

Nylon 12CF / PA 12 carbon-filled

Alternative Designations

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Key Features

Excellent structural properties • Lightweight • Abrasion resistant

Description

It is a carbon-filled semi-crystalline thermoplastic engineering polymer. It is a strong, lightweight material with excellent abrasion, chemical, and moisture resistance. The blend of Nylon 12 resin with chopped carbon fiber gives this material excellent structural properties. Carbon fibre occupies 35% of its weight. This allows for distinct freedom of design. It has wide applications in the automobile, industrial and recreational industries.

Mechanical Properties

Tensile modulus	7600 MPa
Tensile strength	76 MPa
Elongation at break	1.9%
Flexural strength	142 MPa
Flexural modulus	10.3 GPa

Thermal Properties

Heat deflection temperature (1.80 MPa)	143°C
Softening temperature	166°C

Physical Properties

Density	1.15 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.