



# ASA

## UV RESISTANCE AND HIGH STRENGTH



BigRep ASA is a strong, engineering-grade filament that can withstand exposure to the elements thanks to excellent **weather and UV resistance**. Designed for **industrial** and **end-use parts**, ASA is particularly well-suited to applications in automotive and sporting goods where strength and UV stability are crucial. Its superior layer adhesion and low shrinkage mean that ASA 3D prints are less prone to warpage resulting in **strong, geometrically accurate parts**.

BigRep ASA has been optimized for large-format additive manufacturing and is able to print complex and lightweight ready-to-use parts including **end-use, factory tooling**, and **functional prototypes**. With high heat deflection properties, ASA is well-suited for applications exposing parts to high temperatures and prolonged sunlight.



High Impact Strength



Weather and UV Resistance



High Heat Deflection Temperature



Minimal Shrinkage for Part Accuracy



Lightweight 3D Prints



PHYSICAL PROPERTIES	TEST METHOD	VALUE
Density	ISO 1183	1.07 g/cm <sup>3</sup>
Filament Diameter	-	2.85 mm +/- 0.05
Color Availability	-	Black, White
Filament Net Weight	-	2.3, 4.5, 8.0 kg
MECHANICAL PROPERTIES	TEST METHOD	VALUE
Tensile Strength	ISO 527	40 MPa
Tensile Modulus	ISO 527	1800 MPa
Elongation at Break	ISO 527	25%
Flexural Strength	ISO 178	60 MPa
Flexural Modulus	ISO 178	1900 MPa
Charpy Unnotched Impact Strength	ISO 179	60 kJ/m <sup>2</sup>
Charpy Notched Impact Strength	ISO 179	30 kJ/m <sup>2</sup>
THERMAL PROPERTIES	TEST METHOD	VALUE
HDT - B - 0.45 MPa	ISO 75	94 °C
HDT - A - 1.8 MPa	ISO 75	86 °C
Vicat Softening Temperature	ISO 306	100 °C
Glass Transition Temperature (Tg)	DSC	105 °C
Continuous Use Temp. (UL Yellow Card)	UL 746	50 °C
<b>COMPLIANCE</b>	<input checked="" type="checkbox"/> REACH Compliant	<input checked="" type="checkbox"/> RoHS Certified
		<input type="checkbox"/> FDA Compliant

PROPERTIES	RECOMMENDED USAGE
Nozzle Temperature	200 - 240 °C
Bed Temperature	40 - 60 °C
Printer Compatibility	BigRep PRO, BigRep STUDIO G2
Fan Speed	0 - 50%
Surface Adhesion	<ul style="list-style-type: none"> <li>Kapton (additional adhesion using glue, e.g. Magigoo)</li> <li>BigRep SWITCHPLATE</li> </ul>
Drying	ASA is moderately hygroscopic. Recommended drying at 80 °C for 4 - 6 hours.
Storage and Shelf Life	Keep dry, avoid sunlight, and store at room temperature. Use BigRep SHIELD for best results. When stored properly, product has a shelf life of 24 months.
Handling	Use the BigRep Keep-Dry Box for best material printability.
Post-Processing	Wear gloves to avoid possible microdamage to skin. Use a dust mask and protective glasses when processing. Acetone vapors can be used to post-process ASA prints to achieve a completely smooth and glossy surface finish.
Support	<ul style="list-style-type: none"> <li>Breakaway</li> <li>BigRep BVOH</li> </ul>