



Resin problems with 3D printers

10/11/2023



Problèmes sur figurines imprimées à l'imprimante 3D... Procédé « bain de résine » (3D ELEGOO, ORIGINE ONE, PRUSA SL1, FORMLABS, DLS, etc...)... La figurine posée sur son décor après peinture... Pour certaines figurines, objets et décors imprimés avec cette technique - lorsque les volumes sont imp...





Problems with 3D-printed figurines...

"Resin tank" process (3D ELEGOO, ORIGINE ONE, PRUSA SL1, FORMLABS, DLS, etc.)...



The figurine placed on its base after painting...

For certain figurines, objects, and sets printed using this technique—when the pieces are large—in order to save on material, the largest parts are sometimes hollow...

This can have two (major) drawbacks:

1. Reinforcements of an appropriate size must be embedded within these areas to ensure a certain degree of dimensional stability in the model.

2. An opening **MUST BE PRESENT** to allow unpolymerized resin to drain out during the manufacturing process and to enable the removal of any resin residue by soaking in alcohol.

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If these requirements are not met:

Case No. 1

Undersized scales will not be able to accommodate the material's defined shrinkage during final curing; this poses a risk of deformation, as well as the model splitting open or tearing.

Note: Depending on the quality of the resin used and other factors (shortening the UV exposure time, printing at low temperatures, etc.), the object may warp or break over a very long period of time...

Case No. 2

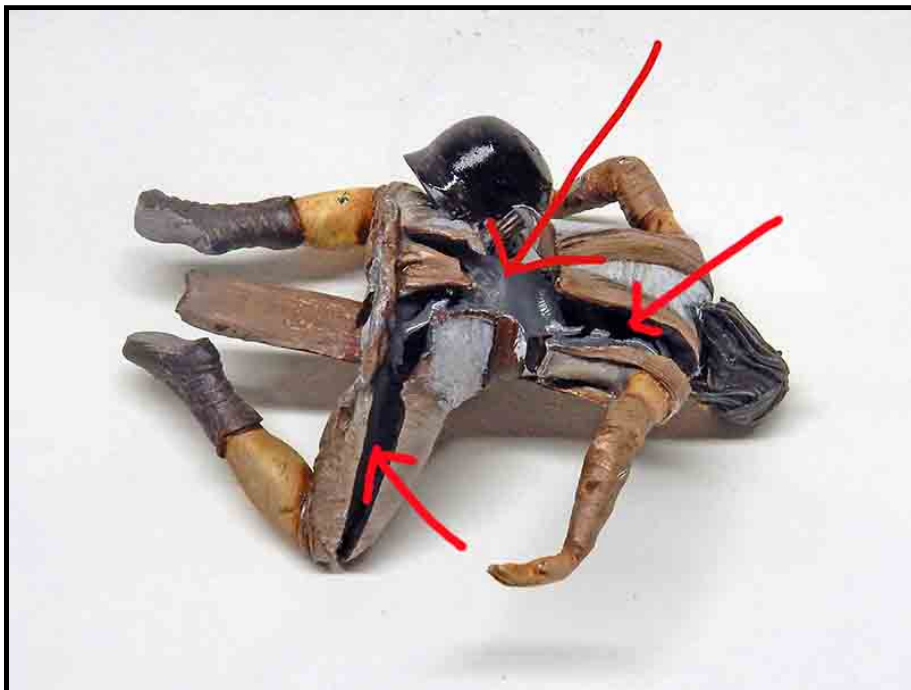
If uncured resin remains trapped within the object, it will **NEVER HARDEN**. This could affect the part's long-term durability **AS WELL AS LEAD TO CONTINUOUS EMISSIONS OF CHEMICAL VAPORS**.



Après environ 20 mois, cette résine à l'échelle 1/24 achetée dans le commerce a littéralement "implosé". Le trône s'est ouvert et déchiré. Les renforts n' étant pas assez nombreux...



The photo on the right shows the spot where the model was glued (A) and where the resin flowed onto the base. A "soft" piece is still in place. The spilled resin is still liquid and active; it will never dry and is therefore harmful...



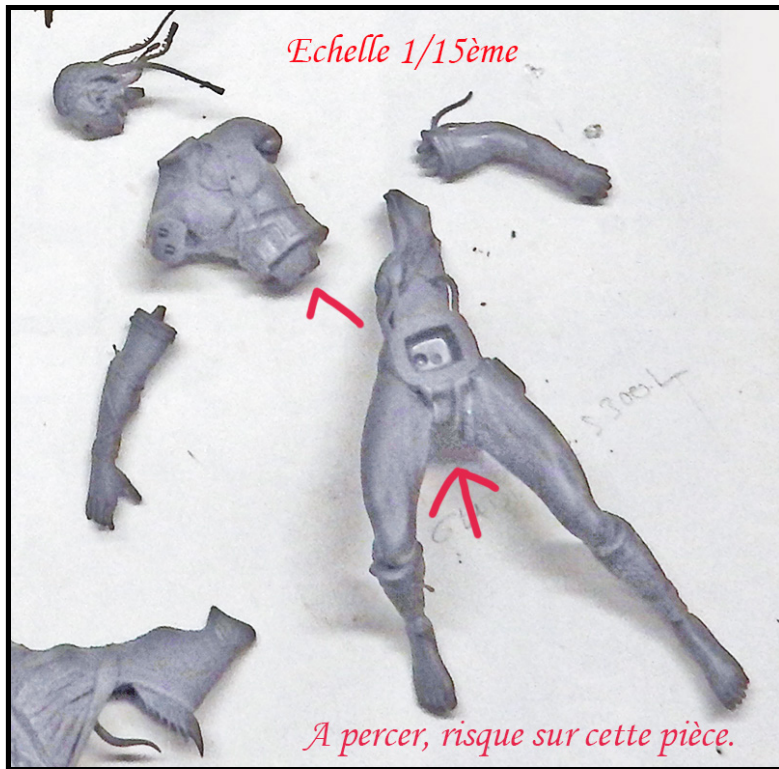
The figurine wasn't spared either; it split open and swelled up...

Solutions:

1. If you're printing, please keep these settings in mind.
2. Buyers should check that the larger containers are either full (which can be determined by their heavier weight) or have been punctured (evidenced by a puncture mark or hole) and are clean. If you cannot check before purchasing (if the package has already been shipped), pierce the model immediately as described below and allow the liquid resin to drain completely before plugging the hole and cleaning it with alcohol or acetone.

Please note the following regarding the 1/15-scale Avatar figurine:





The problem was discovered while drilling a hole in the part to attach it to a base before painting. The liquid resin immediately began to leak...



Confirmation : au bout de quelques mois, la cuisse droite s'est fendue et la matière s'est écartée laissant couler la résine. Après nettoyage complet à l'acétone, rebouchage et ponçage au mastic, la partie a été repeinte...

