

Anti-Impact Resin Instruction

1. The Product Description

Anti-impact resin is a durable Nylon-like resin with high impact toughness and tensile toughness. The prints have low water absorption, high dimensional accuracy, and fine and wear-resistant surface. In addition, its mechanical properties are stable for a long time, with good fatigue resistance and weather resistance. It is suitable for printing repeatable machined, wet or underwater operation, impact resistant, snap on or movable parts, and even end use products.

2. Material Properties Data

	METHOD	Anti-Impact-DATA
Viscosity (25℃)	ASTM:D4212-10	715mpa.s
Shore Hardness	ASTM:D2240-05	78D
Tensile Strength	ASTM: D638-14	21MPa-28MPa
Elongation at Break	ASTM: D638-14	81%-100%
Elongation at Yield	ASTM: D638-14	7.8-8.7%
Notched IZOD	ASTM:D256-10	46-72J/m
Flexural Strength	ASTM: D790-10	29MPa-37MPa
Flexural Modulus	ASTM: D790-10	650MPa-1076MPa
Water Absorption (24hr)	ASTM:D570	0.46%

3. Printing

Support setting: Anti-impact resin has a high viscosity (25℃/77°F, 700mpa.s) and is not rigid enough when printing. The model with thin and less support was successfully printed with resins with good rigidity (such as standard resin, rigid resin, ABS resin, etc.), but it might fail to print with Anti-impact resin instead. Suggestions for adding support to the model: a) Add more supports at the island of the model; b) The higher the supports, the larger the middle diameter; c) The heavier the model, the thicker the supports.

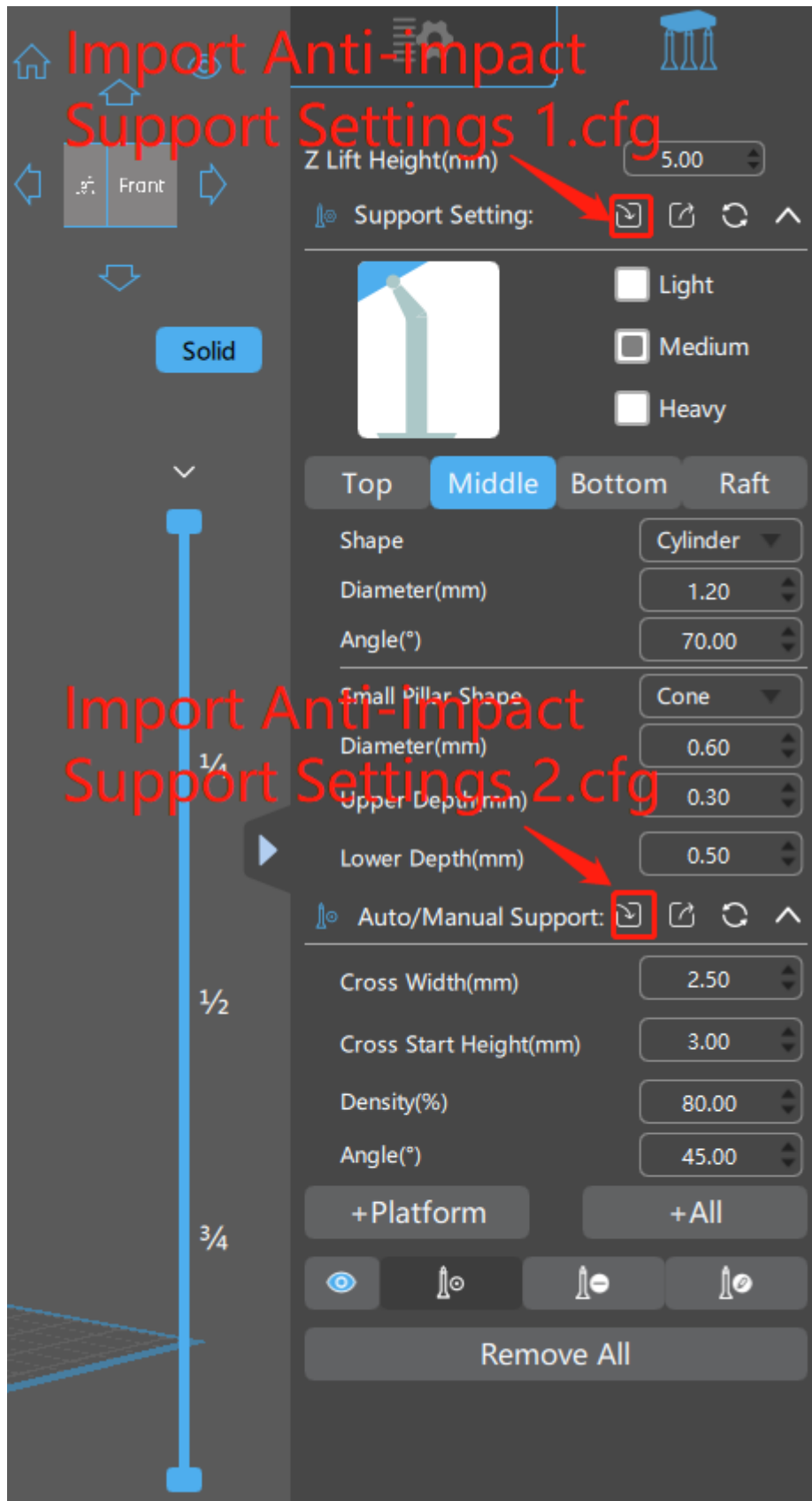
In addition, the following is the Anti-impact resin Support Settings recommended by RESIONE, which can be used for normal models after importing the Support Settings using the Chitobox slicer as instructed in the following figure. (There are two support Settings files in the zip package)



Anti-impact Support Settings 1.cfg



Anti-impact Support Settings 2 .cfg



Printing Settings: You can download the resin printing parameters from RESIONE's official website. The detailed operations are as follows: RESIONE's official website —>Support —>Settings

Attentions: When the ambient temperature is lower than 28 °C/82.4 °F, it is recommended to heat the resin liquid (80 °C/176 °F water bath, 5-10 minutes) before printing, and increase the "Bottom lift distance", "lifting distance" and "rest time after retract" in the slicer.

4. Cleaning and Post-curing

Cleaning: You can use ultrasonic or 3D printing special cleaning machine with the ethanol(concentration \geq 95%), or IPA. Cleaning time: \leq 5mins. Please use compressed air to dry the prints after cleaning it.

Post-curing: If you use a post-curing box with a power of 40W, our recommended post-curing time is about 30mins-60mins (Adjust the post-curing time according to the power of the post-curing box, the greater the power, the shorter the time).



Attentions:

- Prints will become soft and weak under the following conditions: liquids are stored unsealed after long-term exposure to air (especially in the environment with high humidity); Clean with solvent or ultrasonic for more than 5 minutes. The solution when the prints becomes soft is to place them in thermostatic drying oven at 60-80 °C (140-176 °F) for 30 minutes before post curing. The prints will become harder and more stable.
- Anti-impact resin liquid has the characteristic smell of acrylate, which is quite pungent. It is recommended to use it in a ventilated environment or on a 3d printer with an air purifier.

For more questions, please contact support@godsaid3d.com