

TECHNICAL DATA SHEET

BIGREP ABS

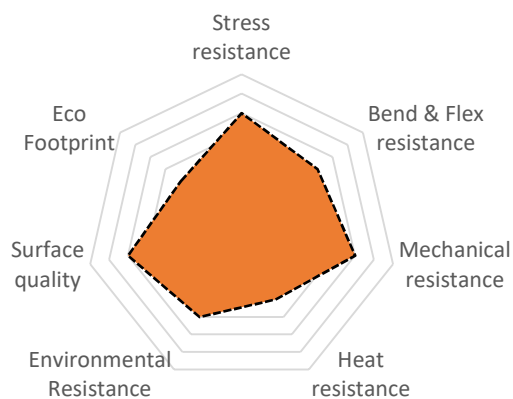
DESCRIPTION

BigRep's ABS material is a classic FFF filament that enables the production of a wide variety of products in large-format additive manufacturing. A familiar automotive manufacturing material now specialized for industrial AM, BigRep ABS is a high-strength filament suitable for mobility and a variety of white-goods and consumer appliances.

KEY FEATURES

- High impact strength
- Excellent adhesion
- Minimal warping
- High heat resistance
- Easy post-processing

PERFORMANCE



STRESS

High stress and strength performance

ENVIRONMENTAL RESISTANCE

Good chemical resistance

BEND & FLEX

Good resistance to bend with good flex behaviour

ECO FOOTPRINT

Recycling and repairing possible

HEAT

Suitable for temperatures higher than 80°C

SURFACE

Matt surface, easy post-processing

MECHANICAL RESISTANCE

High mechanical and impact resistance

PROCESSING

Layer adhesion ★ ★ ★ ☆ ☆

Tendency to warp. Use extra adhesives and/or print slow for first layers

Ease of printing ★ ★ ★ ☆ ☆

Printing in open frame is possible for the experience user.

Extrusion rate ★ ★ ★ ★ ☆

Accelerated build rates according to extruder capabilities possible; >40mm/s

Post-processing ★ ★ ★ ★ ★

Excellent post-processing with all common technologies. Keep processing temperature in mind when milling, drilling, etc.

Geometries ★ ★ ★ ☆ ☆

Fine and complex designs possible when using high details and using support

Join parts using MEK, 2K adhesives or super glue

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PROPERTIES

Density	1.08 g/cm ³
Flexural Modulus (ISO 178)	1350 MPa
Tensile Strength (ISO 527)	30 MPa
Tensile Modulus (ATM D638)	1400 MPa
Impact Strength, notched (ISO 179)	35 kJ/m ²
HDT / B (ISO 75)	91 °C

REQUIREMENTS & RECOMMENDATIONS

Nozzle temp.: ca. 235°C

Heatbed temp.: ca. 99°C

Chamber temp.: n.a.

Adhesion: Suitable on BigRep Kapton print bed foil. **Additional adhesion** using glue, e.g. from Magigoo

Support structures: **Break-away** support works well for ABS. For complex geometries a soluble material is supportive too.

Health & Safety: BigRep ABS is safe to print when using the recommended temperature settings listed above. To ensure a comfortable and healthy working environment, we recommend 3D printing in a well-ventilated area.

Storage & drying: Store at room temperature in a dry and dark place
it is recommended to use BigRep DryBOX for best material printability.

Shelf life: When stored and dried correctly, this material has a shelf life of min. 1 year

CERTIFICATION & ADDITIONAL INFORMATION

RoHS, REACH, FREE OF SILICONE

Compatibility: BigRep **STUDIO G2** and Bigrep **PRO/ACE**

Suitable for: conventional FFF extruders

The data mentioned in this TDS, particularly the recommendations for application and use of products are based on our recent knowledge and experience. Due to the fact of having so many different materials involved and conditions of applications which are out of our influence, we strongly recommend doing sufficient tests in order to guarantee that products are suitable for the intended process and applications. Except for wilful acts any liability based on such recommendations or any verbal advice is hereby expressly excluded.