



LDPE

Alternative Designations

Low Density Polyethylene

Key Features

Flexible • Lightweight • Translucent • Resistant to stress

Description

It is a low-density polyethylene, which is a type of thermoplastic polymer. It offers good resistance to stress and pliability with good strength and toughness. It is lightweight and translucent. It is commonly used in food containers, toys, industrial parts, and medical products. LDPE is not as strong as other plastics, but it is less likely to shatter.

Mechanical Properties

| | |
|---------------------|-----------|
| Tensile modulus | 393 MPa |
| Tensile strength | 9.6 MPa |
| Elongation at break | 100% |
| Flexural strength | 10.3 MPa |
| Flexural modulus | 0.199 GPa |
| Hardness (Shore D) | 55 |

Thermal Properties

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|--|-------|
| Melting temperature (20°C/min) | 115°C |
| Heat deflection temperature (1.80 MPa) | 46°C |
| Heat deflection temperature (0.45 MPa) | 48°C |
| Softening temperature | 80°C |

Physical Properties

| | |
|---------|------------------------|
| Density | 0.92 g/cm ³ |
|---------|------------------------|

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.