We Are Keystone

- Dental manufacturer of innovative operatory, laboratory, and preventive dental products since 1908
- Holder of more than 45 granted and pending patents
- State-of-the-art research and development
- 25-year industry leader light-cured product industry technologies
- Branded and private label supplier
- FDA-licensed and ISO 13485-certified
- Certified manufacturing sites in PA and NJ exceed 400,000 combined square feet

100 YEARS IN DENTAL

25 YEARS AS A MANUFACTURER OF PHOTOPOLYMERS

keyprint®
In an industry that is increasingly defined by the ability to innovate, adapt, and produce consistent results, Keystone Industries introduced KeyPrint in 2018, a line of precision 3D resins specifically formulated for the dental industry. Keystone has combined its unique blend of dental and photopolymer expertise to deliver the highest quality 3D printing resins to the dental market.

Entirely designed and produced in the USA, the full KeyPrint line is available throughout North America, Europe, and other global territories. Keyprint resins are compatible with DLP printers (wavelengths of 385-405 nm). Keystone is profiling 3D printers on an ongoing basis to ensure our KeyPrint resins work reliably in multiple open-source printers.

Prioritizing patient safety, KeyPrint resins are subjected to a battery of biocompatibility tests in accordance with global regulatory standards. Each biocompatible print complies with international standards to ensure efficacy and effectiveness for the patient. Keyprint’s robust formulations guarantee a two-year shelf life, along with color stability and stain resistance.

“Our KeyPrint® Journey

“These are certainly the best materials I have ever seen. The color, clarity and detail of the printed parts are superior.”

DELL DINE, COO OF 3D DDS
Safe and Effective
Biocompatible Resins

PRECISION 3D RESINS
KEYPRINT®: PRECISION 3D RESINS
Utilizing unique patent-pending technologies, Keystone Industries has developed a one-of-a-kind 3D printing resin for the fabrication of flexible dental splints and nightguards. This DLP-optimized resin is an exceptional printing material, that combines the strength needed to protect teeth against disorders like bruxism with added flexibility for better patient comfort. KeySplint Soft is also resistant to stains and easily cleaned by the patient.

KeySplint Soft is fully biocompatible, and is in compliance with international medical device regulations and standards. The robust formulation has two years of guaranteed shelf life, is color stable, and is validated in multiple open-source printers. No other dental splint resin can deliver the quality and performance of KeySplint Soft.

### Key Properties

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>PROCEDURE</th>
<th>KEYSPINT SOFT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural Strength</td>
<td>ASTM D790</td>
<td>47</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>ASTM D790</td>
<td>1356</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D638</td>
<td>52</td>
</tr>
<tr>
<td>Young’s Modulus Tensile</td>
<td>ASTM D638</td>
<td>1790</td>
</tr>
<tr>
<td>Water Sorption</td>
<td>ISO 20795-2</td>
<td>&lt;84.8 µg/mm³</td>
</tr>
<tr>
<td>Biocompatibility</td>
<td>ISO 10993-1 and USP Class VI</td>
<td>Pass</td>
</tr>
</tbody>
</table>

- Biocompatible
- Transparent
- Polishable
- Stain-resistant

#4220005 KeySplint Soft, 35.3 oz (1 kg)
KeyGuide™

KeyGuide is ideal for fabricating transparent surgical guides, which enable the placement of implants at a precise angle and depth.

- Strong without brittleness
- Biocompatible
- Easy to polish
- Autoclavable and color stable

#4220001 KeyGuide, 35.3 oz (1 kg)
AS STRONG AS IT GETS!

**Flexural Strength (MPa)**

- Formlabs, Bego
- Dreve, EnvisionTEC, Kulzer
- NextDent, Whipmix

- KeyGuide™

**Flexural Modulus (MPa)**

- Formlabs, Bego
- Dreve, Whipmix
- Kulzer, EnvisionTEC, NextDent, Stratasys

- KeyGuide™

"KeyGuide™ resin is a perfect fit for our laboratory. The material prints quickly and accurately in our 3D printer and polishes to a beautiful high luster shine. Our doctors are loving it!"

KEN KINCAID - CDT, RG, TE
KeySplint Hard is a rigid dental splint used for the fabrication of orthodontic and dental appliances such as splints, bite planes, mouthguards, nightguards, snoring appliances, retainers and repositioners.

