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Shat-R-Proof, SRP, Velocity, Surface Wizard and For Installers, By Installers are registered trademarks of TCG International Inc. © 2004
Shat R Proof Corp. provides this Installation Manual as a means to educate the user in the proper procedures and techniques when using SRP Totalseal adhesives and primers as well as SRP cleaning products.

Failure to follow these instructions, as well as other printed SRP materials, will void all warranties, implied or otherwise stated.
Who We Are

Shat R Proof Corp. is a wholly owned subsidiary of TCG International, Inc. TCGI is the parent company of many of North America's leading businesses that specialize in the sale, distribution and installation of glass and glass products to the automotive aftermarket and flat glass industries.

TCGI was founded as a family-owned business in New Westminster, B.C., Canada under the name A & H Sales in 1946. Today, the company is still owned by the Skidmore family and is headquartered in Burnaby B.C., a suburb of Vancouver.

During the past five decades, we have installed auto replacement glass in all regions of the world and in all weather conditions. We have seen the industry as it has changed from rubber gaskets to polysulfide to butyl tape to polyurethane. This unique arrangement and history ensures our ability to provide you with the highest-quality, shop tested, and installer approved Auto Glass Replacement products possible in the AGR industry.

The name Shat-R-Proof® has been around since the early days of automobiles. Motorists have been looking through Shat-R-Proof windshields since 1922. In 1998, Autostock International, a division of TCGI, launched a line of AGR products under the recognized Shat-R-Proof name with the intent of providing customers with the best value for both Original Equipment (OE) and OE-quality products. Based in Minneapolis, Minnesota, Shat-R-Proof is utilizing the auto glass experience of our sister companies within TCGI, and the adhesive industry knowledge of our European supplier, Le Joint Francais (LJF), to bring industry leading products to North America.

Shat R Proof Corp, as a member of the Autostock International family, has over 50 years experience in the AGR industry with over 2500 corporate, franchise and affiliate units in 42 countries. With the Autostock International team behind it, Shat-R-Proof® can provide you something other companies simply cannot - products designed specifically For Installers, By Installers™.

Our Urethane Adhesive Supplier

Shat R Proof Corp.’s supplier and collaborator in the development of the SRP Totalseal line of Automotive Adhesives is Le Joint Francais. LJF is a division of Total, one of the world’s largest petroleum and petroleum product producers in the world. Based in Bezons, France, LJF has been providing adhesives and sealants to European Original Equipment Manufacturers and the automotive aftermarket since the mid-1960’s. LJF began offering structural polyurethane adhesives for windshields to the OEM market in 1985.
This expertise allows Shat-R-Proof and LJF to bring the highest quality AGR adhesives to the North American markets.

All SRP Totalseal adhesives are produced by LJF at their QS9000 certified, 40 thousand square foot production facility just outside of Paris, France. Continual research and development is conducted at LJF’s R&D facility in Germany.

LJF knows and understands the adhesive industry. TCGI and Shat-R-Proof® are experts in the Auto Glass Replacement market. Through this unique combination of skills and experience, we can guarantee that you will receive the best possible adhesive products at a considerable cost savings. This not only ensures that your glass replacements will be safe, but that your bottom-line will be as strong as the SRP Totalseal adhesives you use.

**Shat R Proof Corp. Contact Information**

The following is a list of contacts within the Marketing and Sales Department of Shat R Proof Corp. Hazardous Materials and Emergency contact information is also provided here, on our website at [www.shatrproof.com](http://www.shatrproof.com), or on our published MSDS and Technical Data Sheets.

**Corporate Headquarters**
Shat R Proof Corp. 800-728-1817
12800 Hwy 13 South
Suite 500
Savage, MN 55378

**Sales**
Sales Manager, Western Canada Tim Eyben 604-539-9471
Sales Manager, Eastern Canada Stewart McLean 416-417-9271
Sales Manager, Western U.S. Don Ford 800-489-8994
Sales Manager, Mid-West US Todd Hanson 952-334-3378
Surface Restoration Products Jeremy Pentz 800-328-0042
International Sales Tania Madera 952-946-0446
Customer Service 800-728-1817

Medical Emergencies 800-420-8036
(24 Hours a day, 7 Days a Week)

**Transportation Spill Emergencies** Chemtrec 800-228-5635 x 334
(24 Hours a day, 7 Days a Week)
Purpose of Urethane

The primary purpose of polyurethane is to serve as the solution to the multiple challenges of installing auto glass, balancing safety standards and customer demands. But structural adhesives also perform additional functions that currently make them the preferred, and only, solution of vehicle manufacturers. Besides safety, polyurethane adhesives also help reduce noise, improve vehicle handling and performance, and provide a waterproof seal around the glass.

In order to meet critical safety standards and meet the design criteria of today’s vehicle designs, manufacturers needed a structural adhesive or fastening system that not only would hold under the extreme conditions of an auto collision. It also needs to remain flexible enough so that the glass would not break under the stress of expansion, contraction and other vehicle movement during normal driving.

Polyurethane became the standard for glass installation because it met these needs. Not only is urethane extremely strong when compared to other bonding materials (see the chart below), it is also flexible enough to prevent windshield breakage as the substrate (the metal pinchweld) expands and contracts with temperature changes or as the vehicle body flexes in turns. Urethane also is extremely durable when protected from UV degradation through the use of appropriate blackout primers and frits on the replacement glass.

<table>
<thead>
<tr>
<th>Adhesive Product</th>
<th>Typical Tensile Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl Tape</td>
<td>12-18psi</td>
</tr>
<tr>
<td>Silicon Sealant</td>
<td>110-125psi</td>
</tr>
<tr>
<td>SRP180HV Urethane</td>
<td>&gt;500psi</td>
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</tbody>
</table>

A second advantage urethanes hold over mechanical and gasket fastenings is that the solid, cured urethane seal acts as a noise suppressant. It not only helps prevent road noise from entering the passenger compartment, it has no mechanical parts that can wear or corrode, becoming loose and creating disturbing rattles or vibrations.

High-Modulus adhesives are now being used in many vehicles to lock the glass more rigidly into the vehicle body to utilize it as a stabilizing tool. Glass flexes less than metal and helps high performance vehicles offer improved handling and cornering by eliminating the “sway” that is commonly felt as the vehicle enters and exits turns.

Finally, urethane adhesives, when the complete adhesive system is used properly, forms a waterproof seal around the perimeter of the glass. Since no mechanical fasteners are used, there are no points where water can enter the passenger compartment or areas where water can leak around moldings.
Primarily because of the safety advantages, but also due to urethane adhesive’s other attributes, urethanes have become the vehicle manufacturer’s structural adhesive of choice and the adhesive of choice for the AGR market. Aftermarket installers must utilize this product in order to ensure that the work they perform meets OEM and Federal Safety Standards. Refer to this manual for guidance and procedures to properly, and safely, replace auto glass using SRP Totalseal auto glass urethane adhesives.

A Look at How Urethane Cures

SINGLE COMPONENT ADHESIVES
In order to understand curing, an installer must understand basic polyurethane chemistry and how environmental conditions affect the curing process.

While many different single component urethane adhesive products exist, they are all similar in that their chemical structure incorporates an Iso-Cynate group. This group is composed of Nitrogen, Carbon and Oxygen. In the curing process, this Iso-Cynate group bonds with one another to form the solid, rubber-like, cured urethane bead.

Single component adhesives are utilized in most auto glass replacements because of their ease of use and relatively inexpensive price. As single component adhesives cure, water from the atmosphere reacts with the Iso-Cynate to cure the polyurethane.

