



Printer compatibility 385nm (UV) / 405nm



Health hazard



Use by date



Batch number



Product reference



Store at 15°C - 30°C



Avoid direct sunlight



Instructions for use



Caution. See references

Instructions For Use – SuperCAST HD – Part Number: PN / 02142

Description, Indications & Effects:

Asiga SuperCAST HD is intended be used in combination with DLP based 3D printers (i.e. Asiga Max Series or Asiga Pro Series) that support Asiga resins. Asiga SuperCAST HD is optimised to build parts using light with 385nm or 405nm wavelength. Printer and resin must be optimized with respect to each other in order to produce complete and precise printed parts. If the printer and resin are not optimized with respect to each other this may have an adverse effect on the accuracy and physical quality of printed parts. DLP based 3D printers and post-curing lightboxes make use of a light source to polymerize the Asiga resin. Therefore, operators are advised to wear UV protective glasses when operating a 3D printer and/or lightbox. Differences in colour nuance may occur due to: production in batches; inadequate shaking and mixing of the original packaging before use; inadequate stirring in the SuperCAST HD resin before use; insufficient post-curing.

Hazard & Precautions:

Please refer to Asiga product safety data sheet for SuperCAST HD. For material SDS or technical assistance, contact your Asiga resellers or open a support ticket in your account online <https://www.asiga.com/accounts/support/>

Preparation:

Ensure the 3D printer is clean prior to use, including the imaging area and any optical surfaces. Ensure the material tray is clear of solid debris prior to commencing a print. The presence of solid particles in the resin may cause deformation or failure of the printed objects. Nitrile gloves should be worn at all times when handling Asiga liquid resins up until the finishing step. Avoid contact with skin. If contact with skin occurs, wash thoroughly with cold soapy water. If contact with eyes occur, remove any contact lenses and flush with cold water and seek immediate medical assistance.

Mixing Before Use:

In Bottle: Agitate/shake bottle vigorously prior to pouring for at least one minute.

In Material Tray: Stir material with a soft spatula. Take care not to damage the film of the Material Tray.

This step is necessary to re-disperse the (possible) pigment sediment from the bottom of the vessel.

Colour deviation and print failures may occur if insufficiently mixed.

Fill Material Tray:

Pour the resin into the material tray of the 3D printer. Avoid exposing resin to direct sunlight.

Printer Settings:

Ensure you are using the latest material ini file. You can access the latest material ini file for this material in your Asiga account online here:

https://www.asiga.com/accounts/#tab_material

See manual or user guides of Asiga 3D Printers (Asiga Max Series or Asiga Pro Series).

Washing:

Wash parts in at least 98% pure isopropyl alcohol in a well ventilated area.

Best results are achieved when using a pre-wash and post-wash.

The pre-wash bath may be isopropyl alcohol which has previously been used for washing SuperCAST HD only.

The post-wash bath should be fresh isopropyl alcohol.

1. Using an ultrasonic cleaning device:
 - Pre-wash bath: 1 minute.
 - Post-wash bath: 1 minute.

Best casting results are obtained when the parts are free of uncured resin.

Soaking parts in isopropyl alcohol for excessive time will result in weakening of the part and possible shrinkage after drying.

Do not wash in IPA that has previously been used for washing other materials. Contamination may affect casting results.

Allow parts to dry thoroughly before post-curing.





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Post-Curing:

Post-curing SuperCAST HD parts improves part strength and handling ability. Post-curing may improve the casting performance if the washing is incomplete. Well washed parts will cast satisfactorily without post-curing.

1. After washing and drying, let the printed parts rest for at least 30 minutes to ensure that the printed parts are free of alcohol residue.
2. Place the printed parts in a UV curing unit for 20 minutes. Asiga Flash post-curing box is suitable. Please see Asiga Flash Unit user guide.
3. Alternatively, use "NK Optik Otoflash G171" for 2000 flashes. Turn parts over and allow to cool. Cure for a further 2000 flashes. Total: 4000 flashes (2 x 2000 flashes each side).

Post-curing is an UV-light treatment to ensure that SuperCAST HD printed parts obtain optimal polymer conversion. Through this the residual monomer is reduced to a minimum and the required mechanical properties are obtained. Place parts inside the G171 Otoflash chamber on the support mesh, do not use a plastic tray inside the chamber. Inert gas is not required.

Investment Casting:

High cristobalite gypsum investments recommended:

- R&R Ultravest MAXX
<https://www.ransom-randolph.com/investments>
- Prestige Optima
<http://www.certus-int.com/products.php>

Follow the investment and burnout cycles recommended by the investment manufacturer.

Storage Conditions, Expiry Date & Transport:

Store the resin in the original packaging at room temperature in a dry, cool and dark area. Close the packaging after each use.

The expiry date of the product is mentioned on the product label along with the lot number.

Store on printer for up to 4 weeks with hood closed or store in bottle for up to 36 months in a cool dark place.

The product performance is no longer guaranteed once the expiry date is exceeded. Do not expose to UV-light.

Standard transport conditions apply to this product. There are no restrictions for transport related to hazardous substances.

Waste Disposal:

Asiga resin in its polymerized form is not environmentally harmful thus can be disposed of in general waste. Asiga resin in its liquid state should be treated as chemical waste. Special disposal requirements are applicable, check with your local, federal, or other regulatory agencies for disposal requirements.

Delivery Units:

Asiga SuperCAST HD is available in 1 colour only: Green, 1kg.

