



Data Sheet

PTFE / Teflon

Alternative Designations

Polytetrafluoroethylene

Key Features

Slippery • Resistant to extreme temperatures • Low friction, thermal and electrical insulator

Description

This is a highly slippery material with excellent resistance to extreme temperatures. It has outstanding insulating properties and is resistant to industrial chemicals. Due to its low coefficient of friction, it is widely used in the production of gears, bushings, slide plates, piston rings etc. Teflon's density and stiffness gives it easy machinability. However, its high coefficient of expansion and stress creep make it difficult to obtain tight tolerances.

Mechanical Properties

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|---------------------|-----------|
| Tensile modulus | 551.5 MPa |
| Tensile strength | 26.88 MPa |
| Elongation at break | 300% |
| Flexural strength | 14 MPa |
| Flexural modulus | 0.49 GPa |
| Hardness (Shore D) | 57 |

Thermal Properties

| | |
|--|-------|
| Melting temperature (20°C/min) | 335°C |
| Heat deflection temperature (1.80 MPa) | 55°C |
| Softening temperature | 110°C |

Physical Properties

| | |
|---------|------------------------|
| Density | 2.16 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.