

KEYPRINT[®] – FREQUENTLY ASKED QUESTIONS

RESINS

Q: *What materials are available and when are they available?*

A: There are seven initial KeyPrint resins. Here is a description of each, along with key performance attributes:

- **KeyModel™** - Produces highly-precise models with smooth, hard surfaces for optimal scanning. Colored for easy visibility of margins and tooth anatomy. Keystone's low-shrinkage formulation yields exacting models for crown & bridge and implant work.
 - o Available now
- **KeyOrthoModel™** - Designed for high-speed prints (150-200 microns, rather than 25-100 microns). Highly-accurate, hard, and dimensionally-stable under heat – perfect for thermal-forming orthodontic devices.
 - o Available now
- **KeyCast™** - For casting of crowns and partials, this formulation produces a strong, porous-free print that is resistant to fractures in even the finest of details. It burns out easily using existing ovens and workflows, with no residual ash, yielding detailed frames and accurate crowns.
 - o Available now
- **KeyMask™** - A flexible pink material that produces gingival masks to simulate the look and feel of gum tissue in restoration planning.
 - o Available – March 2018
- **KeyGuide™** – BIOCOMPATIBLE. Clear, incredibly strong, not brittle, and high-precision for optimal placement of surgical guide and drilling during surgery.
 - o Available – pending regulatory testing and clearance. Samples are available for testing, but not for sale or re-sale.
- **KeySplint Hard™** – BIOCOMPATIBLE. The print is strong and clear for cases where tooth immobilization is the priority.
 - o Available – pending regulatory testing and clearance. Samples are available for testing, but not for sale or re-sale.
- **KeySplint Soft™** – BIOCOMPATIBLE. The print is clear and polishable, with some flexibility and give. Perfect for retainers.
 - o Available – pending regulatory testing and clearance. Samples are available for testing, but not for sale or re-sale.

Q: *When and how can I get samples?*

A: Call us, or email us, or visit our website. We have an initial process to profile your 3D printing system, equipment and needs. After completing the initial customer set-up, we will ship you samples. Some limits may apply.

Q: *What is the pricing for KeyPrint®?*

A: KeyPrint resins are premium quality products offered at or below competitor prices – our stone model application is approximately 10% less than the competitors' material and it far exceeds their quality. Keystone also offers volume discounts for customers who need a scaled source of resin supply. Please contact us for more details on pricing for each resin. Please see our terms and conditions of sale for the full purchase terms applicable to our KeyPrint® resins.

Q: *How safe and compliant are your biocompatible materials?*

A: Our materials are subjected to rigorous testing to ensure safe compliance with industry standards for biocompatibility, including ISO 10993-1. KeyGuide™ and KeySplint™ materials are under review and should be available for purchase in your country soon.

Q: *What is the shelf life of the KeyPrint® Resins?*

A: Currently, we guarantee 12 months of shelf life. We expect to be able to guarantee 18 months of shelf life upon the conclusion of ongoing stability testing.

Q: *How quickly can resins be shipped to me after I place an order?*

A: It depends on (1) how much you are ordering; and (2) whether you are a new or returning customer. Keystone has always strived for excellent customer service, including ensuring that we can supply quality products promptly and within reasonable lead times. Keystone will always maintain an inventory of 3D resin products, but if large and unexpected orders are placed, those orders may require more planning and lead time to fulfill. Generally, Keystone will be able to ship product to its North American customers within a few days of receiving an order.

New customers for KeyPrint® resins (including existing Keystone customers) will require that we establish a profile so that we can ensure that KeyPrint® resins work optimally in the printers intended to be used. That initial set-up process may delay initial order processing and fulfillment.

Q: *What if I want to use KeyPrint® resins in a printer that is not on your current validation list?*

A: See current Validation list (which is updated as new printers are validated with KeyPrint®) at dental.keystoneindustries.com/keyprint-printer-validation/ Keystone continues to profile printers to ensure our KeyPrint resins work reliably in multiple open source printers. We can work with you to optimize your machine settings to work with KeyPrint®, but until we put that printer through our validation protocols, Keystone will not be able to guarantee the print results. Additionally, if end-users use KeyPrint® resins in a printer which Keystone has not validated, Keystone disclaims any responsibility for claimed damage to the unvalidated printer.

Q: *What is the regulatory classification and status of each KeyPrint® resins?*

A: Generally, KeyModel™, KeyOrthoModel™, KeyCast™ and KeyMask™ are not medical devices because they are not being placed inside the body. When available for sale, KeyGuide™ surgical guide is a Class I medical device in the USA and Canada and a Class IIa medical device in the EU. When available for sale, KeySplint™ classification will depend upon its usage and the standards applicable in a particular country.

Q: *Are KeyPrint® resins available for private labeling opportunities?*

A: Yes, on a limited basis. We have private label program standards and volume requirements that must be met in order to qualify.

Q: *How many parts can I print from a bottle of KeyPrint®?*

A: See our "Value" chart at dental.keystoneindustries.com/material-value/
The answer will depend on how you design and build your devices to be printed.
Generally, you can expect to get:

- 35-50 full arch models
- 65-70 quadrant models
- 65-70 large surgical guides
- 525+ castable frames
- 275+ castable coping
- 2000+ castable crowns
- 100-150 small surgical guides
- 100-120 splints

PRINTERS

Q: *What printers will KeyPrint® work on?*

A: KeyPrint resins are designed to work in DLP printers with wavelengths from 365 - 405 nm. Keystone will be releasing an SLA version of some of its resins in the near future. Additionally, for customers looking to purchase resins designed and tailored for SLA printers, Keystone is willing and able to discuss undertaking development of specialized SLA resin for your system.

Q: *What printers are validated with KeyPrint® resins for guaranteed results?*

A: See Validation chart at dental.keystoneindustries.com/keyprint-printer-validation/
Keystone continues to profile and validate printers to ensure our KeyPrint resins work reliably in multiple open source printers.

Q: *Does KeyPrint® work in both DLP and SLA printers?*

A: KeyPrint resins are designed to work in DLP printers with wavelengths from 365-405 nm, which technology Keystone believes prints faster and with finer details and accuracy.
Keystone will be releasing an SLA version of some of its resins in the near future. Additionally, for customers looking to purchase resins designed and tailored for SLA, LED or LCD printers, Keystone is willing and able to discuss undertaking development of specialized SLA, LED or LCD resin for your system.

Q: *Can you get KeyPrint® to work with my printer?*

A: Yes. We can work with you to optimize your machine settings to work with KeyPrint, but until we put that printer through our validation protocols, Keystone will not be able to guarantee the print results.