ARMOR
INDUSTRY FOR PEOPLE

TECHNICAL DATA SHEET

ABS RANGE | ABS-CARBON500 ARMOR

APPLICATIONS

The carbon fiber size distribution was specifically selected in order to fit the standard 3 D printer nozzles.
The combination of an accurate dosage of carbon fibers and their size management gave to the **ABS-CARBON500 ARMOR** material excellent printing characteristics without nozzle clotting and, at the same time, limiting the abrasive impact of the printing equipment.
The optimized blend leads to a less brittle filament compared to the standard carbon reinforced thermoplastics usually available onto the market.
With an improved tensile modulus of +35% compared to standard ABS, the printing parameters are compatible with the majority of 3D printers equipped with heating plates.

More information

HEALTH & SAFETY

ABS-CARBON500 ARMOR filaments are not hazardous for health. However, as short fibers and dust, in case of peeling or sanding, ABS filament may cause skin, eyes and respiratory tract irritation. Moreover, the low size of fibers can cause sometimes allergies. Users must wear individual protection equipment (mask, gloves…) in case of sanding or milling the printed pieces. Consult MSDS for more data.

ABS can lead to COV production during printing process (styrene derivatives). Ensure a working area equipped with air extraction or suitable protection. Always refers to MSDS prior handling.

More information

Featured Object: Carabiner

ABS-CARBON500 ARMOR available in 2 diameters

Packaging

Spools packed in individual boxes, under vacuum with desiccant. Product supplied with batch number and material traceability. Spools of 300g, 750g and 2.2kg are available on our store. Other spools are available on request (up to 25 kg).

Product Information	Units	Method	Result
Printing Temperature	[°C]	-	250 - 270
Plateform Temperature	[°C]	-	90 - 110
Nozzle	[mm]	-	0.5 (>0.4)
Printing Speed	[mm/s]	-	70
Linear Weight Ø 1.75	[g/m]	-	2.51
Linear Weight Ø 2.85	[g/m]	-	6.70
Thermal and Mechanical Properties	**Units**	**Method**	**Result**
Tg	[°C]	-	101
DTUL	[°C]	-	90
Flammability	[UL 94@1.6mm]	-	HB
Density	[g/cm³]	ISO 1183	1.08
Tensile Modulus	[Mpa]	ISO 527	2 700
Flexural Modulus	[Mpa]	ISO 178	2 700
Elongation at Break	[%]	ISO 527	10
Charpy	[kJ/m²]	-	5.18
Filler	**Units**	**Norms**	**Result**
Mean Lenght	µm	-	251
Mono Fiber Diameter	µm	-	7 +/- 2
Fibers > 100 µm	%	-	70
Fibers Population	Unit/g of filament	-	4.37 x E6

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