

keyprint™

by keystone industries

3D PRINTING RESINS

KeyOrthoModel™

INSTRUCTIONS FOR USE

Product Description

KeyPrint™ KeyOrthoModel™ is a light-curing resin for 3D printing of dental model arches or quadrants. For use in DLP 3D printers utilizing wavelengths between 385nm and 405nm.

Processing

- During the application of KeyPrint™ KeyOrthoModel™, we recommend wearing personal protective equipment, nitrile or latex gloves, safety, goggles etc.
- KeyPrint™ KeyOrthoModel™ should be well shaken approx. 1 hour before use.
- Carefully fill pour KeyPrint™ KeyOrthoModel™ into the pre-determined container of the production unit.
- Remove all bubbles with a cleaned object.
- Make sure that KeyPrint™ KeyOrthoModel™ is tempered in your production unit up to approx. 23°C.
- Select the product specific parameter settings for your process.

Below are the recommended cure settings for KeyOrthoModel™

KeyOrthoModel™ should be used with a 385nm or 405nm light source. Printers using alternative light sources will need to be verified by Keystone. Unless specified, always run with the following settings:

Model Layer Thickness	Energy	MiiCraft 125 (factory intensity)
200µm	18 (mJ/cm ²)	4 seconds
100µm	13.5 (mJ/cm ²)	3 seconds
Base Layer	45 (mJ/cm ²)	10 seconds
Buffer/Burn-in Layers = 4		

When the building process is finished a direct post treatment is recommended.

Resin coated parts get cleaned with Isopropanol (97%) within a time of about 10 minutes. Do not allow the parts to sit in IPA for longer than 5 minutes as the properties may begin to deteriorate.

1. Remove part from printer and build platform.
2. Remove support structures from the part (optional to remove supports before or after post-cure in Otoflash G171 box.)
3. Place into a Stage 1 Isopropanol Alcohol (IPA) bath and use gloved hands to remove excess resin from the part. This can be done by running fingers over the surface, swishing the part, or even placing on a rotary table mixer (with a closed lid container).
 - a. The Stage 1 bath is an IPA bath that has been used with other parts and is the first wash for any part coming from the 3D printers.
4. Transfer the part(s) into a Stage 2 bath. The second wash does not require fresh IPA, but it must have a lower concentration of contaminants than the previous bath. Using a scrub brush or tooth brush can help remove excess resin. An explosion-protected ultrasonic bath can also be used to clean parts in place of the Stage 2 bath.
5. Use compressed air to dry part, looking for additional resin that is left behind.
 - a. Residual resin will be easy to spot as it flows when exposed to the compressed air and does not dry (like the IPA).
6. If residual resin remains, clean part in the Stage 2 bath or spray with fresh IPA (if you have a spray bottle).
7. Once part is clean, place the part in the OtoFlash G171 box.
8. Run the OtoFlash G171 for 4,000 cycles, flip part over.
9. Run an additional 4,000 cycles.
10. Perform final processing (i.e. polishing).
11. Part is ready for testing/use.