



Automotive Systems



## Advanced-Cure Adhesives

- Choose from BETASEAL™ O<sup>ne</sup>™, BETASEAL™ *Express* or U-400HMNC in cartridges or sausage packs
- BETASEAL™ O<sup>ne</sup>™ and BETASEAL™ *Express* are available in G-EZKits with primers, cleaners and accessories included
- BETASEAL™ O<sup>ne</sup>™ and BETASEAL™ *Express* have one hour minimum drive-away time in temperatures as low as 0°F (-18°C). BETASEAL™ U-400HMNC has a two hour minimum drive-away time in temperatures 20°F (-7°C) or higher.
- Gun-n-Go – easy application, no heating required
- Crash proven
- Improved formula is easy to use with superior decking and short cut-off string



[www.DowARG.com](http://www.DowARG.com)

## Advanced-Cure Adhesives

Advanced-cure urethane adhesives are a one-component material that contains enhanced chemical crosslinking to speed bonding. They utilize Dow Automotive Systems' patented Reinforced Isotropic Network Adhesive (RINA) technology to offer industry best one hour minimum drive-away times.



## BETASEAL™ 0°ne™ – Simply the Best

- One urethane adhesive for standard and high modulus, non-conductive (HMNC) applications
- High-modulus formula enhances vehicle's structural integrity and improves passenger comfort by reducing road noise and stiffening the vehicle's ride.
- Non-conductive for reduced interference with GPS and phone reception.
- One-hour minimum drive away in temperatures as low as 0°F (-18°C)
- Crash proven
- Gun-n-Go – easy application, no heating required



## BETASEAL™ Express – Fast, Easy, Trusted

- Formulated for all standard glass replacements
- Superior decking and short cut-off string
- Gun-n-Go – easy application, no heating required
- Excellent for cold-weather applications – one-hour minimum drive away in temperatures as low as 0°F (-18°C)

## BETASEAL™ U-400HMNC – The Tried and True Evolves into the New Modern Standard

- High modulus for torsional stiffness to quiet and stabilize the vehicle's ride
- Non-conductive preserves radio, cellular phone and global positioning system reception in OEM antenna-encapsulated windshields and backlites
- Shorter minimum drive-away time – two hours in temperatures as low as 20°F (-7°C)
- Gun-n-Go – easy application, no heating required
- Use with BETAPRIME™ 5504G All-in-One Primer
- Crash proven and value priced OEM adhesive




## BETASEAL™ G-EZKit – Everything you need for a good day's work


Every BETASEAL™ G-EZKit contains:


- Choice of adhesives – BETASEAL™ 0°ne™ or BETASEAL™ Express in cartridges or foil packs
- 12 oz can BETACLEAN™ GC-800
- 14 BETAPRIME™ Clear SA sticks
- 40 ml (1.4 oz) BETAPRIME™ 5504G All-in-One Primer
- Instructional mirror tags
- Proof-of-use stickers
- Precut nozzles





# Windshield Installation Instructions

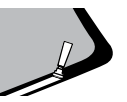
- 1**  **Wear appropriate safety equipment**
- Protect yourself
  - Wear safety equipment, such as work gloves, nitrile chemical-resistant gloves, safety glasses, work apron or other protection required by your company


- 2**  **Inspect replacement glass**
- Spray glass bonding surface and vision area with BETACLEAN™ GC-800 Glass and Surface Cleaner and wipe glass clean with a lint-free paper towel
  - Inspect replacement glass for defects, damage or signs of contamination
  - Verify primer and adhesives are within use-by dates


- 3**  **Cut out the glass**
- Protect the customer's vehicle
  - Remove all hardware and reveal moldings
  - Cut out the windshield using your preferred method


- 4**  **Prepare the glass**
- Many contaminants are difficult to detect and remove
  - Use of BETABRADE™ F1 to remove difficult contamination is recommended
  - Shake BETABRADE™ F1 bottle for 10 seconds and apply 2 mm thin line of BETABRADE™ F1 around entire glass bonding area
  - Scrub the bonding area with a lint-free paper towel until BETABRADE™ F1 is dry
  - Spray entire windshield with BETACLEAN™ GC-800 Glass and Surface Cleaner and wipe clean with a lint-free paper towel to ensure it is clean and free of any traces of BETABRADE™ F1 in the bondline

