

Magigoo Pro Metal for Ultrafuse 316L 3D Printing Adhesive

Technical Data Sheet*

Ver 1.0 December 2019



*This document has been conscribed to the best of our knowledge. Verifications should be made to confirm details when necessary.

magigoo
magigoo.com

Description:

Magigoo® - Metal for Ultrafuse® 316L, is an all-in-one 3D printing adhesive that offers sure adhesion with easy part removal for BASF Ultrafuse® 316L filament. Magigoo - Metal, has been specifically formulated for BASF Ultrafuse® 316L filament to ensure reliable first layer adhesion whilst also being non-hazardous and compliant with the filament post processing methods. Warping, among other factors, is caused by the differential cooling of a print during the 3D printing process due to the thermoplastic nature of the filament binding materials. For printing repeatability, reliability and sure adhesion, Magigoo® - Metal is needed.

Technical specifications:

- ▶ **Appearance:** clear-faint yellow liquid
- ▶ **Consistency:** low viscosity
- ▶ **Solvent:** water

Intended use:

To be used on FDM/FFF 3D printers with a heated bed on glass surfaces. Magigoo Metal is intended for use with BASF Ultrafuse® 316L FDM filament

Properties:

Magigoo® - Metal, acts as a thermally activated interfacial layer, allowing for better interactions, both at the micro and molecular level, between the printing bed and the printing materials. It is generally recommended to print according to the printing temperatures recommended by the filament supplier. For use with BASF Ultrafuse® 316L a build-plate temperature of 90-110 °C is recommended, nonetheless, the printing conditions might vary between one printer and another. It is always recommended to determine the ideal build-plate temperature of the printer prior to printing green parts with BASF Ultrafuse® 316L.

To find the best temperature one could start from the lower end of the recommended settings and increase the bed temperature in 5 °C increments. This should be done with standardised calibration prints.

An additional benefit of Magigoo® - Metal, being highly water soluble, is that the green part can be easily removed after soaking the build-plate in water for 30 minutes to a couple of hours (depending on size). This ensures that the part is not damaged when being removed.

The best and most reliable performance is achieved when applied as a thin layer. This means that cleaning and re-applying between prints is recommended especially on longer prints or hard to print with materials.

Storage and Handling:

Magigoo® - Metal, should be stored in a cool dry place away from direct sunlight. After use Magigoo® - Metal should be stored in an upright position and with the cap on.

Excess Magigoo® - Metal on the nib can cause the applicator adhering to the cap. To prevent this, make sure no excess Magigoo® - Metal remains on the rim of the applicator after use. If not capped the Magigoo® - Metal applicator will dry up. In such a case just rinse with water.

Application Method:

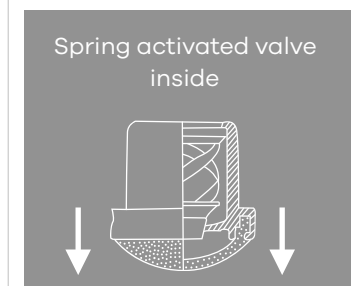
* Images are illustrative.

Step 1: Shake the bottle vigorously.



Step 2: Press nib against the surface.

NB! The Magigoo – Metal container is spring activated. Pressing the bottle without pressing the nib against the bed may result in applicator popping off and product wastage.



Step 3: Apply to Desired area



Step 4: Print

NB! Ensure proper bed calibration. Having nozzle too close to bed surface may cause excess adhesion, this can potentially cause the printed part to be more difficult to remove from the build-plate.

After printing, completely submerge the build-plate in water or soak around the part, after some time, usually between 30 minutes and a couple of hours, the part should come off on its own.



Step 5: Clean

NB! Just wipe off with a damp (water) cloth if any residue is left on the build-plate after part removal.

