





Primerless-to-glass adhesives

Gun-n-Go - no heating required

- · One-component, primerless-to-glass adhesives for convenience
- Get 2-hour MDAT with 418HV
- OEM approved and used
- FMVSS crash proven
- High viscosity options for easy application in all conditions



Primerless-to-glass adhesives – proven and easy to use

BETASEAL™ U-418HV and BETASEAL™ U-418 are primerless-to-glass adhesives. Primerless-to-glass adhesives are designed to form the same chemical bonds to clean glass frit as the primer does. Eliminating the glass priming step saves time and can help to error proof installations. See back page for MDAT.

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BETASEAL™ U-418HV – primerless with 2-hour MDAT convenience

- 2-hour MDAT down to 40°F (see back for complete MDAT)
- Saves time by eliminating glass priming
- · High viscosity formulation delivers higher initial (green) strength
- Easy to gun, excellent decking and sag resistance

BETASEAL™ U-418 – primerless convenience

- Excellent utility sealant for backlites, quarter glass and other stationary glass
- Saves time and improves productivity by eliminating glass priming
- See back for MDAT



Maximum shelf life, as stated on product packaging, is achieved when the product is stored between 41°F (5°C) and 77°F (25°C). Temporary storage above 77°F (25°C) is permissible as long as it does not continuously exceed 110°F (43°C).



Use no other manufacturers' primers, cleaners or other chemicals in conjunction with any BETASEAL $^{\mathbb{M}}$ adhesive system.





Windshield installation instructions



Wear appropriate safety equipment

- b) Wear safety equipment, such as work gloves, nitrile chemical-resistant gloves, safety glasses, work apron or other protection required by your company



Inspect replacement glass

- a) 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
- b) Inspect replacement glass for defects, damage or signs
- c) Verify primer and adhesives are within use-by dates



Cut out the glass

- a) Protect the customer's vehicle
- b) Remove all hardware and reveal moldings
- c) Cut out the windshield using your preferred method



Prepare the glass

- a) Many contaminants are difficult to detect and remove
- b) Spray glass with BETACLEAN™ GC-800 Glass and Surface Cleaner
- c) Use a BETACLEAN™ Easy-Go Cleaning Sponge or an abrasive pad to
 - This is a mechanical abrasion step, make sure to use some pressure
- Ensure the entire bonding surface is treated
- d) While the surface is still wet, wine surface with a clean paper towel
- e) Spray glass again with BETACLEAN™ GC-800
- If the glass cleaner de-wets, repeat steps a through d
- If the glass cleaner does not de-wet, proceed to glass priming step



Prime fritted glass (skip this step if using BETASEAL™ U-418 or BETASEAL™ U-418HV)

- a) Open the bottle of BETAPRIME™ 5504G All-in-One Primer carefully and insert a clean, unused dauber; to avoid spilling, never pour liquid
- b) Apply one coat of BETAPRIME™ 5504G with a clean wool dauber in one, even wet coat, moving the dauber in the same direction
- c) 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 6 minutes d) If glass is not installed within 24 hours of original priming, reprime
- the glass with BETAPRIME™ 5504G; do not reprime more than once Note: Clear glass without any frit REQUIRES two coats of 5504G allowing each coat to dry

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.



Prepare encapsulation or PAAS

- a) Clean RIM or PVC encapsulation with BETACLEAN™ GC-800 Glass and Surface Cleaner and a clean, lint-free paper towel
- b) "Wet scrub" the RIM or PVC encapsulation with an abrasive pad and BETACLEAN™ GC-800, then clean again with BETACLEAN™ GC-800 and allow to dry completely
- c) Check the expiration date on the container
- d) Apply BETAPRIME™ 5504G All-in-One Primer to the RIM or PVC encapsulation surface with dauber
- e) Apply BETAPRIME™ 5504G to any molding surface that contacts new urethane to promote adhesion
- f) 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 6 minutes
- g) Replace inner seal and cap on bottle immediately

Note: Refer to the DuPont Fixed Glass Installation Guide for instructions on preparing PAAS



Trim back the urethane

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

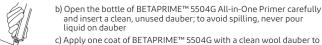


Prepare the pinchweld

Once body surface is clean and dry, follow these priming steps:

a) Check the expiration date on the container

For priming any areas of bare metal (large or small, including scratches):



- and insert a clean, unused dauber; to avoid spilling, never pour
- c) Apply one coat of BETAPRIME™ 5504G with a clean wool dauber to any scratches in the paint or large areas of bare metal
- d) 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 6 minutes.
- e) 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 6 minutes

For priming painted bonding surfaces (no bare metal):

- b) 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
- c) Apply one coat of BETAPRIME™ 5504G All-in-One Primer with a clean wool dauber to the nainted area where original adhesive may have peeled off or to extend the bonding area when applying adhesive to the glass part
- d) 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 6 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.



Apply BETASEAL™ Adhesive (Choose either glass or pinchweld application)

a) 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



- b) 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
- c) Either application: Hold the applicator in a vertical position (90°) and dispense the adhesive with a continuous motion in a uniform "V" shaped bead
- d) Make sure bead is uniform and has no gaps; add material or gently tool joints, if necessary



Install the glass

- a) Carefully place the glass in the body opening
- b) Adjust glass to precise alignment
- c) Lightly press it into position



Clean up

- a) Clean any excess uncured urethane
- b) Clean the newly installed glass with BETACLEAN $^{\!\scriptscriptstyle\mathsf{TM}}$ GC-800 Glass and Surface Cleaner
- Clean up any remaining debris or broken glass on seats, floor, door handles and/or dash console



- a) Attach master lot code sticker to paperwork or manually record primer and adhesive lot numbers b) Record D.O.T. number from glass part on sticker
- c) Communicate to the customer when MDAT will be reached and when the vehicle can be driven

Minimum drive-away times

BETASEAL™ U-418HV

2-hour minimum drive-away times in all temperatures and humidities above 40°F.



BETASEAL™ U-418

Temperature

Relative	40°-50°F	50°-60°F	60°-70°F	70°-80°F	80°-90°F	>90°
					26.6°-32.2°C	> 32.2°
> 70%	15	13	10	7	5	3
50-70%	24	17	13	8	5	4
30-50%	24	24	19	13	8	6
10-30%	24	24	23	23	20	17

FMVSS 212 with Passenger-Side Airbag

Below 40°F (4.4°C), use BETASEAL™ Xpress30 or BETASEAL™ Express+ adhesive and BETAPRIME™ 5504G All-in-One Primer to prime glass.



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