/min)	136°C
Heat deflection temperature (1.80 MPa)	82°C
Heat deflection temperature (0.45 MPa)	95°C
Softening temperature	128°C

Physical Properties

Density	0.93 g/cm ³
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Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit Materialdatacenter.com for further information on this material.