A common misconception in the installation industry is that temperature is the major factor affecting the curing process. The truth is that temperature does affect the reaction rate, but moisture in the air plays a larger role because it is one of the reactants. If moisture (H₂O) is not present, the iso-cyanate groups will not react and cure as fast. This is why urethane does not cure in the package where moisture is not present.

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Relative Humidity (Rh)</th>
<th>Water Content (grams/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>95°F (35°C)</td>
<td>100%</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td>75%</td>
<td>4.50</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>1.50</td>
</tr>
<tr>
<td>75°F (24°C)</td>
<td>100%</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>75%</td>
<td>2.25</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>1.50</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>0.75</td>
</tr>
<tr>
<td>55°F (13°C)</td>
<td>100%</td>
<td>1.50</td>
</tr>
<tr>
<td></td>
<td>75%</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>0.38</td>
</tr>
<tr>
<td>35°F (1.5°C)</td>
<td>100%</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>75%</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>0.19</td>
</tr>
</tbody>
</table>

The chart above illustrates how much moisture the air holds at different temperatures and relative humidity levels.

Note that at 75°F (24°C) and 25% Relative Humidity, the atmosphere holds 0.75 grams of water per cubic meter. When the air is at 35°F (1.5°C) and 25% Relative Humidity, air holds only 0.19 grams of water per cubic meter. However, at 35°F (1.5°C) and 100% Relative Humidity, this jumps back up to 0.75 grams of water.
When comparing the moisture levels on the previous page to the cure times of SRP101EZ adhesive at the same conditions, it can be seen that at 75°F (24°C) and 25% Relative Humidity a dual airbag vehicle will be safe to drive in 4 hours. At 40° (4.5°C) and 25% Relative Humidity, the vehicle will not be safe to drive until 15 hours have passed. However, at 40°F (4.5°F) and 80% Relative Humidity, the vehicle will be safe to move in 9 hours. Installers must realize that relative humidity changes will significantly change the cure rate and safe drive away times, even when the temperature remains constant!

The urethane curing process is also affected to a somewhat lesser degree by the temperature of the air. Curing is an endothermic reaction. This means that energy is absorbed during the reaction process. As air temperature is reduced, less energy is available for use in the curing process.

**Job of The Installer**

The most important factor in any installation is the human factor. It is important that the technician understands the products, the safety standards, what the customer needs, and what the customer’s expectations are. Failure to understand any of these concepts will cost your business, not only in lost customers, but also in potential litigation.

**Safety First!**

Never overlook the fact that replacing a vehicle’s windshield is a major factor in the safety and welfare of your customer. Cutting corners, using the wrong products, using expired products, and not following published safety guidelines can end up costing you and your company money. Please make sure you follow every step outlined in this manual in regards to how the SRP Totalseal adhesive system should be used.

SRP provides you with the products and the knowledge to do the job right every time. Failure to follow these guidelines can put your customers safety at risk.
**Managing Your SRP Products**

Often times it is hard to keep track of your inventory due to busy technicians, mobile jobs, and orders showing up at all times of the day.

It is very important to keep your SRP Totalseal urethanes and primers in a central, conditioned, location. This will allow you to adequately rotate your stock, and ensure that your products will not expire before you have a chance to use them. During the cold of winter, or the heat of summer, it is important to keep your product at room temperature of 60°F to 80°F (16°C to 27°C). If your product gets too cold or too hot, you may run into issues of shelf life and complicate the dispensing of the product.

It is also important to keep the product out of harms way to avoid damage to packaging of the product.

**Follow All Safety Instructions Provide by the Manufacturer**

The first step in any safe job is to understand the manufacturers instructions and warnings before the job is started. Consult the Material Safety Data Sheets (MSDS) and use common sense. Copies of the SRP MSDS can be obtained from your distributor, by calling 800-728-1817, or at www.shatproof.com.

**Vehicle Walk Through with Customer**

If possible, explain to the customer what you are going to do to his/her vehicle prior to starting the job. Point out the damage to the glass, make note of any dents, scratches, or pre-existing conditions of the vehicle. This simple step will protect you against damage claims from your customer.

**Follow Published Drive Away Times**

It is your obligation to ensure that any vehicle whose windshield you have replaced meets Federal Motor Vehicle Safety Standards (FMVSS) before the customers drives the car away.

After a windshield has been set, the urethane must bond to the glass and pinchweld, and be allowed time to cure. To ensure the vehicle is safe to drive, refer to the SRP Drive Away Charts and make sure the vehicle is not driven until the appropriate safe drive away time has been reached.

In the event of an accident, recent lawsuits have found the installer liable even when the vehicle owner was warned, signed a release, and the owner disobeyed installer recommendations. In case of doubt, do not allow the vehicle back into service until you are positive the vehicle is safe to drive.
**Inspect the Glass**

Any number of things can and will happen to a windshield from the time it leaves the factory until it reaches your shop. Scratches, blemishes, and nicks can happen just from handling the glass. Before you prep and prime the replacement glass, clean it off and thoroughly inspect it for things that your customer would object to. Dry fitting the glass to the vehicle is also a simple step that can eliminate fit problems that you usually would not notice until the glass was set onto the car, and by then it is too late. If small nicks or blemishes are found, it maybe possible to polish them out with the SRP Surface Wizard™ which can help restore the sheen to glass surfaces as well as plastics and acrylics. See Appendix C for more information.

**Protect the Vehicle**

Paying close attention to detail will help in the prevention of damage to the customer’s vehicle. Using fender and hood protectors, covering the customer’s upholstery, taping areas where the cut-out knife or power tool could scratch the paint are all simple ideas that will save you and your company thousands of dollars each year in damage claims. Performing these preventative steps will also show your customer that you take pride in your work.

**Stay Informed**

On a regular basis, Shat R Proof Corp. publishes a variety of items aimed at keeping SRP customers up to date on the newest products, trends, and SRP news. These items are provided at no cost and can be accessed through E-mail, www.shatrproof.com, through our 800#, or by contacting the distributor of your SRP products.

**SRP Bond Line Journal**

The SRP “BLJ” is a quarterly publication that updates readers on the latest information on SRP products, tech tips, trends, news, and general information designed on educating the reader. Back issues of the BLJ can be found on the website.

**Shatrproof.com**

A one-stop shop for all things Shat-R-Proof. Find the SRP Totalseal site, the Shat-R-Proof Auto Glass site, and links to other Shat R Proof Corp. businesses such as SRP Glass Restoration, SRP Paint Restoration Systems, and Novus® Plastic Polish.

**SRP Totalseal Installer Certification Program**

This program recognizes auto glass installers who have completed the SRP Field Training Program and are familiar with SRP products.
SRP Totalseal Prep & Primer Guide
Inspecting and Cleaning the Glass
Most Replacement Auto Glass is cleaned and inspected by the distributor before the glass is loaded and delivered to a glass shop. This is done to provide retailers with clean product, and to allow the distributor to inspect the windshield or tempered part thoroughly for scratches, stains, or distortion that would make this glass unacceptable to both the retailer and the final customer.

Once the glass is delivered, however, it may often sit in a drop box, a retailer’s warehouse or shop, or in the back of a mobile van for some time before it is actually installed in a vehicle. During this time, contaminants such as dust, water, chemicals, and oily fingerprints may collect on the glass. To ensure a safe installation, SRP recommends that installers first clean the replacement glass thoroughly using SRP Foaming Glass Cleaner. With the addition of primerless to glass urethanes on the market, it is even more important to make sure the glass is completely clean before using any adhesive product.

