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Technical Data Sheet

Ultrafuse® Pellets PP GF30

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General information

Product Description

Introducing Ultrafuse® Pellets PP GF30: These high-performance polypropylene (PP) micro pellets are reinforced with 30% glass fiber, ensuring extreme stiffness, high heat resistance, and enhanced UV stabilization. Designed for demanding applications like tools, molds, and holders, as well as environments sensitive to moisture or chemicals, they deliver exceptional performance. Ideal for both desktop and industrial 3D printing, these easy-to-print micro pellets guarantee outstanding surface quality while preserving the inherent properties of homopolymer polypropylene.

Components

Printing with Enhanced Reinforcement: Polypropylene (PP) is a leading thermoplastic choice across various industries, notably in automotive applications. These specially engineered polypropylene-based micro pellets for Fused Granulate Fabrication (FGF) in 3D printing are fortified with 30% glass fibers, ensuring exceptional stiffness and performance.

Delivery form and warehousing

Ultrafuse® Pellets PP GF30 should be stored at 15 - 25°C in its originally sealed package in a clean and dry environment. If the recommended storage conditions are observed the products will have a minimum shelf life of 12 months.

Product safety

Recommended: Process materials in a well-ventilated room, or use professional extraction systems. For further and more detailed information please consult the corresponding material safety data sheets.

Disclaimer

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

Pellet Properties	
Pellet diameter	< 2 mm
Pellet length	< 2 mm
Pellet size	1 ± 0.25 g
Pellet shape	Cylindrical, cold cut
Available colors	Black

Packaging
Available in 20 kg boxes with 2 * 10 kg bags

Drying Recommendations	
Temperature	Min. 55 °C; Max. 70 °C (prevent sticking)
Time	4 - 16 h
Condition	<1000 ppm

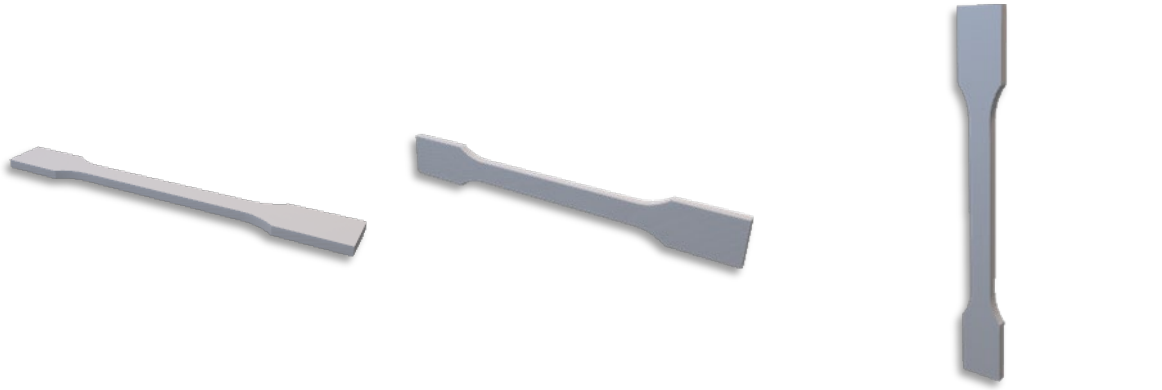
Please note: To ensure constant material properties the material should always be kept dry.

Recommended Extrusion Parameters	
Zone 1 Temperature	210 ± 10 °C
Zone 2 Temperature	225 ± 10 °C
Zone 3 Temperature	235 ± 10 °C
Nozzle Temperature	250 ± 10 °C
Bed Temperature	80 ± 10 °C

General Properties		Standard
Bulk density	1066 kg/m³ / 66.5 lb/ft³	ISO 1183-1

Thermal Properties		Standard
HDT at 1.8 MPa	73 °C / 163 °F	ISO 75-2
HDT at 0.45 MPa	127°C / 261 °F	ISO 75-2
Glass Transition Temperature	-5 °C / 23 °F	ISO 11357-2
Crystallization Temperature	125 °C / 257 °F	ISO 11357-3
Melting Temperature	158 °C / 316 °F	ISO 11357-3
Melt Volume Rate	11.7 cm^3/10 min / 0.7 in^3/10 min (260 °C, 2.16 kg)	ISO 1133

Mechanical Properties*



Print direction	Standard	XY	XZ	ZX
		Flat	On its edge	Upright
Tensile strength	ISO 527	41.7 MPa / 6.0 ksi	-	15.9 MPa / 2.3 ksi
Elongation at Break	ISO 527	4.4 %	-	0.8 %
Young's Modulus	ISO 527	2628 MPa / 38.2 ksi	-	2242 MPa / 325 ksi
Flexural Strength	ISO 178	76.8 MPa / 11.1 ksi	95.3 MPa / 13.8 ksi	19.3 MPa / 2.8 ksi
Flexural Modulus	ISO 178	3507 MPa / 509 ksi	4026 MPa / 584 ksi	1671 MPa / 242 ksi
Flexural Strain at Break	ISO 178	4.6 %	3.3 %	1.3 %
Impact Strength Charpy (notched)	ISO 179-2	5.3 kJ/m^2	5.2 kJ/m^2	1.2 kJ/m^2
Impact Strength Charpy (unnotched)	ISO 179-2	23.1 kJ/m^2	25.8 kJ/m^2	2.5 kJ/m^2
Impact Strength Izod (notched)	ISO 180	5.6 kJ/m^2	6.2 kJ/m^2	1.4 kJ/m^2
Impact Strength Izod (unnotched)	ISO 180	20.5 kJ/m^2	2.4 kJ/m^2	2.6 kJ/m^2

*measured on filament