



A Pac-Dent Brand

# GLAZE N<sub>2</sub>-Free

Universal Light-Curing Sealant for All Surfaces



Instruction For Use



A Pac-Dent Brand

Universal Light-Curing Sealant for All Surfaces

GLAZE N<sub>2</sub>-FREE

## Product Description

**Glaze N<sub>2</sub>-Free** is a versatile light-cure solution designed to enhance the durability and esthetics of dental restorations. It seals microfractures and pits, while simplifying post-processing workflows by eliminating the need for conventional polishing to achieve a radiant, high-shine finish. Tailored for 3D composite polymers and milled PMMA material systems, it is also compatible for use with pre-sintered zirconia and lithium disilicate products.

## 2. Material Composition

**Glaze N<sub>2</sub>-Free contains:**

- Monomer
- Oligomer
- Photo Initiator
- Photo Inhibitor

## 3. Intended User

**The product is exclusively intended for use by:**

- Trained professional dentists
- Trained professional prosthodontists
- Dental Lab Technicians

**Sales are restricted to:**

- Dental supply dealers
- Teaching institutions
- Government dental facilities

## 4. Intended Use

**Glaze N<sub>2</sub>-Free is designed for:**

1. Surface characterization of a wide range of materials including:
  - Zirconia
  - Lithium disilicate
  - PMMA
  - 3D composite polymer material systems
2. Sealant for PMMA and 3D composite polymer systems.
3. Esthetic enhancements for fixed and temporary hard splints, surgical guides, crowns, bridges, inlays, onlays, veneers, and partial/full denture arches.

## 5. Contraindications

**Methyl Methacrylate Allergy:** Patients who have a known allergy to methyl methacrylate should not be prescribed products containing this compound. Methyl methacrylate is a common ingredient in dental resins and acrylics. Exposure to materials containing it can trigger allergic reactions in sensitized individuals. These reactions can range from mild (such as skin irritation or rash) to severe (such as anaphylaxis, which is a potentially life-threatening condition).

## 6. PPE Recommendations

### Recommended personal protective equipment includes:

- Gloves
- Eye protection
- Lab coat
- Closed-toed shoes

### Precautions

1. Avoid vigorous shaking of the bottle, as it may introduce microbubbles, distorting the high-shine glaze appearance.
2. Do not leave Glaze N<sub>2</sub>-Free bottle cap ajar in clinical or laboratory environments, as the resin is sensitive to dust and ambient light contamination, which may adversely affect curing performance.
3. The dispensing tip should be kept clean. Wipe dispensing tip with a lint free towel after each use.
4. Ensure the cap is securely closed after each use.

## 7. Directions for use

### For 3D Composite Ceramic Systems

1. Remove all remaining support tips and perform final contouring, contact adjustments, and occlusal refinements.

*Note: Avoid sandblasting or using unvalidated solvents that could remove the oxygen inhibition layer (OIL). Aluminum oxide media may embed into the surface, causing discoloration and compromising the chemical bond with Glaze N<sub>2</sub>-Free.*

2. Remove residual debris using compressed air.

*Note: Avoid steaming printed patterns before applying Glaze N<sub>2</sub>-Free, as residual moisture may result in an undesirable textured surface after curing.*

3. Apply a thin coat of Glaze N<sub>2</sub>-Free to the cameo surfaces using a conventional Kolensky or synthetic porcelain brush.

*Note: Thoroughly clean your brush with IPA after each use to prevent contamination.*

4. Remove any excess glaze from the intaglio surfaces, embrasures, and occlusal grooves to ensure proper seating, function, and esthetics.
5. If desired, apply light-curable stains, and tack-cure them following the manufacturer's instructions.

*Note: Reserve at least 3/4 of the total curing time for uninterrupted curing of the Glaze N<sub>2</sub>-Free to ensure adequate curing of the underlying substrate. (Ref. sec 8)*

6. After completing all stain layering and tack-curing, apply a light second coat of Glaze N<sub>2</sub>-Free to all cameo surfaces.
7. Tack-cure the first glaze layer for 30 seconds, recoat as needed, and perform the final cure with remaining time budget.