Steps
1. Place the replacement glass, exterior side down, on a windshield cradle.
2. Thoroughly apply SRP Foaming Glass Cleaner to the bond line of the glass and then onto the center of the glass. This will move any loose contaminants into the center of the glass and away from the bond line.
3. Using a clean, lint-free, disposable cloth or towel, wipe the SRP Foaming Glass Cleaner around the bond line first, working your way to the center of the windshield. Do this to ensure no contaminants are left along the bond line.
4. If contaminants are still on the glass, the use of a Scotch-Brite type pad is recommended.
5. If contamination is still present, repeat step 1-4 until glass is completely clean.

Never use glass cleaner with anti-static properties or those that contain silicates.

A Word on Dry Fitting the Glass
Dry fitting (or dry setting) the glass is always a good idea once the original windshield is cut out to check for any fit problems that may arise. Make sure to dry fit the windshield before you prep and prime the glass. Also, after the dry fit, clean the glass following the steps written above.

The glass can become contaminated during the dry fit process. Make sure to inspect and thoroughly clean the glass before apply SRP Preps or Primers.
The Two Methods for Preparing Glass

Two methods exist for prepping and priming glass using SRP Totalseal urethanes. The first is a 2-step method that ensures complete bonding between the glass and the urethane, even when the glass is not perfectly clean. The second is a 1-step primer that promotes complete bonding to completely clean glass where contamination has been removed by thorough cleaning. The 1-step method does not offer the additional protection of a “Black Out” primer that is part of the 2-step method.

2-Step Glass Prep and Prime Method - SRP7016 and SRP5028

After thoroughly cleaning the glass, the SRP7016 Glass Prep is required to prepare and etch the glass and frit surface before application of SRP5028 Glass Primer.

Steps for SRP7016 Glass Prep Application

1. Inspect the expiration date, located on the bottom of the SRP7016 Glass Prep bottle to ensure that the product is fresh. Note the expiration date and lot number of the SRP7016 on your Installation Record.
2. Once the SRP7016 is opened, write the date of the opening on the label. All SRP primers have an open life of 7 days. Dispose of any unused product once the 7-day open-life has expired.
3. Shake the SRP7016 Glass Prep bottle for 1 minute prior to use to ensure a proper mix.
4. Remove the cap using a twisting motion and place the cap on a clean surface.
5. Using a clean, uncontaminated dauber or a clean, lint-free disposable cloth, apply SRP7016 Glass Prep in a continuous motion to the bond line of the replacement glass surface. Start in the lowest part of the windshield or tempered part to prevent excess SRP7016 from running onto and etching the non-bonding areas of the glass.
6. Using a clean, lint-free, cloth or disposable towel, immediately wipe the treated surface in a scrubbing motion to remove any excess SRP7016 from the glass. Continually turn the cloth to prevent the transfer of dirt and oils around the glass.
7. Tightly close the SRP7016 bottle with the original cap as soon as possible after use to minimize solvent flash and/or potential contamination.
8. Allow the SRP7016 to dry for 3 minutes before applying SRP5028 Glass Primer to the bonding surface.
9. Glass prepped with SRP7016 will remain active for up to 4 hours. If SRP5028 Glass Primer is not applied within this time period, reapply SRP7016 to the replacement glass using the procedure outlined above before applying SRP5028 Glass Primer.

Never use any adhesive or primer product after the expiration printed on the bottle or tube. The use of expired product can result in product failure and may cause injury or death to vehicle occupants in the event of an accident.
Tech Tips:

- SRP7016 Glass Prep has an unopened shelf life of 12 months.
- SRP7016 Glass Prep has an open life of 7 days when immediately closed after use.
- Properly dispose of any expired primer and adhesive products.
- SRP does not recommend applying SRP7016 until immediately before replacement glass installation in order to prevent contamination of the bond line, and to ensure that no prepping or priming steps are missed during the installation process. In cold weather situations where the glass must be prepped ahead of time, be sure to keep the glass contaminant free.
- Never “Re-Load” daubers or cloths by dipping them into fresh prep or primer products a second time nor “Re-Use” cloths or shop towels that have been washed as chemicals may remain on the fabric that can contaminate the entire bottle of prep or primer product.

The use of contaminated product may result in adhesive failure of the urethane adhesive system in the event of an accident.

Steps for SRP5028 Glass Prep Application
The SRP5028 Glass Primer is a “black out” primer designed to promote adhesion between the urethane and the glass. Additionally, the “black out” properties within the SRP5028 serve as a barrier to protect the installed urethane adhesive from long-term breakdown caused by the sun’s harmful UV rays on glass without a frit. The bond line of the replacement glass must be prepared with SRP7016 Glass Prep prior to SRP5028 application.

1. Inspect the expiration date on the SRP5028 Glass Primer bottle to ensure that the product is fresh. Note the expiration date and lot number of the SRP5028 on the Installation Record.

Never use any adhesive or primer product after the expiration printed on the bottle or tube. The use of expired product can result in failure of the urethane adhesive system in the event of an accident.

2. Inspect the SRP5028 bottle to ensure that the open life limit has not passed. All SRP primers have an open life of 7 days. If the bottle has not been opened, using a permanent marker, write the opening date on the bottle. Properly dispose of any unused product once the 7 day open-life has expired.

3. Shake the SRP5028 Glass Primer bottle for 1 minute prior to use to ensure a proper mixture.

4. Securely hold the bottle on a hard, flat surface. Remove the cap using a twisting motion and place it on a clean surface.
5. Apply the SRP5028 Glass Primer with a clean, uncontaminated dauber to the glass surface previously cleaned and prepared with SRP7016 Glass Prep. Start in the lowest part of the windshield or tempered part to prevent excess SRP5028 from running onto and staining the non-bonding areas of the glass. Apply SRP5028 using a smooth motion in a single pass. Do not overlap passes as this can cause air bubbles that can be trapped in the primer line.

6. Tightly close the SRP5028 bottle with the original cap as soon as possible after use to minimize solvent flash and/or potential contamination.

7. Allow the SRP5028 Glass Primer to “flash off,” or completely dry, normally 5-10 minutes depending on environmental conditions. In cold applications, allow as much as 25 minutes for the primer to flash off before applying SRP Totalseal adhesive products to the glass.

8. The primed glass will remain active for 3 hours after the SRP5028 application. If fresh adhesive is not applied to the primed glass within 3 hours, re-activate the primer line by applying SRP7016 Glass Prep according to the procedures outlined in the section of this manual titled “Steps for SRP7016 Glass Prep Application” and reapply SRP5028.

Tech Tips:

- SRP5028 Glass Primer has an unopened shelf life of 9 months.
- SRP5028 Glass Primer has an open life of 7 days when immediately closed after use.
- Properly dispose of any expired primer and adhesive products.
- Apply SRP5028 in a continuous motion around the bond line. Slowly turn the dauber to ensure complete coverage of the bond line of the glass.
- SRP does not recommend applying SRP5028 until immediately before replacement glass installation in order to prevent contamination of the bond line, and to ensure that no prepping or priming steps are missed during the installation process. In cold weather situations where the glass must be prepped ahead of time, be sure to keep the glass contaminant free.
- Never “Re-Load” daubers or cloths by dipping them into fresh prep or primer products a second time nor “Re-Use” cloths or shop towels that have been washed as chemicals may remain on the fabric that can contaminate the entire bottle of prep or primer product.

The use of contaminated product may result in adhesive failure of the urethane adhesive system in the event of an accident.
1-Step Glass Prep and Prime Method – SRP7000
The SRP7000 One Step for Glass is a popular choice for installers on the go. When using the 1-step method, it is imperative to make sure the windshield is completely clean. If the windshield has contaminated after it is cleaned, clean it again. If contaminants are still present then the use of SRP7016 and SRP5028 is recommended.

The SRP7000 can be used with all SRP Totalseal adhesives. It is only optional with the SRP101EZ Primerless to Glass adhesive.

