



BETASEAL™ Advanced-Cure Adhesives



- Choose from BETASEAL™ Express APG or BETASEAL™ Xpress30 in cartridges or sausage packs
- BETASEAL™ Express APG and BETASEAL™ Xpress30 are available in G-EZKits with primers, cleaners and accessories included
- Gun-n-Go – easy application, no heating required
- Crash proven to FMVSS 212 and 208
- All formulas are easy to use with superior decking and short cut-off string
- DuPont aftermarket products are tested to the harshest conditions from OEM standards, including long-term environments such as weatherometer and outdoor exposure
- Products are manufactured and tested for automotive application in an IATF 16949:2016 certified facility (IATF Certificate #0301635)

Adhesive	MDAT	Minimum Application Temperature
BETASEAL™ Express APG	60-minute	0°F (-18°C)
BETASEAL™ Xpress30	30-minute	0°F (-18°C)



Introducing the newest step in the Evolution of Express – Express APG

- Express APG is the newest step in the long lineage of BETASEAL™ Express innovation
- Express APG (APG = Advanced Primerless to Glass) is a combination of DuPont's proprietary RPM technology paired with 30 years of primerless-to-glass experience.
- The result – an Express formula with all the benefits of DuPont Advanced cure technology, that simplifies use by eliminating the glass priming step



BETASEAL™ Express APG – Fast Easy – the next evolution

- High modulus, non-conductive (HMNC)
- Primerless-to-glass exterior and inner frit
- Compatible with BETAPRIME™ 5504G All-in-One primer
- Technician friendly - excellent sag or slide resistance and easy-to-tool with short tails
- 60-minute MDAT down to 0°F (-18°C)
- 8-10 minute working time
- Single-component - 600 ml sausage or 310 ml cartridge



BETASEAL™ Xpress30 – 30-minute minimum drive away down to 0°F

- Exclusive RPM adhesive technology
- High modulus, non-conductive (HMNC)
- Excellent pumpability, no heating required and easy-to-tool
- Use with BETAPRIME™ 5504G All-in-One or CLEAR Advanced primers
- Superior decking and short cut-off string
- 8-10 minute working time
- Single component – 600 ml sausage or 310 ml cartridge



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


Every BETASEAL™ G-EZKit contains:


- Choice of adhesives – BETASEAL™ Express APG or BETASEAL™ Xpress30 in cartridges or foil packs
- 18 oz can BETACLEAN™ GC-800 Glass and Surface Cleaner
- 12 BETAPRIME™ CLEAR Advanced SA sticks for Xpress30
- 40 ml (1.4 oz) BETAPRIME™ 5504G All-in-One Primer
- Proof-of-Use stickers and precut nozzles


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).





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

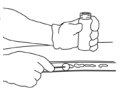
- 3**  **Cut out the glass**
- Protect the customer's vehicle
 - Remove all hardware and reveal moldings
 - Cut out the windshield using your preferred method

- 4**  **Prepare the glass**
- Many contaminants are difficult to detect and remove
 - Spray glass with BETACLEAN™ GC-800 Glass and Surface Cleaner
 - Use Easy-go melamine foam sponge or Scotch-Brite pad to wet scrub the surface
 - This is a mechanical abrasion step, make sure to use some pressure
 - Ensure the entire bonding surface is treated
 - While the surface is still wet, wipe surface with a clean paper towel
 - 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