## Surface Preparation for Zirconia, Lithium Disilicate, and PMMA Materials

1. Perform final contact, contouring, and/or occlusal adjustments as needed.
2. Sandblast all cameo surfaces with aluminum oxide to enhance mechanical retention.
3. Remove residual debris and sandblasting media using a dental steam gun.
4. Thoroughly dry the restoration with compressed air before applying Glaze N<sub>2</sub>-Free.

*Note: Do not subject Glaze N<sub>2</sub>-Free restorations to furnace firing cycles, as the glaze will burn off. Ensure zirconia and lithium disilicate restorations are sintered and final adjustments are made before glaze application and light curing.*

5. Apply a thin coat of Glaze N<sub>2</sub>-Free to the cameo surfaces using a conventional Kolensky or synthetic porcelain brush.

*Note: Thoroughly clean your brush with IPA after each use to prevent contamination.*

6. Remove any excess glaze from the intaglio surfaces, embrasures, and occlusal grooves to ensure proper seating, function, and esthetics.
7. If desired, apply light-curable stains, and tack-cure them following the manufacturer's instructions.

*Note: Reserve at least 3/4 of the total curing time for uninterrupted curing of the Glaze N<sub>2</sub>-Free to ensure adequate curing of the underlying substrate. (Ref. sec 8)*

8. After completing all stain layering and tack-curing, apply a light second coat of Glaze N<sub>2</sub>-Free to all cameo surfaces.
9. Tack-cure the first glaze layer for 30 seconds, recoat as needed, and perform the final cure with remaining time budget.

### Glaze N<sub>2</sub>-Free Reapplication/Occlusal Touchup

1. Rinse target area and dry thoroughly with compressed air.
2. Roughen surface of target touchup area with a fine diamond bur.
3. Rinse target area to remove debris and thoroughly dry with compressed air.
4. Check occlusal clearance. Should have 0.1 mm of occlusal clearance to compensate for reapplied glaze layer. Reduce restoration as needed.
5. Apply a thin coat of Glaze N<sub>2</sub>-Free to the adjusted areas.
6. Cure glaze with an intraoral spot curing lamp (see section 8 for details)
7. Buff with a goat hair polishing wheel or cotton buff wheel if desired.
8. Check occlusal clearance. Repeat steps 3-6 if occlusion is high. wavelength range of 400-510 nm.

## 8. Validated Glaze N<sub>2</sub>-Free Minimum Curing Parameters

DEVICES	SETTINGS
<b>NK-Optik Otoflash</b>	2,000 flash cycles (without nitrogen)
<b>Ackuretta Curie+ Plus</b>	5 minutes, power level 9, duty cycle 20%, BL On
<b>Formlabs Form Cure</b>	5 minutes, 40°C
<b>LuxCreo iLuxCure Dental</b>	P1-615, P2-20, P3-3 minutes
<b>Nexa3D xCure</b>	405nm, 3 minutes, PWM 20%
<b>Shining3D FabCure2</b>	5 minutes, 40°C
<b>Phrozen Wash and Cure</b>	7 minutes
<b>Handheld Spot Curing Lamp</b>	Cure for 40 seconds at 0.5-inch distance using a device with a minimum intensity of 1,000 mW/cm and wavelength range of 400–510 nm.

Note-Ensure to follow minimum curing settings for underlying 3D printed substrates for best performance

## 9. Chairside Adjustments:

- Make necessary final contour, occlusal, or contact adjustments.
- Rinse and thoroughly dry adjusted area using compressed air.
- Remove restoration or prosthesis from patients' mouth and apply a thin coat of Glaze N<sub>2</sub>-Free to adjusted area and cure with validated desktop curing devices. If the restoration is cemented in place, reapply a thin coat of Glaze N<sub>2</sub>-Free to adjusted areas and cure with appropriate handheld curing unit following recommended curing protocol (see section 8).

## 10. Storage:

**Light Protection:** Store Glaze N<sub>2</sub>-Free in a dark place, away from direct sunlight and bright artificial light, to prevent inadvertent curing performance.

**Dust-Free:** Ensure the storage area is clean and free from dust. Dust particles can contaminate the resin, affecting curing performance.

