

# keyprint<sup>®</sup>

by keystone industries

## 3D PRINTING RESINS

# KeyCast<sup>™</sup>

INSTRUCTIONS FOR USE

**Product Description:** A light-curing 3D printing resin designed for residue-free and precise dental castings. KeyCast is compatible with a variety of investment materials for clean burnout using rapid or gradual temperature ramping, such as removable partial denture frames, crowns, bridges and copings.

For use in DLP 3D printers utilizing wavelengths between 385nm - 405nm.

#### Warnings & Precautions:

1. For professional use only.
2. Not for intra-oral use. For bench/lab work only.
3. Review the product Safety Data Sheet (SDS) prior to use.
4. Wear proper personal protective equipment when handling KeyPrint® resins and uncured printed parts as directed on SDS.
5. When pouring the resin, be careful not to splash.
6. Store in a cool, dry place and away from light.

#### Contraindications:

Contains acrylated monomers and oligomers which, although rare, may cause an allergic reaction in individuals sensitive to acrylic containing products.

#### Processing Tips:

1. Ensure that resin is tempered to ambient temperature (20-25°C/68-77°F) prior to printing.
2. In order to achieve consistency of the resin and to prevent bubbles, agitate the bottle 1 hour prior to use. If bubbles are present, remove with a clean instrument/spatula.
3. Only use KeyPrint® product-specific predetermined settings for your DLP 3D printer. KeyModel™ should be used with a 385nm - 405nm UV light source. Printers using alternative light sources require validation by Keystone's technical team for optimal settings. Unless specified, always print using the settings provided at [keystoneindustries.com](http://keystoneindustries.com).
4. Resin coated parts should be cleaned with Isopropanol (at least 97%) within approximately 8 hours from the completion of the print. Do not allow the parts to sit in Isopropanol for longer than 5 minutes as the properties may begin to deteriorate.
5. Keystone discourages the use of denatured alcohol or ethanol for cleaning as it may diminish or degrade the quality of the finished parts.

#### Directions for cleaning and post-cure treatment of printed part(s):

1. Remove part from printer and build platform.
2. Remove support structures from the part if applicable (Optional: remove supports before or after post-cure).
3. Place in Stage 1 Isopropanol (IPA) bath. This bath is used for the first wash of any part coming from the printer.
4. Remove excess liquid resin from the printed part. This can be done by running fingers over the surface, swishing or vibrating with the part submerged in the IPA bath.
5. Transfer the part(s) into a Stage 2 IPA bath. In order to achieve optimal final print quality, use fresh IPA with lower concentration of contaminants. Using a soft scrub brush or tooth brush can help remove excess resin.
6. Use compressed air to dry part, looking for residual liquid resin, which will be visible as it remains glossy. If residual resin remains, repeat steps 5 & 6 as needed.
7. Place the part in a post processing cure box, being sure to place the part flat to prevent warping. Refer to [keystoneindustries.com](http://keystoneindustries.com) to locate validated cure box settings. Our resins are compatible in cure boxes with UV wavelengths of 250nm - 390nm.
8. Allow part to cool completely before removing from the cure box to prevent surface defects or warping.
9. Perform final processing (i.e. polishing).
10. Part is ready for testing/use.

**Disposal Considerations:** KeyPrint® KeyModel™ is not considered an environmental hazard in its final, fully cured state. Dispose of unused and non-recyclable liquid resin materials in accordance with federal, state and local regulations.



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