



HDPE

Alternative Designations

High Density Polyethylene

Key Features

Lightweight • Strong • Ductile, Chemical resistant • Environmental friendly

Description

This material is light in weight with high strength. It is resistant to chemicals and heat, impermeable and has good electrical insulation. It is highly ductile and is impact resistant. This material works well in both hot and cold temperatures. It is ideal for use in heavy construction, plumbing, agriculture and medical products.

Mechanical Properties

Tensile modulus	1000 MPa
Tensile strength	25 MPa
Elongation at break	9%
Flexural strength	36.68 MPa
Flexural modulus	0.97 – 1.38 GPa
Hardness (Shore D)	64

Thermal Properties

Melting temperature (20°C/min)	126°C
Heat deflection temperature (1.80 MPa)	80°C
Heat deflection temperature (0.45 MPa)	76°C
Softening temperature	124°C

Physical Properties

Density	0.947 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.