

BETASEAL* U-216 Urethane Adhesive Installation Instructions



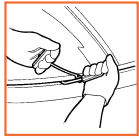
1. Wear appropriate safety equipment

- Protect yourself.
- Wear safety equipment, such as work gloves, laboratory quality chemical-resistant gloves, safety glasses, work apron, or other items required by your company or safety regulations.
- See Section 1 of the *Essex ARG Technical Installation Guide (TIG)* and pages 3-4 of the *Essex ARG Fixed Glass Installation Guide (FGIG)* for additional details.



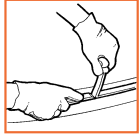
2. Clean and inspect replacement glass

- Use Essex GC-800 Glass & Surface Cleaner and a clean paper towel to clean the bonding surface of the glass.
- Inspect replacement glass for defects.
- Verify all primers and adhesives are within expiration dates.



3. Cut out the glass and trim back the urethane

- Protect the customer's vehicle.
- Remove all hardware and reveal moldings.
- Cut out the windshield or body glass using your preferred method.
- Clean any dirt and debris from around the existing urethane.
- Trim the urethane with an appropriate tool leaving a 1 mm to 2 mm thick base of OE urethane on the pinchweld.
- Take care not to damage the vehicle paint or pinchweld.
- See Section 6 of the TIG and pages 10-11 of the FGIG for additional details.



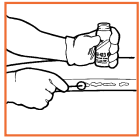
4. Dry fit the glass

- Fit new glass into the opening.
- Determine how to best position the glass.
- Mark this position with "paint safe" tape as guides.
- See Section 6 of the TIG and pages 10-11 of the FGIG for additional details.



5. Apply U-413 Urethane Pinchweld Primer

- Shake bottle for **at least one (1) minute** prior to application.
- Inspect the pinchweld for any bare paint or scratches.
- If found, prime these with Essex U-413 Urethane Pinchweld Primer.
- Carefully open the bottle. Insert a clean unused dauber. To avoid spilling never pour liquid on dauber.
- If using single application stick, activate it according to the directions printed on the inside of the carton lid.
- Apply U-413 to the bare paint or scratches along the bond line. Avoid priming existing urethane bead.
- Replace inner seal and cap on bottle immediately.
- Allow five (5) to ten (10) minutes for primer to dry.
- See Section 6 of the TIG and pages 10-11 of the FGIG for additional details.

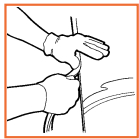


6. Prepare the glass/frit (Choose either the one-step or the two-step procedure.)

One-step Procedure:

Apply BETAPRIME* U-459sa 1-Step Glass/Frit Primer

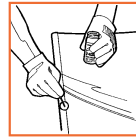
- Shake Essex U-459sa for **at least one (1) minute** before application.
- Activate single application stick according to the directions printed on the inside of the carton lid.
- Apply U-459sa along the bond line.
- Allow at least six minutes for the primer to dry.
- Apply the FlexiTrim™ reveal molding or original molding to the glass if necessary.
- Apply Essex U-555 PVC Primer to any molding or encapsulation bonding surface that contacts new urethane to promote adhesion.
- See Section 7 of the TIG and pages 12-13 of the FGIG for additional details.



Two-step Procedure:

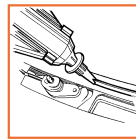
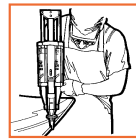
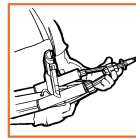
Apply U-401 Urethane Glass/Frit Primer #1

- Use GC-800 and a clean paper towel to clean the inner surface of the glass.
- Shake U-401 for **at least one (1) minute** before application.
- Open U-401 bottle carefully. Insert clean unused dauber. To avoid spilling never pour liquid on dauber.
- Apply U-401 to one length of the perimeter of the glass, such as the top, then immediately wipe with a clean, dry, lint-free paper towel.
- Finish the remaining three lengths, then **repeat** the procedure for a total of two applications to the windshield.
- Replace inner seal and cap on bottle at once.
- See Section 7 of the TIG and pages 12-13 of the FGIG for additional details.



Apply U-402 Urethane Glass/Frit Primer #2

- Shake Essex U-402 for **at least one (1) minute** before application.
- Carefully open bottle. Insert clean unused dauber. To avoid spilling never pour liquid on dauber.
- Apply U-402 directly on top of the U-401 path along the bond line.
- Replace inner seal and cap on bottle immediately.
- Allow at least six minutes for the primer to dry.
- Apply the FlexiTrim™ reveal molding or original molding to the glass if necessary.
- Apply U-555 to any molding or encapsulation bonding surface that contacts new urethane to promote adhesion.
- See Section 7 of the TIG and pages 12-13 of the FGIG for additional details.



7. Apply BETASEAL U-216 Two-component Urethane Adhesive

- Open the BETASEAL* U-216 adhesive kit. Puncture top of A and B cartridges. Remove endcaps. Assemble it as shown.
- Load the U-216 two-component urethane adhesive into the BETAGUN* applicator.
- Make sure plungers are clear of the cartridge rim.
- Hold the applicator in a vertical position and dispense the U-216 adhesive uniform bead with a continuous motion.
- Apply U-216 to the glass on top of the U-402 bond line.
- Keep the applicator at a 90° angle to glass.
- OR apply U-216 to the pinchweld perimeter directly on top of the freshly cut OE urethane film.
- Keep the applicator at a 90° angle to pinchweld.
- Make sure bead is uniform and has no gaps. Add material if necessary.
- See Section 8 of the TIG and pages 18-19 of the FGIG for additional details.



8. Install the glass

- Place the glass in the body opening.
- Use the tape guides to correctly position the glass. Adjust glass to precise alignment.
- Lightly press it into position.
- Backpaddle urethane around edge of glass into gaps.
- Apply U-555 PVC Primer to any molding or encapsulation bonding surface that contacts new urethane to promote adhesion.
- Replace the press-in style molding, if required.
- Replace any additional hardware.
- See Section 8 of the TIG and pages 14-17 of the FGIG for additional details.



9. Clean up

- Clean any excess urethane with Essex U-421 Urethane Adhesive Cleaner.
- Clean the newly installed glass with GC-800
- Complete the job paperwork and record lot numbers.
- Release the car to the customer after the appropriate drive away time has elapsed.
- Drive away is 30 minutes for vehicles without passenger side air bags and 60 minutes with passenger side air bags in temperatures as low as 0°F.
- **See Section 10 of the TIG for installations below 40°F.**

See Essex ARG Technical Installation Guide for complete details.

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