

Pro Resin Information



Monocure 3D created Pro resins for those wanting professional results. All the resin products in the Pro range are built on the advanced polyurethane base material, ensuring tough, long-lasting models with no shrinkage or warping, plus more tolerance to heat & UV exposure. In this document you can read about the safety and storage information as well as about the tips for 3D printing and post-processing process.

Printing Tips:

1) Shake the resin

Always shake resin well before printing. It's recommended to wait for the surface bubbles to pop before starting your print. PROTIP: A lighter or heat gun can speed up this process.

2) Ensure you have enough of material

The new large format printers can 3D Print massive models but have tend to have low volume vats. Ensure you have enough resin to complete the print job, and remember to top up the resin vat if necessary.

3) Store the resin in the dark place

When stored correctly, Monocure 3D resins can last up to 36 months. Remember to keep your resin in its original bottle, in a dark, cool place away from direct sunlight. Do not allow the materials to freeze.

4) For best results for clear material, post-cure models with 405nm wavelength for short time

For the best result with Crystal Clear, always post-cure using 405nm UV light for a short time only. Polishing or using a clear gloss acrylic spray paint, will give you see-through results.

Printing Advices:

1) Pro resins can be printed between 10 and 100-micron layer heights

All Monocure 3D Pro resins are versatile and can be printed between 10 and 100-micron layer heights.

2) Solid design or hollowed models

To achieve the best results, 3D models should always be designed solid. If hollowing is required, ensure drain holes are included to remove any trapped resin.

3) Check the printing settings before printing

Check the Monocure printer setting page to see if your printer is listed to give you a good starting point. (Not all slicers have this setting, check with your software provider). Use a calibration model to dial in your printer with the Monocure Pro resin.

Post-Processing:

1) Wash the printed models

For best results after printing, use Monocure ResinAway to remove uncured resin from the part. Place part in a pre-wash bath filled with ResinAway products and use a soft brush to remove excess resin. Follow by placing the component into an ultrasonic cleaner with ResinAway for 3-5mins to help remove the resin trapped in the finer detail.

2) Dry models after washing

Ensure parts are dry by using compressed air or patting gently with a lint-free cloth before post-curing – Warning: leaving excess IPA or ResinAway on parts might result in surface cracking.

3) Cure the models

Pro resin requires post-curing to reach its optimal mechanical properties. Monocure recommends using a 405nm LED Ultraviolet light to post-cure the model. It is recommended to post-cure for a few minutes, then remove the excess ResinAway by washing with fresh water.

Then place it back in the curing chamber for at least 30 mins to improve the tensile strength of the resin.

4) Paint the model

When exposing a part to external elements, apply paint to the surface to improve longevity. Alternatively, the components can be machined, sanded and polished to create a tough, scratch-resistant surface.