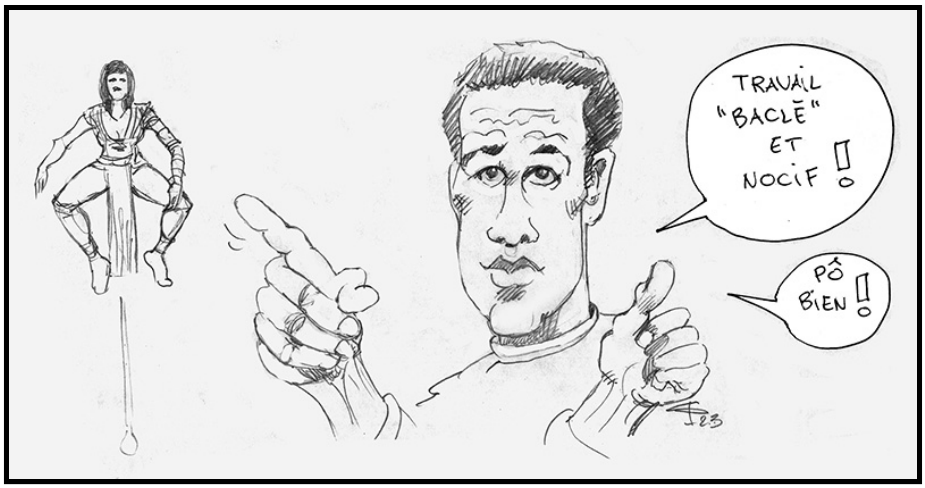
Resin problems with 3D printers

10/11/2023 — Basic techniques



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 printed within these areas to ensure a certain degree of dimensional stability in the model.

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.

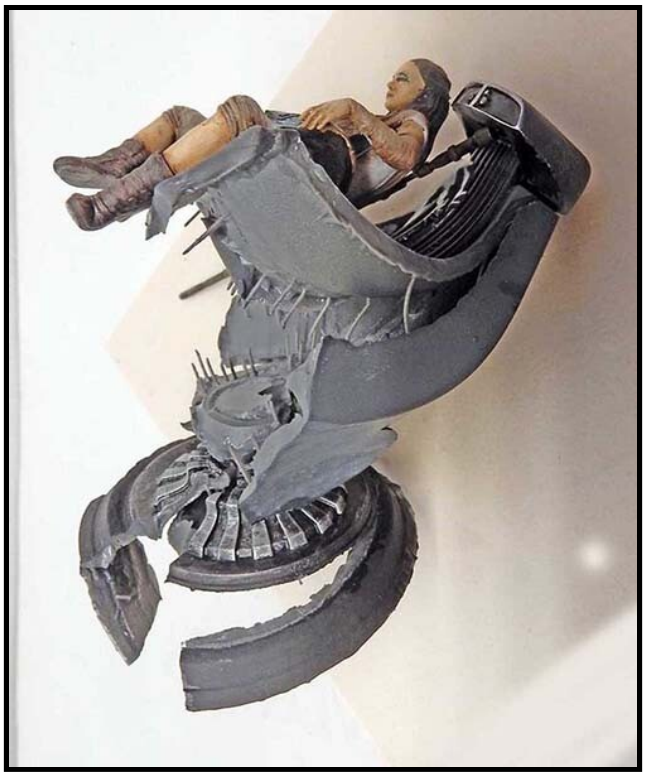
Note: Depending on the quality of the resin used and other factors (shortening the UV exposure time, printing at low temperatures, etc.), the object may warp or break over a very long period of time…

Case No. 2

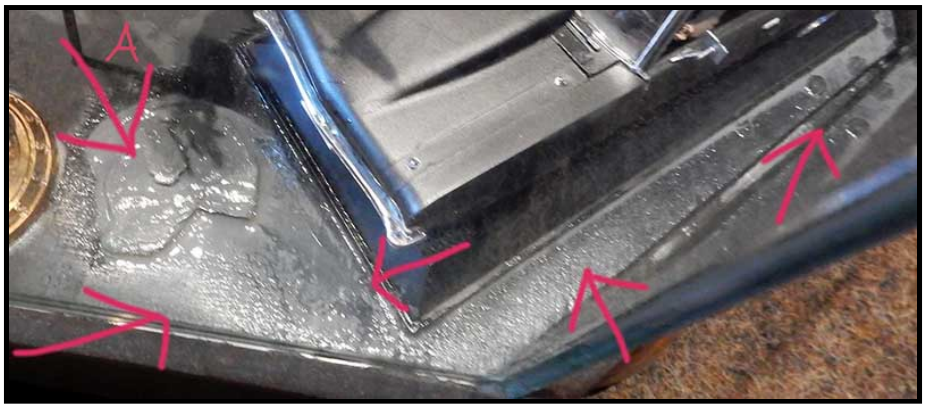
If uncured resin remains trapped within the object, it will NEVER HARDEN. This could affect the part’s long-term durability AS WELL AS LEAD TO CONTINUOUS EMISSIONS OF CHEMICAL VAPORS.