Steps for SRP7000 One Step for Glass Application
1. Thoroughly clean glass until all oil, grease and other contaminants have been removed. If needed, use a light abrasive pad, such as a Scotch-Brite pad, to clean off contaminated areas.
2. If contaminants cannot be removed it is suggested to use different glass. It is also recommended to use the 2-Step Glass Prep and Prime Method to ensure a proper bond.
3. Inspect the expiration date, located on the bottom of the SRP7000 to ensure that the product is fresh. Note the expiration dates and lot numbers on your Installation Record.
4. Once the SRP7000 is open, write the date of the opening on the label. All SRP primers have an open life of 7 days. Dispose of any unused product once the 7-day open-life has expired.

Never use any adhesive or primer product after the expiration printed on the bottle or tube. The use of expired product can result in product failure and may cause injury or death to vehicle occupants in the event of an accident.

5. Shake the SRP7000 bottle for 1-minute prior to use to ensure a proper mix.
6. Using a clean, uncontaminated dauber or a clean, lint-free disposable cloth, apply SRP7000 in a continuous motion to the bond line of the replacement glass surface. Start in the lowest part of the windshield or tempered part to prevent excess SRP7000 from running onto and staining the non-bonding areas of the glass.
7. Using a clean, lint-free, cloth or disposable towel, immediately wipe the treated surface in a scrubbing motion to remove any excess SRP7000 from the glass.
8. Allow the SRP7000 to flash off for at least 3-minutes before the application of urethane.
Inspecting, Cleaning, and Priming the Pinchweld

The installer must make an assessment of the pinchweld's condition once they have cut out the existing glass. The condition of the pinchweld, along with the condition of the existing urethane, must be inspected for signs of rust, corrosion, and anything else that will impact the fit and function of the replacement glass.

Full Cut Method
SRP recommends a full cut method of the existing urethane bead down to the height of approximately 0.05" to 0.08" (1mm to 2mm). Make sure the residual bead of urethane is structurally sound and the pinchweld is in good condition.

SRP only recommends the full cut method because:
1. Short cutting will void all SRP Drive Away Times.
2. Too little space is left between the old bead and the windshield for the new bead to set up and cure properly.
3. Short cutting can lead to adhesive failure in the event of a collision.
4. The windshield replacement will not be restored to OEM condition.

Inspection for Rust and Corrosion
When inspecting the pinchweld during urethane trimming, installers will often notice signs of rust and rust damage. This is particularly true in older vehicles where normal body rust has expanded under the glass, or in vehicles where the auto glass has been previously replaced.

Rust can seriously compromise the integrity of glass replacements if not repaired properly. It will do this by compromising the bond between the urethane and the pinchweld and by weakening the metal itself. Rust must be properly removed whenever it is found to ensure the future safety of vehicle occupants.

When rusted areas are small (less than 1" by 1"), repair these rust spots using the procedure outlined below. When rust is extensive, SRP only recommends consulting the OEM or referring the vehicle to a body shop for complete repair or reconstruction of the pinchweld.

Steps for Small Rust Spots
1. Remove the original adhesive bead down to the bare metal in rusted areas and for 3" to either side of the damage. Do this prior to trimming back the remainder of the existing adhesive bead. The existing bead will protect the bonding surface from dust created in the repair process.
2. Use a Wire Brush, Rotary Wire Brush, or similar tool to remove all rust from the damaged area.
3. Use a brush to remove any remaining dust or rust debris from the repaired area.

4. Apply an OEM approved base metal primer, and prepare the bare metal surfaces as described in the section of this manual entitled “Priming Procedures for Bare Steel” or “Priming Procedure for Bare Aluminum.”

Trim back the remainder of the adhesive bead as describes in the section entitled “SRP5025 Priming Procedure for Pinchweld.”

**SRP5025 Priming Procedure For Pinchweld**

SRP5025 Paint Primer offers a one-step solution to all of your pinchweld priming needs. The SRP5025 Paint Primer saves you money by eliminating the need for separate primers for exposed metal, encapsulated parts, painted surfaces, and moldings. SRP5025 alsoreactivates PAAS and trimmed urethane.

SRP5025 Paint Primer is compatible with all urethane, paint, metal and PVC surfaces used in the production of today’s vehicles. While SRP5025 contains no rust inhibitors, it helps to seal and protect metal surfaces, preventing moisture contact that leads to future rust development.

**Steps**

1. Inspect the expiration date, located on the bottom of the SRP5025 to ensure that the product is fresh. Note the expiration dates and lot numbers on your Installation Record.

   Never use any adhesive or primer product after the expiration printed on the bottle or tube. The use of expired product can result in failure of the urethane adhesive system in the event of an accident.

2. Once the SRP5025 is open, write the date of the opening on the label. All SRP primers have an open life of 7 days. Dispose of any unused product once the 7-day open-life has expired.

3. Shake the SRP5025 Paint Primer bottle for 1 minute prior to use to ensure a proper mixture.

4. Remove the cap using a twisting motion and place the cap on a clean surface.

5. Using a clean, uncontaminated dauber, apply the SRP5025 Paint Primer to exposed metal, bright scratches and painted pinchweld surfaces, and to cut-back urethane that has been exposed for more than 30 minutes.

6. Tightly close the SRP5025 bottle with the original cap as soon as possible after use to minimize solvent flash and/or potential contamination.
7. Allow SRP5025 Paint Primer to “flash off”, or completely dry, normally 5-10 minutes depending on environmental conditions, before extruding fresh urethane onto the surface or installing the replacement. In colder applications, the flash off time may be as long as 25 minutes.

8. Freshly cut-back urethane will remain active for 30 minutes. Surfaces primed with SRP5025 will remain active for 60 minutes after the primer has flashed off. If fresh adhesive has not been applied or the replacement glass installed to the pinchweld surfaces within these time limits, re-prime the inactive surfaces with SRP5025 according to the steps previously outlined.

Tech Tips

- SRP5025 Paint Primer has an unopened shelf life of 9 months.
- SRP5025 Paint Primer has an open life of 7 days when immediately closed after use.
- Properly dispose of any expired primer and adhesive products.
- If you find rust or corrosion on the pinchweld, immediately stop priming and consult OEM recommendations for removal and restoration of the pinchweld.
- For urethane that has been exposed to air for over 30 minutes, use a dauber to refresh the cut back urethane with SRP5025.
- SRP does not recommend applying SRP5025 until immediately before replacement glass installation in order to prevent contamination of the bond line and to ensure that all surfaces remain active for bonding to the fresh adhesive.
- Never “Re-Load” daubers or cloths by dipping them into fresh prep or primer products a second time nor “Re-Use” cloths or shop towels that have been washed as chemicals may remain on the fabric that can contaminate the entire bottle of prep or primer product.

The use of contaminated product may result in adhesive failure of the urethane adhesive system in the event of an accident.

**Priming Procedures for PAAS Parts**

Some OEM automotive manufacturers are now using Pre-Applied Adhesive System (PAAS) on their replacement auto glass. These systems are being utilized to ensure that the new adhesive bead is applied in the correct position on the glass and to make contact with the existing bead on the pinchweld.

In order to complete a safe installation, a different set of procedures must be followed to prepare the PAAS surface for adhesive application. SRP5025 Paint Primer is used to re-activate the pre-applied adhesive bead.
Steps
1. Some glass manufacturers use a special wax or a mold release for protection of the PAAS bead during the production process. Use a clean abrasive pad, such as a Scotch-Bite Pad, to abrade the PAAS bead surface, and remove any wax or agents that may be on the surface.
2. Inspect the expiration date on SRP5025 Paint Primer bottle to ensure that the product is fresh. Note the expiration date and lot number of the SRP5025 on the Installation Record. All SRP primers have an open life of 7 days. If the bottle has not been opened, use a permanent marker to write the opening date on the bottle. Dispose of any unused product once the 7-day open-life has expired.