- 4.1**  **4.1a Glass priming instructions using BETAPRIME™ 5504G All-in-One Primer**
- Check the expiration date on the container
  - The primer bottle no longer requires shaking\*
  - Open the bottle of BETAPRIME™ 5504G All-in-One Primer carefully and insert a clean, unused dauber; to avoid spilling, never pour liquid on dauber
  - Apply one coat of BETAPRIME™ 5504G with a clean wool dauber in one, even wet coat, moving the dauber in the same direction
  - Allow primer to dry for 2 minutes at 20°F (-7°C) and above and from 20°F (-7°C) down to 0°F (-18°C) allow primer to dry for 10 minutes\*
  - If glass is not installed within 24 hours of original priming, reprime the glass with BETAPRIME™ 5504G; do not reprime more than once

-  **4.1b Glass priming instructions using BETAPRIME™ CLEAR SA**
- Point pad of BETAPRIME™ CLEAR SA stick 1-Step Glass/Frit Primer toward the surface to be primed and pinch tube between thumb and forefinger to break internal vial, releasing the primer
  - Allow the pad to saturate; it is not necessary to squeeze the tube
  - Slowly draw the applicator twice around the surface to be primed to get an even glossy primer film (do not wipe off)
  - Wait six (6) minutes for the primer to dry before installing glass
  - If glass is not installed within 24 hours of original priming, reprime the glass with BETAPRIME™ CLEAR primer; do not reprime more than once
  - When priming glass with BETAPRIME™ CLEAR primer in temperatures from 0°F (-17.8°C) to 40°F (4.4°C), the glass should be cleaned at a temperature at or above 40°F (4.4°C) and stored in a manner that will keep it clean and contaminant free
- Note:** On clear glass without any frit, apply two coats of BETAPRIME™ 5504G, allowing each coat to dry

- 4.2**  **Prepare encapsulation or PAAS**
- Clean RIM or PVC encapsulation or PAAS bead with BETACLEAN™ GC-800 Glass and Surface Cleaner and a clean, lint-free paper towel
  - "Wet scrub" the RIM or PVC encapsulation with an abrasive pad and BETACLEAN™ GC-800 Glass and Surface Cleaner, then clean again with BETACLEAN™ GC-800 Glass and Surface Cleaner and allow to dry completely
- Note:** Skip this step if bonding to PAAS
- Check the expiration date on the container
  - The primer bottle no longer requires shaking\*
  - Apply BETAPRIME™ 5504G All-in-One Primer with dauber to the RIM or PVC encapsulation, PAAS surface or any molding surface that contacts new urethane to promote adhesion
  - Allow primer to dry for 2 minutes at 20°F (-7°C) and above and from 20°F (-7°C) down to 0°F (-18°C) allow primer to dry for 10 minutes
  - Replace inner seal and cap on bottle immediately


- 5**  **Trim back the urethane**
- Clean any dirt and debris from around the existing urethane with BETACLEAN™ GC-800 Glass and Surface Cleaner or water and a clean towel
  - Trim the urethane, leaving a 1 mm to 2 mm base of original equipment urethane
  - Take care not to damage the vehicle paint or pinchweld
  - Any areas of trimmed urethane that require additional cleaning should be carefully wiped with BETACLEAN™ GC-800 Glass and Surface Cleaner or water and a clean towel


- 6**  **Prepare the pinchweld**
- Once body surface is clean and dry, follow these priming steps:**
- Check the expiration date on the container
  - The primer bottle no longer requires shaking\*


- For priming any areas of bare metal (large or small, including scratches):**
- Open the bottle of BETAPRIME™ 5504G All-in-One Primer carefully and insert a clean, unused dauber; to avoid spilling, never pour liquid on dauber
  - Apply one coat of BETAPRIME™ 5504G with a clean wool dauber to any scratches in the paint or large areas of bare metal
  - Allow primer to dry for 2 minutes at 20°F (-7°C) and above. From 20°F (-7°C) down to 0°F (-18°C), allow primer to dry for 10 minutes.
  - Apply second coat of BETAPRIME™ 5504G and allow primer to dry for 2 minutes at 20°F (-7°C) and above. From 20°F (-7°C) down to 0°F (-18°C), allow primer to dry for 10 minutes.


- For priming painted bonding surfaces (no bare metal):**
- Open the bottle of BETAPRIME™ 5504G All-in-One Primer carefully and insert a clean, unused dauber; to avoid spilling, never pour liquid on dauber
  - Apply one coat of BETAPRIME™ 5504G All-in-One Primer with a clean wool dauber to the painted area where original adhesive may have peeled off or to extend the bonding area when applying adhesive to the glass part
  - Allow primer to dry for 2 minutes at 20°F (-7°C) and above and from 20°F (-7°C) down to 0°F (-18°C) allow primer to dry for 10 minutes

**Warning:** Do not reinsert (double dip) the dauber into the primer bottle if it has touched the body of the vehicle. This could contaminate the remaining primer in the bottle.

