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ABS Filament

Acrylonitrile-Butadiene-Styrene (ABS) *is a thermoplastic and a copolymer that is used for rigid objects. It consists of 5-30% Butadiene, around 50% Styrene and the rest is Acrylonitrile.*

Key properties

- Maximum operating temperature; between 85°C and 100°C, depending on the modifications
- Particularly suitable for FDM and FFF 3D printers
- According European regulations EC No. 1935/2004, EC No. 2023/2006 and EC No. 10/2011

Measurements & Tolerances

Diameter	Tolerance	Roundness
1,75 mm Filament	+/- 0,05 mm	99%
2,85 mm Filament	+/- 0,05 mm	99%

Moisture content	< 0,05%	

Technical information

ABS is a strong material with high toughness and impact resistance. The minimum operating temperature is -35°C. ABS is a flammable polymer to which flame retardant can be added. It also subject from aging by being exposed to the weather conditions (UV light, oxygen, moisture, heat) because Polybutadiene stimulates the oxidation of Polystyrene. This causes discoloration and the plastic loses its mechanical strength. In order to improve this UV stabilizers can be added.

Polyfluor ABS Filament contains unique properties because the material has an extremely constant diameter and roundness. On top of that the ABS filament does not come into contact with water during the production process and is directly packaged in a vacuum packaging. These properties make ABS Filament particularly suitable for FDM and FFF 3D printers.

The material has an excellent adhesion between layers. This results in great improvement of the impact resistance, strength, durability, the printing process and “warping”.

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Physical properties

Description	Value	Test method
Density	1,05 g/cm³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (220°C/10KG)	15 g/10 min	ISO 1133

Mechanical properties

Description	Value	Test method
Tensile Stress	45 Mpa	ISO 527-2/50
Flexural Modulus	2300 Mpa	ISO 178
Impact strenght Notched Izod	19 Kj/m²	ISO 180/A
Tensile Strain	2,50%	ISO 178

Printer settings

Description	Value
Printer nose temperature	220 - 260°C
Heated platform temperature	90 - 110°C

Our ABS Filament meets the European regulations EC No. 1935/2004, EC No. 2023/2006 and EC No. 10/2011 concerning plastic materials and articles coming into contact with food. The colorants used to color the Filament also meet these European regulations.

Our experience while printing with our ABS Filament is that it gives better results when used at higher temperatures than other ABS Filaments. This can vary with different printers.

To get the best results while printing we advise you to keep the 3D printer in a room where there is hardly any draft and/or temperature fluctuations. This cannot be a room where people sleep.

When the 3D printer is not being used it is important to keep the ABS Filament in a bag and store it in a cool, dry and dark place.

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Safety information
REGULATION (EC) No. 1272/2008. According to EC criteria regulations this product is not classified as hazardous. Classification according to EU-directive 67/548/EEC or 1999/45/EC. According to EC criteria this product is not classified as hazardous.

Composition and information on the components
This product is a mixture.

CAS-No./EC-No./Index	REACH Number	Quantity	Components	Classification Regulation (EC) No. 1272/2008
CAS-No. 9003-56-9 **EC-No.** Polymer	----------	>= 99,0%	Acrylonitrile Butadiene Styrene	Not classified

Legally Obliged Information
1 Specific safety, health and environmental regulations and legislation for the substance or mixture.
European inventory of existing commercial chemical substances (EINECS)
The components of this mixture are either included in the EINECS list or exempt.
2 Chemical safety assessment: Does not apply
RoHS (Restriction of Hazardous Substances) and REACH (Registration, Evaluation, Authorization and Restriction of Chemicals). The ABS Filament delivered by Polyfluor meets the European RoHS and REACH regulations.

Environmental information
Plastic waste can damage the environment. 3D misprints must be separated with plastic waste together with the Filament reel. We are developing a return system for 3D misprints and the Filament reel.
Together we can protect the environment!