

MG94 ABS

Acrylonitrile Butadiene Styrene

ABS filament is one of the most common materials used in 3D printing today. It easily molds when heated and sets evenly when cooled. ABS filament is used by a variety of manufacturing industries for parts requiring structural integrity and detail, and is ideal for "wear and tear" projects. It is commonly used in rapid prototyping and additive manufacturing environments to test product impact resistance and durability. It is also popular with 3D printing hobbyist who utilize 3D printing in their home or at a local maker faire. Get everything you love about ABS — but with the increased strength, smooth printability, and glossy finish of MG94 3D-printer filament. The new gold standard in MG94 ABS filament, Airwolf 3D's MG94 is manufactured in-house with pure ingredients and according to our exceedingly high-quality standards.

Mechanical Properties	Standard	Value	Unit
Ultimate Tensile Strength	ISO 527	46.4	MPa
Tensile Modulus			MPa
Elongation at Break	ISO 527	21.6	%
Flexural Strength			MPa
Flexural Modulus			MPa
Hardness Shore	Standard	Value	Unit
Hardness			

Thermal Properties	Standard	Value	Unit
HDT @ 0.45 MPa	ASTM D648	95	°C
Glass Transition Temp			°C
Physical Properties	Standard	Value	Unit
Density	ISO 1183	1.04	g/cm ³
Certifications and Tests	Standard	Value	Unit
Flammability (UL 94)			
USP Class VI Certified			

Characteristics

- High temperature resistance, flexibility, machinability and strength
- Impact, and wear & tear resistant
- Easy to post-process
- Good mechanical properties
- Strong electrical insulation properties

Applications

- Visual and functional prototypes
- End use parts and Manufacturing tools
- Electronic and mechanical enclosures, covers and cases
- Short-run manufacturing
- Automotive parts and components, natural finishes and painted, plated and coated
- Pipe systems, musical instruments, home appliances, keyboard caps, Lego, canoes, and even flat-screen TV's and computer monitors.
- Virtually all toys

Considerations

- Strong and toxic fumes, so ensure the HEPA filter is running during a print, and the chamber is always closed!
- It requires proper temperature management, as it must cool slowly to avoid cracks or split layers, so it is critical to use the material profiles provided by Airwolf, when you are learning to print.
- Proper bed adhesion: It is prone to warping, so it is highly recommended to WolfBite adhesive.
- UV sensitivity: ABS is UV sensitive, so it can sustain damage by direct sunlight. For this reason, it's not really recommended to print outdoor parts with ABS. PETG and ASA are good alternatives for such applications.
- ABS requires special care during storage, as it's a mildly hygroscopic material (absorbs water). Moist filament will affect your prints, so try as much as possible to store ABS in a dry container when not in use, or ask about our MMS.

Printing Skill & Experience:

Beginner Intermediate Advanced Expert

- Small learning curve – but you can overcome them by following the printing guide steps
- Enclose the printer: ABS is sensitive to drastic temperature changes, so make sure your 3D printer is closed.
- Use a heated bed: This is mandatory. ABS has a high thermal contraction, so when the first layer cools down it shrinks in volume, causing deformations like warping. With a heated bed at high temperatures, ABS remains in a sort of rubbery state, allowing it to contract without deforming.
- Use WolfBite for ABS

Printer Compatibility

<input type="checkbox"/> 3ntr A2v4	<input type="checkbox"/> 3ntr A4v4	<input checked="" type="checkbox"/> EVO-T	<input checked="" type="checkbox"/> EVO22-T
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Available Colors from [TRAK](#):

Natural, Black

Available Colors from [AW3D](#):

Black, Dark Blue, Green, Grey, Light Blue, Natural, Orange, Purple, Red, White