- This device is indicated for the protection against bruxism (nighttime teeth grinding) and for relief of TMD/TMJ symptoms
- Biocompatible
- Strong and transparent

Coming soon: KeySplint Hard, 35.3 oz (1 kg)
Lab

Reliable and Consistent Laboratory Resins
KeyModel™ produces highly precise and accurate dental models. Its low shrinkage formulation makes it an ideal resin for:

- Crown, bridge, and implant models
- Orthodontic clear aligner models
- Diagnostic modeling
- Colored for easy visibility of margins and tooth anatomy
- Carvable without chipping
- Pairs perfectly with KeyMask™

#4220006  KeyModel, 35.3 oz (1 kg)

Check out our line of Proform thermoforming materials at dental.keystoneindustries.com for your bleaching tray, retainer, splint & mouthguard needs.

Pairs perfectly with:

Machine III  Mouthguards
KeyOrthoModel ™

KeyOrthoModel is designed for high-speed and accurate prints. Perfect for thermoforming aligners and orthodontic devices.

#4220003  KeyOrthoModel, 35.3 oz (1 kg)

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>PROCEDURE</th>
<th>KEYMODEL &amp; KEYORTHOMODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural Strength (MPa)</td>
<td>ASTM D790</td>
<td>79.6</td>
</tr>
<tr>
<td>Flexural Modulus (MPa)</td>
<td>ASTM D790</td>
<td>2293</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D638</td>
<td>51</td>
</tr>
<tr>
<td>Young’s Modulus (MPa)</td>
<td>ASTM D638</td>
<td>1850</td>
</tr>
<tr>
<td>Elongation at break %</td>
<td>ASTM D638</td>
<td>5.60%</td>
</tr>
<tr>
<td>Shore Hardness (D)</td>
<td>Scale D</td>
<td>86</td>
</tr>
</tbody>
</table>
KeyCast™

KeyCast is compatible with rapid burnout and gradual temperature ramp workflows, with no residual ash.

- KeyCast is used with chrome, cobalt, gold, and silver
- Low shrinkage formula controls thermal expansion to yield porous-free and accurate castings

#4220000 KeyCast, 35.3 oz (1 kg)

**PROPERTY** | **PROCEDURE** | **KEYCAST**
--- | --- | ---
Flexural Strength (MPa) | ASTM D790 | 15
Flexural Modulus (MPa) | ASTM D790 | 340
Tensile Strength (MPa) | ASTM D638 | 9.1
Young’s Modulus (MPa) | ASTM D638 | 220
Elongation at break (%) | ASTM D638 | 16%
CTE 0-150°C (32-302°F) | ASTM E831 | $168 \times 10^{-6}\text{m/(m⋅°C)}$
CTE 150-250°C (302-482°F) | ASTM E831 | $64 \times 10^{-6}\text{m/(m⋅°C)}$
CTE >250°C (>482°F) | ASTM E831 | <0m/(m⋅°C)
Shrinkage | ASTM D792 | <2%
Burnout | | <0.05%

Pairs perfectly with:

- Casting Rings
- Sprue Wax
- Green Flexiboles
- Microtorch

Check out our full line of dental casting rings, waxes, mixing bowls and other accessories at dental.keystoneindustries.com.
KeyMask™

- Flexible yet firm gingival mask that simulates the look and feel of gum tissue
- Incorporate KeyMask in your digital restoration planning
- Easily trimmed to create a proper emergence profile or sculpted for proper pontic shape

#4220002 KeyMask, 17.6 oz (0.5 kg)

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>PROCEDURE</th>
<th>KEYMASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength (MPa)</td>
<td>ASTM D638</td>
<td>2</td>
</tr>
<tr>
<td>Young’s Modulus (MPa)</td>
<td>ASTM D638</td>
<td>4.6</td>
</tr>
<tr>
<td>Elongation at break (%)</td>
<td>ASTM D638</td>
<td>41%</td>
</tr>
</tbody>
</table>
Accessories

Everything you need to work with keyprint®
**KEYPRINT®: ACCESSORIES & COMPATIBLES**

**Products included in the Keyprint Kit**

- **Denture 3D Baskets** #1220207
- **Microfiber Cloth** #1220201
- **Professional Sprue Cutter** #1220200
- **Stiff Putty Knife 1½”** #1220210
- **Pro Wood Chisel 1½”** #1220209
- **Wash Bottle 250 ml.** #1655413
- **Small Bowl Scrape** #1220202
- **Tekton Mallet 8 oz.** #1220208
- **1½” Bristle Brush** #1220205
- **2½” Bristle Brush** #1220206
- **Scratch .016 Nylon Brush** #1220203
- **6” Point Curved Tweezers** #1220204

**Compatible Products**

- **Isopropyl Alcohol, 99%**
- **CAD/CAM Scanning Spray**
- **Microtorch**
- **Green Flexiboles**
- **Machine III**
- **Keystone Pro-Form & Vacuum Forming Materials**
- **High Gloss Ortho Boxes**
- **Sprue Wax**
- **Casting Rings**

* For our full line of dental & 3D printing accessories, visit dental.keystoneindustries.com