

# Magigoo 3D Printing Adhesive

## Technical Data Sheet\*

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

magigoo

### **Description:**

MAGIGOO® is an all-in-one 3D printing adhesive that offers sure adhesion with easy release. Magigoo is an easy to use 3D printing adhesive designed to reduce warping in FDM/FFF 3D printers. Warping, among other factors, is caused by the differential cool of a print during a 3D printing process. A heated bed could help reduce warping but for printing repeatability and reliability a sure adhesion method such as Magigoo is needed.

### **Technical specifications:**

- ▶ **Appearance:** clear-faint yellow liquid
- ▶ **Odour:** faint odour
- ▶ **Consistency:** low-med viscosity
- ▶ **Solvent:** water
- ▶ **Decomposition:** extended periods exceeding 120 °C

### **Intended use:**

To be used on FDM/FFF 3D printers with a heated bed on aluminium, glass surfaces. Also works when applied on sheets e.g. Kapton, PEI and similar. To be used with common plastics e.g. PLA, ABS, HIPS, PETG, TPU.

### **Properties:**

Magigoo 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 recommended to print according to the printing temperatures recommended by the filament supplier. The printing conditions vary between one printer and another. If no recommendations are given by the filament supplier the following bed temperatures can be followed:

Filament	Bed Temperature (°C)
<b>ABS</b>	90-110
<b>PLA</b>	40-70
<b>PETG</b>	80-100
<b>HIPS</b>	90-115
<b>TPU</b>	30-60

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.

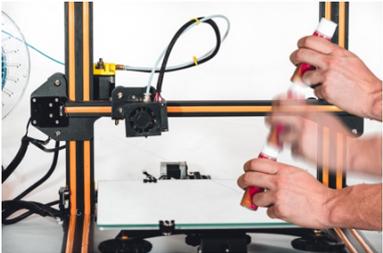
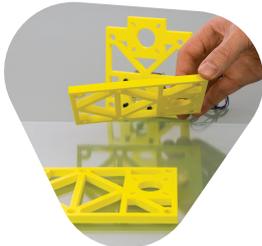
An additional benefit of Magigoo, being thermally activated, is that it will release the print upon cooling. Different printers, print surfaces or filaments will have slightly different released conditions but as a general rule a reduction in temperature by 30-40 °C will be sufficient to remove your prints without any effort.

If the material you are trying to print with is not specifically described in the table above it means we have either found that the results are not up to our standards or we have not conducted enough tests to assure its efficacy. There are other specialty Magigoo formulations for adhering engineering plastics such as Polycarbonate and Polypropylene should these materials be of interest.

### **Storage and Handling:**

Magigoo should be stored in a cool dry place away from direct sunlight. After use Magigoo should be stored in an upright position and with the cap on. Excess Magigoo on the nib can cause the applicator adhering to the cap. To prevent this, make sure no excess Magigoo remains on the rim of the applicator after use. If not capped the Magigoo applicator will dry up. In such a case just rinse with water.

## Application Method:

<p><b>Step 1: Shake it like you mean it.</b></p> <p>NB! Shaking too much might cause bubbling. This does not negatively affect adhesion but will not provide a mirror finish on the bottom of the print.</p>	
<p><b>Step 2: Press nib against the surface.</b></p> <p>NB! The Magigoo container is spring activated. Pressing the bottle without pressing the nib against the bed may result in applicator popping off and product wastage.</p>	
<p><b>Step 3: Apply to Desired area</b></p> <p>NB! 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.</p>	
<p><b>Step 4: Print</b></p> <p>NB! After print, wait until the build plate is cool to remove prints easily.</p>	
<p><b>Step 5: Clean</b></p> <p>NB! For cleaning - Just wipe off with a damp cloth. Yes, it's that easy.</p>	

## Package formats:

<p><b>Sample Pack</b></p> <p>2 mL – multilayer packaging sachets. Designed for a one-time use. Also come with additional instructions which double as an applicator.</p>	
<p><b>General Desktop Bottle</b></p> <p>50 mL – Foam head applicator with an HDPE actuator valve house in a HDPE system. Bottle is an HDPE/LDPE Blend allowing for the user to control the flow. Targeted at printers with beds less than 0.04 m<sup>2</sup>.</p>	
<p><b>Large format Bottle</b></p> <p>120 mL – Foam head applicator with an HDPE actuator valve house in a HDPE system. Bottle is an HDPE/LDPE Blend allowing for the user to control the flow. Targeted at printers with beds larger than 0.04 m<sup>2</sup></p>	