Never use any adhesive or primer product after the expiration printed on the bottle or tube. The use of expired product can result in failure of the urethane adhesive system in the event of an accident.

3. Shake the SRP5025 Paint Primer bottle for 1 minute prior to use to ensure a proper mix.
4. Remove the cap using a twisting motion and place it on a clean surface.
5. Using a clean, uncontaminated dauber, apply the SRP5025 Paint Primer to the entire PAAS bead in order to re-active the pre-applied urethane.
6. Tightly close the SRP5025 bottle with the original cap as soon as possible after use to minimize solvent flash and/or potential contamination
7. Allow SRP5025 Paint Primer to dry completely, normally 5-10 minutes depending on environmental conditions, before extruding fresh urethane into the channel on the PAAS urethane bead. The PAAS urethane bead will remain active for 60 minutes after SRP5025 application.

Tech Tips
- SRP5025 Paint Primer has an unopened shelf life of 9 months.
- SRP5025 Paint Primer has an open life of 7 days when immediately closed after use.
- SRP does not recommend applying SRP5025 until immediately before replacement glass installation in order to prevent contamination of the bond line and to ensure that all surfaces remain active for bonding to the fresh adhesive.
- Never “Re-Load” daubers or cloths by dipping them into fresh prep or primer products a second time nor “Re-Use” cloths or shop towels that have been washed as chemicals may remain on the fabric that can contaminate the entire bottle of prep or primer product.

The use of contaminated product may result in adhesive failure of the urethane adhesive system in the event of an accident.
Priming Procedures for Fiberglass Surfaces
Fiberglass is becoming more common for glass shops that replace glass on RV’s, trucks, and tractor-trailers. Manufacturers are increasingly using this material because of its ability to be molded in almost any shape and it’s light weight.

While most windshields are still set into metal pinchwelds, quite often side and back tempered parts utilize fiberglass. To ensure that SRP Totalseal adhesives properly bond to these surfaces and to complete a proper replacement, follow these special procedures.

Steps
1. Inspect the fiberglass surface to be sure that no corrosion or UV degradation has occurred. This damage will appear as fading or discoloration in the fiberglass surface. If fading appears, using light sandpaper (1200 grit or higher), lightly wet sand the fiberglass surface until all discoloration is removed.
2. Prime the bond line on the fiberglass with SRP5028 Glass Primer. Follow the priming procedures as described in the section of the manual titled “Priming Procedures For Auto Glass.”

Tech Tips
- Always wear a proper protective mask, gloves, and other recommended safety equipment when sanding fiberglass surfaces and follow manufacturers recommendation.
- Review and understand all directions and notes in the sections entitled “Priming Procedures For Auto Glass” before priming fiberglass surfaces and any other safety procedure that may be recommended by the manufacturer.

Priming Procedures for Unpainted Metal Surfaces
Occasionally, retail glass shops are asked to complete glass replacements on vehicles where part or all of the steel pinchweld has been replaced or stripped to the bare metal due to collision repairs or rust restoration.

While SRP5025 Paint Primer is sufficient for use as a bare metal primer in small areas (defined as less than 1 inch by 1 inch), additional steps must be taken on larger surfaces to ensure sufficient bond strength develops between the metal and adhesive to retain the fixed glass in the event of an accident.
Steps
1. Apply an OEM approved base metal primer to the exposed bare metal. Follow all primer manufacturers’ application and safety guidelines when using base metal primer products. Allow the base metal primer to cure completely before continuing with the auto glass replacement per the manufacturer’s recommendations. Note the product used, lot number, and expiration date on the Installation Record.

2. Prime the pinchweld using SRP5025 Paint Primer according to the procedures outlined in the Section of this Manual Entitled “Priming Procedures for Pinchweld Surfaces.”

Tech Tips
• Only use OEM approved base metal primer products.
• Always use all protective equipment recommend by the base metal primer manufacturer.
• SRP5025 Paint Primer has an unopened shelf life of 9 months.
• SRP5025 Paint Primer has an open life of 7 days.
• Properly dispose of any expired primer and adhesive products.
• SRP does not recommend applying SRP5025 until immediately before replacement glass installation in order to prevent contamination of the bond line and to ensure that all surfaces remain active for bonding to the fresh adhesive.
• Never “Re-Load” daubers or cloths by dipping them into fresh prep or primer products a second time nor “Re-Use” cloths or shop towels that have been washed as chemicals may remain on the fabric that can contaminate the entire bottle of prep or primer product.

The use of contaminated product may result in adhesive failure of the urethane adhesive system in the event of an accident.

Priming Procedures for Bare Aluminum
Many foreign OEM manufacturers have begun to use increasing amounts of aluminum in the bodies of their vehicles. This is being done as a part of continuing efforts to reduce overall vehicle weight.

Aluminum pinchwelds offer challenges to installers, as they require the use of SRP185HV, a Non-Conductive adhesive, in order to prevent galvanic corrosion and ensure a safe installation.

Steps
1. If the aluminum pinchweld is bare due to collision repair or corrosion restoration, apply an OEM approved base metal primer to the exposed bare aluminum. Follow all primer manufacturers’ application and safety guidelines when using base primer products. Allow the base primer to cure completely before continuing with the auto glass replacement. Note the product used, lot number, and expiration date on the Installation Record.
2. Prime the pinchweld using SRP5025 Paint Primer according to the procedures outlined in the Section of this Manual Entitled “Priming Procedures for Pinchweld Surfaces.”

Tech Tips

- Only use OEM approved base metal primer products.
- Always use all protective equipment recommend by the base metal primer manufacturer.
- SRP5025 Paint Primer has an unopened shelf life of 9 months.
- SRP5025 Paint Primer has an open life of 7 days.
- Properly dispose of any expired primer and adhesive products.
- SRP does not recommend applying SRP5025 until immediately before replacement glass installation in order to prevent contamination of the bond line and to ensure that all surfaces remain active for bonding to the fresh adhesive.
- Never “Re-Load” daubers or cloths by dipping them into fresh prep or primer products a second time nor “Re-Use” cloths or shop towels that have been washed as chemicals may remain on the fabric that can contaminate the entire bottle of prep or primer product.

The use of contaminated product may result in adhesive failure of the urethane adhesive system in the event of an accident.

Pinchweld Priming after Vehicle has been repainted
Some installers do business with collision repair shops. Sometimes, they must install a new windshield on a vehicle that has been recently painted. This should not be a cause for concern as long as the following scenarios are identified, and the proper steps followed.

Scenario 1: The entire bead of urethane was left on the pinchweld and the existing urethane bead was painted over.
1. Once the paint has fully cured, perform the full cut method on the existing urethane bead. Leave 0.05” to 0.08” (about 1mm to 2mm) of urethane on the pinchweld.
2. Follow regular priming method of the SRP5025 paint primer.

Scenario 2: The existing urethane bead was completely removed. The pinchweld area was repaired and primer coat painted on.
1. Make sure the primer coat has fully cured.
2. Lightly abrade the primer coat on the bond area of the pinchweld with an abrasive cloth such as a Scotch-Brite green pad and clean off area.
3. Follow regular priming method of the SRP5025 paint primer.
Scenario 3: The existing urethane bead was completely removed. The pinchweld area was repaired and fully color painted.