**Temperature Control:** Store resins at a consistent, moderate temperature, away from extremes of heat or cold. Extreme temperatures can affect the viscosity and curing properties of the resin.

**Shelf Life:** 12 months from manufacture date.



A Pac-Dent Brand

Universal Light-Curing Sealant for All Surfaces

GLAZE N<sub>2</sub>-FREE

## 11. Disposal Recommendations

### Classification of Waste:

**Regulatory Compliance:** Familiarize yourself with and comply with all applicable federal, state, and local regulations concerning hazardous waste disposal.

**Hazardous Waste Identification:** Consult the US EPA guidelines and other relevant sources to accurately classify whether the waste you're disposing of is considered hazardous.

### Disposal of Liquid Resin:

**Curing Before Disposal:** Never dispose of liquid resin directly into the trash or down the drain. Uncured resin should be fully cured before disposal.

**Sunlight Curing:** Pour the liquid resin into a clear container and expose it to direct sunlight. UV light will cure the resin. Alternatively, use a UV lamp if sunlight is not sufficient.

**Solidification:** Once the resin is fully cured and solidified, it can generally be disposed of as regular trash. However, always verify with local regulations, as there may be specific guidelines for cured resins.

### Solid Resin Waste:

**Glazed Objects:** Ensure uncured resin is fully cured prior to disposal.

**Containment:** Place the cured resin waste in a sealed bag or container to prevent any potential exposure or reaction.

**Maintain Records:** Keep records of your waste disposal practices, especially for any waste that may be classified as hazardous. This can help demonstrate compliance with regulations.

### Regular Review and Training:

**Stay Informed:** Regularly review disposal practices and stay informed of any changes in regulations.

**Staff Training:** Ensure all staff members are trained in proper disposal procedures to maintain a safe and compliant workplace.

*By adhering to these disposal recommendations, dental practices and laboratories can minimize their environmental impact and ensure they are in full compliance with waste disposal regulations. Responsible disposal is an essential aspect of 3D printing operations in the dental industry.*

### Order Information

**24031** Glaze N2-Free, 5mL

**24015** Glaze N2-Free, 15mL



A Pac-Dent Brand

Universal Light-Curing Sealant for All Surfaces

GLAZE N<sub>2</sub>-FREE

## Legal Disclaimer

### Pac-Dent Inc. Release of Liability

Pac-Dent Inc. (“the Company”) expressly disclaims any and all liability associated with the improper use of its products, including but not limited to its range of 3D printing resins, tools, and equipment intended for dental applications. The end user (“User”) acknowledges and agrees that strict adherence to the instructional guidance provided by the Company is essential for the correct function and performance of the medical device (“Product”).

The User understands that deviation from the provided instructional guidance, or the use of invalidated or unauthorized equipment in conjunction with the Product, may result in alterations to the function and performance of the Product. The Company shall not be held responsible or liable for any such alterations or any consequences thereof.

By using the Product, the User agrees to indemnify, defend, and hold harmless Pac-Dent Inc., its officers, directors, employees, agents, affiliates, successors, and assigns from and against any and all losses, claims, damages, expenses (including reasonable attorneys’ fees), or liabilities of any kind arising out of, related to, or in connection with the User’s deviation from the provided instructional guidance or use of invalidated equipment.

This release of liability is binding upon the User, and, as applicable, the User’s heirs, executors, administrators, legal representatives, and assigns. It is the User’s responsibility to ensure comprehension and observance of this disclaimer and all accompanying instructional materials provided by the Company.

THE COMPANY’S LIABILITY UNDER THIS DISCLAIMER, IF ANY, SHALL BE LIMITED TO THE PURCHASE PRICE PAID BY THE USER FOR THE PRODUCT. IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE PRODUCT.

The User’s acceptance of the Product constitutes acceptance of these terms and an agreement to be bound hereby.



Pac-Dent, Inc.  
670 Endeavor Circle | Brea, CA 92821 | USA  
+1 (909) 839-0888 | [www.rodin-3d.com](http://www.rodin-3d.com) | [www.pac-dent.com](http://www.pac-dent.com)