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Innovating Additive Manufacturing

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Ultrafuse® Pellets PC GF30

High-Strength Micro Pellets:

Low-warping, Flame Retardant, High-Temperature Resistant Extrusions

Material Overview

03-07-2024

OVERVIEW

Introducing Ultrafuse® Pellets PC GF30: These advanced polycarbonate (PC) micro pellets, reinforced with 30% glass fiber, deliver unmatched stiffness, superior temperature stability, and certified flame retardancy (V0).

Easy-To-Print for Demanding High Temp. Applications

Perfect for challenging applications such as tools, molds, and high-temperature parts, they excel in both desktop and industrial 3D printing environments. These easy-to-print micro pellets ensure low warp results with outstanding surface quality while preserving the core properties of polycarbonate.

Wide-Ranging Industrial Applicability:

Featuring outstanding flame retardancy (V0 UL 94) and railway classification (EN 45545-2), Ultrafuse® PC GF30 are ideal for automotive, railway, aerospace, and industrial applications, providing reliable high-quality results.

QUICK FACTS

Material:

- Glass Fiber Reinforced Polycarbonate Micro-Pellets
- Color: Dark Gray

Offer:

- Pellet size: Micro Pellets
- Shape: Cylindrical
- Diameter & Length: ~2mm
- 20 kg in a box with 2*10 kg bags

Key Benefits:

- **PC with the right choice of flame retardancy:** V0 according to UL 94 (@1.5mm and 3.0mm
- **Tested for the demanding field of transportation:** Railway classification according to EN 45545-2
- **Resistance to UV light exposure:** Extended range of applications thanks to UV stabilization
- **Excellent temperature resistance:** High heat deflection temperature and temperature stability
- **High stiffness and strength:** High glass fiber filling for exceptional stiffness and strength

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Product Line:

Ultrafuse® Micro Pellets – Engineering Line

Technology:

Fused Granulate Fabrication (FGF)

Key Benefits:

- Flame Retardancy
- Low Moisture Uptake
- Improved UV Resistance
- High Heat Resistance and Deflectability
- High Stiffness
- High Surface Quality

Suited for:

- Functional Prototypes
- Jigs and fixtures
- Automotive Industry
- Railway / Transportation

This information and values are presented as guidance only and based on Forward AM's knowledge and experience. It is believed to be accurate, however all guarantees are explicitly denied. This document was updated July 2024.

TECHNICAL SPECIFICATIONS

Mechanical properties*	Standard	Value XY / XZ / ZX
HDT (0.45 MPa) (°C)	ISO 75-2	134,0
Tensile Strength (MPa)	ISO 527	36,1 / - / 11,2
Elongation at Break (%)	ISO 527	2,4 / - / 1,1
Young's Modulus (MPa)	ISO 527	2664,0 / - / 1231,0
Impact Strength Izod (notched) (kJ/m²)	ISO 180	5,6 / 5,4 / 2,1
Impact Strength Izod (unnotched) (kJ/m²)	ISO 180	13,9 / 17,8 / 3,4

*measured on respective filament

PRINT SETTINGS

Drying Recommendations

Temperature	100 °C
Time	8 - 10 h
Condition	<300 ppm

Please note: To ensure constant material properties the material should always be kept dry.

Recommended Extrusion Parameters

Zone 1 Temperature	250 ± 20 °C
Zone 2 Temperature	285 ± 20 °C
Zone 3 Temperature	285 ± 20 °C
Nozzle Temperature	300 ± 20 °C
Extrudate Temperature	90 ± 10 °C