1. Make sure the all paint has fully cured.
2. Remove top coat, basecoat, and clear coat (if used) to expose the primer coat.
3. If step #2 exposes bare metal, then the body shop must reapply the primer coat to those areas.
4. Lightly abrade the primer coat on the bond area of the pinchweld with an abrasive cloth such as a Scotch-Brite® green pad and clean off area.
5. Follow regular priming method of the SRP5025 paint primer.

Auto Glass Support Installation

Several products are used by OEM manufacturers to help support the windshield or tempered parts and provide the best possible finished interior to their customers. The mechanisms include Foam Dams, Foam Core Butyl, and Windshield Blocks.

SRP recommends priming the pinchweld surface and then installing these items. This ensures that any cuts or scratched in the paint surface are primed and sealed before being covered by the support devices. Install these devices as the OEM recommends.

General procedures:

1. **Windshield Blocks:** Place the blocks in the designated position on the pinchweld. Do not skip the installation of these blocks. They are part of the energy management system that directs the force of a collision away from the passenger compartment and are necessary to perform a safe installation.

2. **Foam Dam Tape:** Peel the adhesive backing from a small section of the Foam Dam. Apply the Foam Dam to the inner edge of the pinchweld. Be careful not to make contact with, or place the Foam Dam over any part of the trimmed urethane bead.

3. **Foam Core Butyl:** Many Ford, Lincoln, and Mercury vehicles use Foam Core Butyl in the installation of their tempered parts. Install the Foam Core Butyl in the same manner as a Foam Dam is installed. Be careful not to make contact with the trimmed urethane bead.
SRP Totalseal Urethane Guide
An intact windshield is a safe windshield. That’s why all SRP Totalseal adhesives undergo extensive testing and a series of crash tests per Federal Motor Vehicle Safety Standards (FMVSS). So why risk using anything else? Count on SRP, every time. We put safety first.

The SRP Totalseal line of products are designed to meet the exacting needs of you and your customers. No matter what the need, SRP Totalseal has the right urethane for the job.

**SRP101EZ Primerless to Glass Urethane**
Take a lot of the work out of applying urethane adhesives. The SRP101EZ is a primerless product designed to speed up installation times without cutting corners or using questionable practices.
- Achieves dual airbag drive away times in as little as 3 hours at 72°F and 50% RH for dual airbag vehicles.
- High viscosity formula.
- LYNX Services™ approved.

**SRP160HT Pre-Heated Urethane**
When Fast drive away times are required, the SRP160HT single-component adhesive offers drive away times of as little as 1 hour at 15°F for dual airbag vehicles.
- Applied preheated, this OEM adhesive will meet your fast curing needs.
- Ultra High viscosity formula.
- High Modulus adhesive
- LYNX Services™ approved.

**SRP180HV High Viscosity Urethane**
This High Viscosity Urethane Adhesive features the dependability that only an OEM adhesive can provide.
- Achieves dual airbag drive away times in as little as 2 hours at 20°F for dual airbag vehicles.
- Meets or exceeds all FMVSS safety standards.
- High viscosity formula.
- LYNX Services™ approved.
SRP185HV High Modulus, Non-Conductive Urethane

High Modulus, Non-Conductive Urethane Adhesives are designed to meet the increased adhesive needs of today’s sports and luxury vehicles.

- Necessary for vehicles that have electronics embedded in the windshield and those that have aluminum body frames.
- SRP185HV meets or exceeds the High Modulus and Non-Conductive specifications of luxury automakers worldwide as well as all FMVSS standards.
- Drive away times in as little as 2 hours with dual airbags.
- LYNX Services™ approved.

Why is the SRP185HV Special?
The SRP185HV High Modulus, Non-Conductive urethane must be used on vehicles with electronics in the windshield (such as radio antennas, GPS systems, and cell phone antennas).

- Manufacturers such as Audi, Jaguar, Porsche, Mercedes, VW, Saab and Volvo all require High Modulus urethane on vehicles produced after 1994.
- These same manufacturers, plus BMW, require a Non-Conductive urethane on most models.
- If a vehicle has electronics in the windshield and/or an aluminum body frame, a Non-Conductive urethane will prevent damage due to galvanic corrosion.
- The SRP185HV provides both a High Modulus and a Non-Conductive urethane in one tube.

New for 2005!

SRP Velocity™ High Viscosity Urethane

This High Viscosity All-Weather Urethane Adhesive features excellent safe drive away times in all weather conditions.

- Achieves dual airbag drive away times in as little as 1 hour at 0°F (-17°C) for dual airbag vehicles.
- Meets or exceeds all FMVSS safety standards.
- High viscosity formula.
- LYNX Services™ approved.
Choosing the Right SRP Totalseal Product

Which SRP Totalseal Urethane should you use? That can depend on a lot of factors, and you need to know and understand these factors.

1. **Determine the Vehicles Needs:** The first priority in the adhesive selection process is to determine the needs of the vehicle. Does it need a high modulus and/or a non-conductive adhesive.

2. **Determine the Customer’s Needs:** If it is known when the vehicle will be driven, use this time to determine the slowest adhesive that can safely be used. If the installer does not know, or even questions when a customer will need to drive the vehicle, they should assume that it will be moved immediately and use the appropriate fastest curing adhesive, usually SRP160HT, or SRP Velocity. This is particularly important for mobile installations where the installer may be liable if a driver or passenger is injured in an accident even when the vehicle owner acknowledges the safe drive-away time and signs a release.

   When in doubt, use the SRP160HT or SRP Velocity, which will give you the piece of mind that you have used the fastest curing product you could.

3. **Determine the Temperature and Relative Humidity:** The cure rate of SRP Totalseal adhesives is affected, to some extent by the temperature and relative humidity. It is important to note that installers must determine the temperature and humidity where the vehicle will cure, not where the replacement is performed.

   **For example:** If a replacement is made inside a shop in Edmonton, Alberta in January, and the vehicle is immediately moved outdoors, the outdoor temperature and relative humidity reading must be used to calculate the drive away time.

4. **How to Use SRP Drive Away Charts**

   The easiest way to prevent urethane failure is to properly read and adhere to SRP’s Drive Away Charts. To determine safe drive away times, three crucial pieces of information are needed: the temperature of the location where the vehicle will sit as the urethane cures, the relative humidity of the location where the vehicle will sit as it cures, and the correct SRP Drive Away Chart.

   SRP Drive Away Charts are located on the SRP Drive Away Chart Sales Sheet, the SRP Installers Wall Chart, and www.shatproof.com. The best source for reading the temperature and relative humidity is a small, portable digital thermometer/hygrometer.
Thermometers and Hygrometers give accurate temperature and relative humidity readings and are fairly inexpensive. Portability is important for mobile technicians and for shops that move their completed vehicles outside to cure. Knowing that the temperature is 75°F with 50% Rh inside the shop does little good to a mobile installer in Minnesota in January. To determine the safe drive away time, follow the procedures listed below.

1. Determine whether the vehicle is equipped with a driver’s side airbag only, or a dual airbag system. Use the chart labeled “FVMSS Drive Away Times for Single Airbag Vehicles” for vehicle without an airbag or driver’s side airbag. Use the charts labeled “FVMSS Drive Away Times for Dual Airbag Vehicles” for cars with dual airbags. This will include all passenger vehicles manufactured or sold in North America for the last several years.

2. Using your thermometer/hygrometer, determine the temperature and relative humidity of the location where the vehicle will cure.

3. Using the Safe Drive Away Chart for your selected adhesive, find where the temperature intersects with the relative humidity. An example is shown below with the temperature at 62°F and a 44%Rh.

The time shown is the earliest the vehicle is safe to be driven. Remember to account for coming weather changes and the time of day when determining safe drive away times. These charts are guides only. It is always recommended to let the product achieve full cure. Installer judgment is necessary to account for individual situations and changing weather conditions.