- 7**  **Apply BETASEAL™ adhesive (Choose either glass or pinchweld application)**
- Hold the applicator in a vertical position 90° to the glass and dispense the adhesive with a continuous motion in a uniform "V" shaped bead
  - Apply adhesive to the glass on top of the bond line, matching the location of the original adhesive bead on the glass or apply adhesive to the pinchweld perimeter directly on top of the freshly cut original equipment urethane film
  - Either application: Hold the applicator in a vertical position (90°) and dispense the adhesive with a continuous motion in a uniform "V" shaped bead
  - Make sure bead is uniform and has no gaps; add material or gently tool joints, if necessary

- 8**  **Install the glass**
- Carefully place the glass in the body opening
  - Adjust glass to precise alignment
  - Lightly press it into position

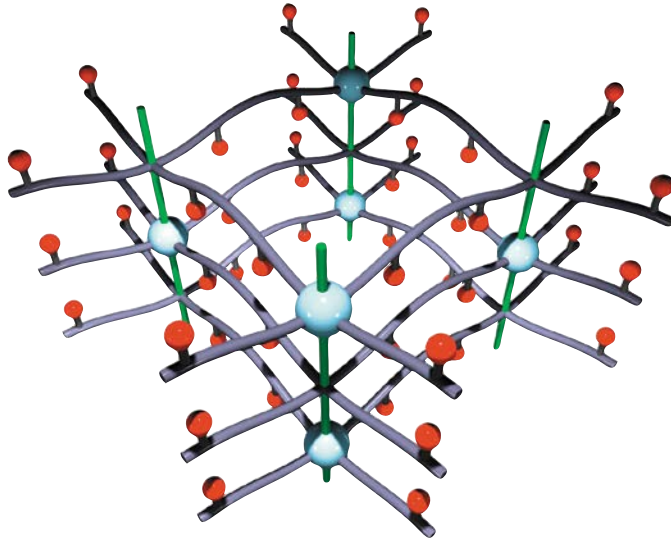
- 9**  **Clean up**
- Clean any excess uncured urethane with BETACLEAN™ U-424 Urethane Adhesive Cleaner
  - Clean the newly installed glass with BETACLEAN™ GC-800 Glass Cleaner
  - Clean up any remaining debris or broken glass on seats, floor, door handles and/or dash console

- 10**  **Recordkeeping**
- Attach master lot code sticker to paperwork or manually record primer and adhesive lot numbers
  - Record D.O.T. number from glass part on sticker
  - Release vehicle to customer after the appropriate drive-away time elapses

\*Advanced formulation BETAPRIME™ 5504G All-in-One Primer no longer requires shaking. However, shaking won't have a negative effect on the performance.







### Exclusive Reinforced Isotropic Network Adhesive (RINA) Technology

BETASEAL™ 0°ne™, BETASEAL™ Express and BETASEAL™ U-400HMNC are advanced-cure, one-component adhesives with enhanced chemical crosslinking to speed bonding for faster minimum drive-away times than conventional-cure adhesives.

Advanced-cure RINA technology reduces dependence on moisture and creates uniform and reinforced properties throughout the bead for high initial green strength, resulting in faster minimum drive-away times.

It provides strength faster than conventional adhesives because the structure of the bead is bolstered by more crosslinking. This reinforced structure absorbs and dissipates crash stresses effectively in a shorter time frame than conventional adhesives, allowing for a faster minimum drive-away time.

BETASEAL™ 0°ne™,  
BETASEAL™ Express and  
BETASEAL™ U-400HMNC  
Adhesives are Part of a Simple,  
Clean-Prime-Bond Glass  
Replacement Solution

#### Clean

Bonding surfaces must be clean of dirt, dust, water, oil, silicone and grease prior to priming and adhesive application. Not all contamination is visible – use BETABRADE™ F1 Surface Contamination Remover every time to help ensure glass is free of surface contamination. Use BETACLEAN™ GC-800 to remove any dust, dirt and other residue.

#### Prime

Use BETAPRIME™ 5504G All-in-One Primer to prime glass, ceramic frit, paint, any nicks and scratches in the paint, large areas of bare metal and encapsulations (RIM, PVC, and PAAS).

If using G-EZKit, prime the glass with BETASEAL™ Clear SA sticks.



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