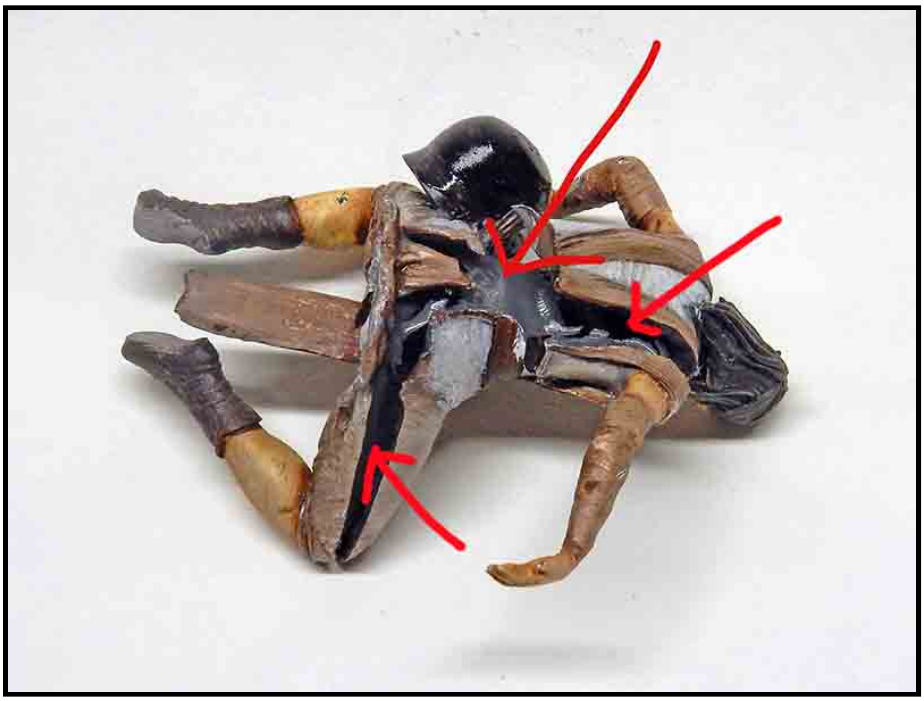




After about 20 months, this commercially available 1/24-scale resin model literally “imploded.” The throne split open and tore apart. Since there weren’t enough reinforcements…



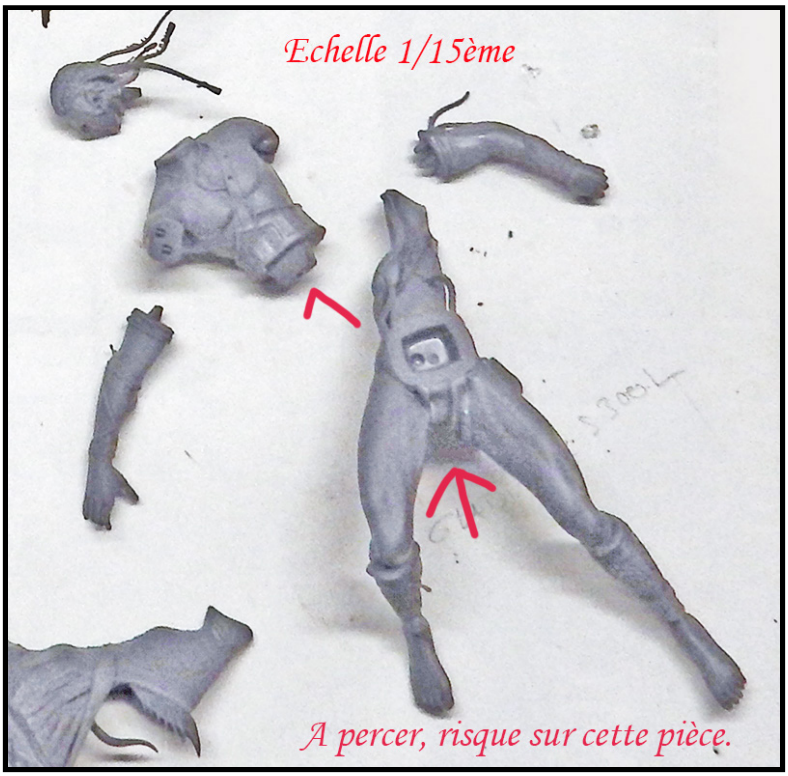
The photo on the right shows the spot where the model was glued (A) and where the resin flowed onto the base. A “soft” piece is still in place. The spilled resin is still liquid and active; it will never dry and is therefore harmful…





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





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: After a few months, the right thigh cracked and the material split apart, allowing the resin to leak out. After thoroughly cleaning it with acetone, filling the crack, and sanding it down with putty, the part was repainted...

