

KeyGuard™ Finishing and Polishing Recommendations¹

NOTE: Keystone Industries recommends polishing only the edges and occlusal surfaces of a sports guard. Polishing the intaglio surface can adversely impact the fit of the printed device.

SUPPORT REMOVAL



PROCESS

 **TIME: APPROX. 2-3 MIN**

- Grind supports down with a Scotch Brite™ Dremel bit
- Optional: you can take steps to remove remaining printing lines/texture from print with an Abrasion Disc sanding wheel (Fine Blue) or Scotch Brite™ dremel bit
- This process is fast and can eliminate any trace of scaling on the edges and the occlusal surfaces prior to polishing. This makes the polishing process quicker, more consistent, and with limited defects

MATERIALS

- Scotch Brite™ Medium Wheel (1670092) – removal of support pin marks
- Fine Blue Abrasion Disc (1670099) - elimination of remnant print lines and residual material from surface

POLISHING



STEP 1: PUMICE

 **TIME: APPROX. 2-3 MIN**

- Fill lighted shield tray with pumice
- Add sufficient water so that the pumice is more than damp and slightly flowable to make reapplication of pumice during polishing easier
- Use the 4x42 cloth wheel surface to reach all edges and occlusal surfaces
- Dampen the wheel with water before pumice application for optimal results
- Coat the part in wet pumice and begin to finish the occlusal surface. You will feel some resistance of the pumice between the part and wheel, and as the resistance lessens, the process is nearing completion
- Polish using high-speed, and apply firm and consistent pressure for predictable results
- Use water or high-pressure steam to clean pumice off of the guard

MATERIALS

- Coarse pumice, or synthetic pumice substitute
- 4x42 cloth wheel (1180170) - larger and flatter surface area is best

¹There are a variety of polishing methods and materials that effectively can finish and high-shine polish a KeyGuard™ device. In this protocol, Keystone Industries describes several steps and materials to be used to achieve a high-shine finish on printed KeyGuard™ devices.



STEP 2: HIGH-SHINE POLISH

 **TIME: APPROX. 2-3 MIN**

- Install new 5x45 cloth wheel dedicated to high-shine materials
- Apply high-shine polishing compound to the wheel until fully coated and repeat as necessary through the process
- Begin to polish the device by using a low speed and applying firm pressure as you polish the entire occlusal surface, looking to achieve a uniform finish with a high-shine
- Re-apply high-shine polishing compound and perform one final polishing of the surface, applying light pressure. Use water or high-pressure steam to clean high-shine compound off of the guard

ALTERNATIVE STEP 2

 **TIME: APPROX. 3 MIN**

- Instead of using the a high-shine compound bar, you can use other polishing compounds like a High-Shine Emulsion Liquid for a high-shine
- Rather than applying this material to the wheel, you apply the liquid to the part with approximately 4 drops per side of the device and spread the liquid over the entire surface
- Polish the device as recommended above
- Use water or high-pressure steam to clean high-shine compound off of the guard

MATERIALS

- Polishing options:
 - White or light beige polishing compound (Beige 90g polishing bar 1670110)
 - Other available light or white dental high-shine polishing compounds
 - High-Shine Emulsion Liquid (1670200)
- 5x45 cloth wheel (1180190) - larger and flatter surface area is best



STEP 3: DRY BUFF

 **TIME: APPROX. 2-3 MIN**

- Install new cotton buff wheel
- Apply the High-Shine Pink compound to the wheel until fully coated and repeat as necessary through the process
- Begin to mirror finish the device by using a low speed as well as applying firm and steady pressure
- KeyGuard™ should have a spectacularly bright shine

MATERIALS

- High-Shine Pink 150 g (1670546) for mirror finish
- High-Shine cotton buff wheel (1670140 or 1670510)

HIGH-SHINE BUFF GUARDS



PURCHASING POLISHING MATERIALS

Keystone Industries provides all materials and items needed for a perfect high-shine polish of KeyGuard™ through your preferred distributor.

MATERIALS

SUPPORT REMOVAL

ITEM NAME	ITEM NO.	PHOTO
Miniature Scotch Brite™ - Medium	1670092 - 2/pack	
Abrasion Discs - Fine Blue	1670099 - w/o mandrel, 4/pack 1670085 - w/ mandrel, 4/pack	

POLISHING

ITEM NAME	ITEM NO.	PHOTO
Course Grit Pumice	1700010	
Muslin Buffs	1180190 for 5" (12.7cm) x 45 & 1180170 for 4" (10.16cm) x 42- 2/pack	
Tripoli Pre-Polishing Compound	1660030 - 2.5 lb (1.14kg) bar	
Beige 100g polishing paste	1670175	
Wooden "Acrylic-High-Shine Polishing" Cotton Buff	1670140 or 1670510	
Polistar Emulsion Polish 125ml	1670212	
High-Shine Pink 150g	1670546	