- 4.1**  **Prime fritted glass (skip this step if using BETASEAL™ ACE or BETASEAL™ Express APG)**
- Point pad of BETAPRIME™ CLEAR Advanced SA 1-Step/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. Do not repeatedly break the glass ampoule or "milk" the stick in an effort to squeeze more primer out
 - Slowly draw the applicator twice around the surface to be primed to get an even glossy primer film (do not wipe off)
 - Wait 2 minutes for the primer to dry before installing the glass in temperatures down to 0°F (-18°C)
 - If glass is not installed within 24 hours of original priming, clean then reprime the glass with BETAPRIME™ CLEAR Advanced primer; do not reprime more than once
 - When priming glass with BETAPRIME™ CLEAR Advanced primer in temperatures from 0°F (-18°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 with BETACLEAN™ GC-800 Glass and Surface Cleaner and a clean, lint-free paper towel
 - "Wet scrub" the encapsulation with an abrasive pad and BETACLEAN™ GC-800 glass cleaner until the gloss is removed from the surface and it appears matte in finish. Clean again with BETACLEAN™ GC-800 to remove any debris on the surface and allow to dry completely.
 - Check the expiration date on the container
 - Apply BETAPRIME™ 5504G All-in-One Primer to the RIM or PVC encapsulation surface with dauber
 - Apply BETAPRIME™ 5504G to 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 6 minutes
 - Replace inner seal and cap on bottle immediately
- Note:** Refer to the DuPont Fixed Glass Installation Guide for instructions on preparing PAAS


- 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 on the pinchweld
 - 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 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
- 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 6 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 6 minutes.
- For priming painted bonding surfaces (Skip this step if using BETASEAL™ ACE applied to clean OEM paint):**

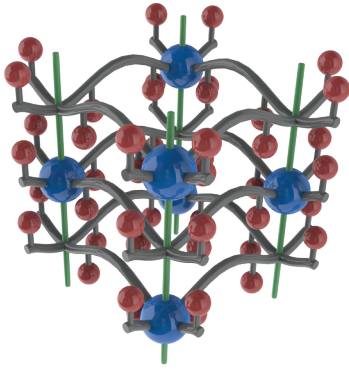
- Open the bottle of BETAPRIME™ 5504G All-in-One Primer carefully and insert a clean, unused dauber; to avoid spilling, never pour liquid on dauber
 - Apply one coat of BETAPRIME™ 5504G All-in-One Primer with a clean wool dauber to the painted area where original adhesive may have peeled off or to extend 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 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.

- 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
 - Clean the newly installed glass with BETACLEAN™ GC-800 Glass and Surface 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
 - Communicate to the customer when MDAT will be reached and when the vehicle can be driven



RPM

APG technology

EXPRESS APG (Advanced Primerless-to-Glass) is the newest innovation in DuPont's proprietary glass bonding technology. DuPont has applied its 30 years of automotive glass bonding experience to simplify the bonding process by eliminating the glass priming step. The result is an Express formula that delivers all the benefits of DuPont's world class bonding process in a fraction of the time.

Advanced-cure urethane adhesives

Advanced-cure urethane adhesives are one-component materials that contain enhanced chemical crosslinking to speed bonding. Advanced-cure adhesives need less moisture to cure and create uniform, reinforced properties throughout the adhesive. The chemical structure is the same in every direction. They absorb and dissipate crash stresses better than conventional-cure adhesives and develop high initial green strength to enable faster drive-away times.

RPM technology

Recently, DuPont developed the next step in advanced-cure adhesive technology, Reinforced Polyisotropic Micronetworked adhesive (RPM). RPM is an evolution of RINA technology. RPM offers the same highly crosslinked adhesive that RINA provides but, by shortening the distance between chemical bonds, the adhesive develops strength even faster, allowing for even further MDAT reduction. RPM technology is used in BETASEAL™ Express APG and BETASEAL™ Xpress30.

BETASEAL™ Express APG and BETASEAL™ Xpress30 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. Use BETACLEAN™ GC-800 Glass and Surface Cleaner and a BETACLEAN™ Easy-Go Cleaning Sponge to abrade the surface and remove any contamination.

Prime

BETASEAL™ Express APG and BETASEAL™ Xpress30 urethanes require the use of BETAPRIME™ 5504G to prime paint, nicks and scratches, bare metal and encapsulations (RIM, PVC, and PAAS).

For glass BETASEAL™ Xpress30 requires glass primer (either BETAPRIME™ 5504G or BETAPRIME™ Clear Advanced)

BETASEAL™ Express APG can be applied primerless to clean glass with frit (exterior or inner layer frit).



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