Do not let the vehicle be driven before the safe drive time has passed. If completing a mobile installation, ensure the customer knows that driving the vehicle before it is safe can result in possible injury or death.

Remember, in the event of an accident, recent lawsuits have found the installer liable even when the vehicle owner was warned, signed a release, and the owner disobeyed installer recommendations. In case of doubt, do not allow the vehicle back into service until you are positive the vehicle is safe to drive.
Special Considerations

Non-Conductive Urethane
Non-conductive urethane will minimize current (electricity) to flow between the electronics in the encapsulation of the windshield and the metal body frame of the car. If this is allowed to happen, radio and cell phone signals may be disrupted, and electronics will fail and damage may occur to these devices. Also, if current is allowed to flow from the glass to an aluminum body frame, the current will eventually corrode at the aluminum causing major damage to the structure of the car (see galvanic corrosion).

Vehicles that have models that may require a Non-Conductive Urethane include:
- Audi
- BMW
- Jaguar
- Mercedes-Benz
- Porsche
- Consult NAGS™ for complete vehicle list

Galvanic Corrosion
When two unlike types of metal are in contact with each other with the presence of moisture, electrical current, or chemicals, galvanic corrosion may occur. Galvanic corrosion will cause the deterioration of the pinchweld of a vehicle with an aluminum body. Audi, Mercedes, and BMW use aluminum frames on certain models.

Use only SRP185HV Non-Conductive urethane on these models as called out by vehicle manufacturer and published by NAGS™.

High Modulus Urethane
On many of today's luxury and sports vehicles, the windshield plays an important role in keeping the car stabilized and rigid, especially on corners. The stress that is placed on the adhesive to hold the glass in place is high. Therefore, an adhesive that can handle the torsional strains and retain the glass in its original position is required. Use SRP160HT or SRP185HV for these installations.

Vehicles that may require a High Modulus Urethane include:
- Audi
- BMW
- Jaguar
- Mercedes-Benz
- Porsche
- Saab
- Volkswagen
- Volvo
- Consult NAGS™ for complete vehicle list
Colder weather creates several problems for auto glass installers. Not only do most one-component adhesives cure more slowly because of the reduced capacity of the atmosphere to carry moisture, but also installers must contend with condensation, frozen product in vehicles or drop boxes, slow drying primers and unwieldy gloves. To compound that issue, the viscosity of some urethanes can increase making it difficult to properly set a windshield.

When ambient air temperatures drop below 40°F (4°C), special care must be taken when installing replacement auto glass. Certain SRP Totalseal adhesives are designed to cure in colder weather, but the preps and primers that are part of the SRP Totalseal system require special handling at temperatures below 40°F (4°C).

Mobile Replacements in Cold Weather
1. When using the SRP160HT, please ensure the product has been preheated in an SRP Oven for a minimum of 1 hour. When using SRP180HV or SRP Velocity™, make sure the adhesive is between 60°F and 75°F (15°C and 24°C).
2. Turn on the vehicles’ defrost; leave running through the rest of the installation. The added heat will help the urethane’s working time and improve cure rates in the cold weather. **Be aware of carbon monoxide being produced by the running vehicle.**
3. Follow manufacturer’s instructions while removing existing windshield.
4. Prepare the pinchweld by removing excess urethane and treat scratches and corrosion per SRP’s published procedures.
5. Pre-prime the glass in the shop or in the heated van, clean bond line of the glass with SRP Foaming Glass Cleaner and apply SRP7000 or SRP7016 and SRP5028 using a wool dauber or clean lint free cloth. All SRP Preps and Primers must be applied at temperatures of 40°F (4°C) or above.
6. Allow preps and primers to properly flash off. Never place any SRP Totalseal adhesives onto a wet surface. Make to sure to remove any condensation that appears. Flash off time will vary by temperature. In cold temperatures allow up to 20 minutes.
7. When using SRP160HT, prepare urethane nozzle prior to removing SRP160HT from oven. Once the SRP160HT is removed from heater immediately apply the urethane and install the windshield. Make sure to properly set the windshield into place.

**Tip:** SRP160HT can lose up to **20°F in as little as 10 minutes** time once removed from heater. This decrease in temperature may cause an increase in viscosity and may make adjusting the glass difficult.
8. Leave vehicle running with defrost on for 15 minutes after the glass is set in place.
9. Replace all trim, cowlings and moldings.

If the vehicle being serviced requires the use of SRP185HV Non-Conductive Adhesive, the glass replacement must be performed indoor (or where the temperature is above 40°F (4°C) and the vehicle is allowed to sit in the heated location until the safe drive-away time has been reached.

In-Shop Replacements
1. When using the SRP160HT, please ensure the product has been preheated in an SRP Oven for a minimum of 1 hour. When using SRP180HV or SRP Velocity™, make sure the adhesive is between 60°F and 75°F (15°C and 24°C).
2. Follow manufacturer's instructions while removing existing windshield.
3. Prepare the pinchweld by removing excess urethane and treat scratches and corrosion per SRP’s published procedures.
4. Allow preps and primers to properly flash off. Never place any SRP Totalseal adhesives onto a wet surface.
5. When using SRP160HT, prepare urethane nozzle prior to removing SRP160HT from oven. Once the SRP160HT is removed from heater immediately apply the urethane directly to the prepared fresh cut urethane and install the windshield. Make sure to properly set the windshield into place.
   
   **Tip:** SRP160HT can lose up to 20°F in as little as 10 minutes time once removed from heater. This decrease in temperature may cause an increase in viscosity and may make adjusting the glass difficult.

6. Replace all trim, cowlings and moldings.
7. Leave vehicle in the shop for 15 minutes after the glass is set in place.
8. Move vehicle outside to cure, if necessary.

Low Temperatures Can Be Safe Temperatures
You can’t control the weather, but the weather does not have to control your business. By following the published cold weather procedures, choosing the right product for the job and the weather, and using common sense, colder weather may not have to be an issue.
Using SRP Totalseal Urethanes

Opening SRP Totalseal Urethane Cartridge
Follow the procedures listed below to ensure that both ends of the cartridge is opened properly. Failure to do so will impede the extrusion of the urethane and cause general dispensing problems.

Steps
1. SRP Totalseal adhesives feature a “Pop-Top” freshness seal (end cap) on the bottom of the adhesive cartridge. Simply lift the tab upward and pull the freshness seal off (Right, and above).
2. Place the cartridge on a sturdy workbench or similar surface. Pierce the top membrane on the threaded end of the adhesive cartridge using an un-cut nozzle or similar tool (Right, and below). Make sure that the opening is as large as the port will allow.
3. Screw the cut nozzle onto the threaded end of the adhesive cartridge and turn until tight.

Nozzle Preparation
The use of a properly shaped adhesive bead is critical when installing replacement auto glass. All adhesive manufacturers and all OEM manufacturers recommend the use of a triangular bead because it is the only shape that guarantees that no air bubbles can get trapped between the fresh adhesive and the glass or pinchweld when the glass is placed into the vehicle.

As the glass is installed in the vehicle, the peak of the triangle is the first point of contact. As the glass is lowered into place, the top of the triangle is pushed down into the adhesive bead. This forces the top of the bead to bow out as the glass is lowered further. Since the adhesive is being pushed out from the center, the contact moves from the center to the final edge of the bead. Air is forced away from the bead and is prevented from becoming trapped.

Square beads can present problems when the nozzle is cut poorly. If any dip is present in the center of the bead, the outside edges will make contact with the glass or pinchweld first. This can create an air pocket that can result in leaks or adhesive failure in the event of a crash.
A similar problem exists with round beads. If the bead rolls as the glass is installed, or uneven pressure is placed on the bead, an outside edge can make contact with the bonding surface before the center of the bead creating air pockets.

SRP packages the twelve uncut nozzles in each case so installers can create the appropriate triangle shape for each installation. For example, a Dodge Dakota will require a taller triangular bead then a Honda Civic because of the depth of the pinchweld.

Steps
1. Place the uncut nozzle on a steady surface.
2. Using a razor blade or knife, cut the nozzle in a diagonal manner approximately 2” from the tip of the nozzle.
3. On the longer edge of the nozzle, cut a triangle shaped notch that is approximately 5/8” in height.

Applying Adhesives to Glass or Pinchweld

Adhesive Application and Seam Paddling Procedures
Leaks occur most often at the joints where adhesive beads meet. Joints that aren’t sealed properly can result in water leaks or air whistles. Either way, they result in costly re-work and/or time consuming R&R’s as well as inconvenience for the vehicle owner.

If gaps are present at seams in the adhesive, the gaps are weak points in the urethane bead. In the event of an accident, failure can begin at these points and “unzip” around the glass perimeter. This can lead to total glass failure and/or failure of the supplement restraint system which is critical to the safety of vehicle occupants.

The best method to reduce leaks and gaps is to plan the locations of your joints in advance and to properly “butt-and-paddle” all seam in the adhesive bead. Installers should attempt to lay one continuous bead across the top of the glass in order to prevent water leaks, and lay second continuous bead along the bottom of the passenger-side of the windshield to absorb the impact of airbag deployment in a collision.
Follow the following procedures to properly apply your selected SRP adhesive to either the replacement glass or the prepared pinchweld:

**Urethane to Glass Application:**

1. Begin applying your selected SRP Totalseal adhesive at the bottom of the windshield in the center of the driver’s side of the glass.
2. Proceed along the bottom of the glass, up the passenger A-Pillar, across the top of the windshield, and as far down the driver A-Pillar as possible before the adhesive cartridge is empty.
3. Switch cartridges and “butt” the tip of the nozzle into the end of the adhesive line on the driver A-Pillar.
4. Continue applying adhesive down the A-Pillar and along the bottom of the glass until the beginning of the adhesive bead is reached. Overlap the adhesives for approximately 1”.
5. Use a windshield stick or similar object to paddle the seams. Paddle the adhesive in one direction on one side of the bead and in the other on the opposite side of the bead for best results.

**Pinchweld Application:**

1. Standing on the passenger side of the vehicle, begin applying your selected SRP adhesive at the bottom of the windshield in the center of the driver’s side of the pinchweld. Apply the adhesive across the bottom of the glass stopping about 3” from the corner on the passenger side of the vehicle.
2. While still standing on the passenger side of the vehicle, reach as far as possible across the top of the pinchweld. Beginning on the driver’s side of the vehicle, begin applying the adhesive along the top pinchweld, across the passenger area, down the passenger A-Pillar, and along the bottom pinchweld overlapping the first bead for approximately 1”.
3. Move to the driver’s side of the vehicle. Butt the tip of the adhesive tube into the bead on the bottom of the pinchweld. Apply adhesive to the remainder of the bottom pinchweld, stopping approximately 3” from the corner.
4. Butt the adhesive nozzle into the end of the bead on the top pinchweld. Apply the adhesive to the remainder to the top pinchweld, down the A-Pillar, and overlap the bottom bead for approximately 1”.

5. Use a clean windshield stick or similar object to overlap all four seams in the adhesive bead. Paddle the adhesive in one direction on one side of the bead and in the other on the opposite side of the bead for best results.

⚠️ Do not use your finger as this may contaminate the urethane bead.

6. To prevent leeks and unnecessary wind noises, pay special attention to where the urethane overlaps. It has the potential to be one of the weakest points in an otherwise strong seal.

Urethane Application Pattern for Pinchweld

Dots represent starting point
SRP Totalseal Application Procedure By Product

SRP101EZ Adhesive Application Procedure
SRP101EZ is a primerless to glass adhesive designed to simplify installation. This type of product is one of the easiest in the industry to use with high initial viscosities and superior decking properties. Once it is determined that this product is appropriate for the installation, follow the procedures listed below to extrude this product onto either the pinchweld or glass.

1. Inspect the expiration date on the SRP101EZ adhesive tube to ensure that the product is fresh. The lot number and expiration dates are printed on the top of the cartridge. Note the product used, the expiration date and lot number of the adhesive on the Installation Record.

2. Thoroughly clean the glass with SRP Glass cleaner and inspect for contamination. If oils, debris, or release agents are still present, continue to clean until gone. If contamination is still on the glass, it is recommended to use SRP7000 One Step for Glass. See section titled “Cleaning, Prepping and Priming Glass.”

Never use any adhesive or primer product after the expiration printed on the bottle or tube. The use of expired product can result in failure of the urethane adhesive system in the event of an accident.

3. Using the appropriate caulking gun, air gun, or battery powered gun, apply the urethane adhesive to the bond line of either the prepared and primed glass or the primed pinchweld.

4. Immediately install replacement glass into the properly primed pinchweld. Adjust the glass as necessary to correctly align the glass and moldings.

Tech Tips
- It is important that SRP101EZ is applied to completely clean glass since it is a primerless to glass product. Use SRP Glass Cleaner to thoroughly clean the glass surface.
- If needed, use SRP Glass Cleaner and a light abrasive pad to remove stubborn spots of contamination.
- SRP101EZ has an unopened shelf life of 9 months.
- Properly dispose of any expired primer and adhesive products.
- SRP101EZ has a working times of 20 minutes. Install the replacement glass soon after adhesive application to prevent skin formation and to ensure a proper adhesive bond.
- Refer to the appropriate SRP Drive-Away Chart to determine when the adhesive will achieve adequate strength for safe use. Do not allow customers to drive vehicle until the published Drive-Away Time has past.
Applying the SRP160HT

SRP160HT Urethane Adhesive is a hot-applied, high modulus, single component product that reaches Safe Drive Away Strength in air temperatures over 15°F (-9°C) in as little as 1 hour for dual airbag vehicles. Because of the extremely high viscosity of this product, SRP160HT must be heated to 120°F to 140°F (49°C to 60°C) before application to allow proper extrusion. Once it is determined that this product is appropriate for the installation being completed, follow the procedures listed below to extrude this product onto either the pinchweld or glass.

1. Inspect the expiration date on the SRP160HT Urethane Adhesive cartridge to ensure that the product is fresh. The lot number and expiration date are printed on the top of the cartridge. Note the product used, the expiration date and lot number of the adhesive on the Installation Record.

Never use any adhesive or primer product after the expiration printed on the bottle or tube. The use of expired product can result in failure of the urethane adhesive system in the event of an accident.

2. Place adhesive in SRP Oven for 1 hour. SRP160HT requires heating to accelerate the curing process. Heating also reduces the viscosity of the product so that it can be properly extruded using a standard caulking gun.

3. Wear heavy-duty gloves to prevent possible burns when removing the heated cartridges from the oven and while handling the product prior to adhesive application.

4. Using the appropriate caulking gun, air gun, or battery powered gun, apply the urethane adhesive to the bond line of either the prepared and primed glass or the primed pinchweld and paddle all joints according to the directions in the section of this manual entitled “Adhesive Application and Seam Paddling Procedures”

5. Immediately install replacement glass into the pinchweld. Adjust the glass as necessary to correctly align the glass and moldings.

6. Reheat any unused portion for the next job (up to 8 hours of total heating time) or dispose of any unused product after 8 hours.

Tech Tips

- SRP160HT Polyurethane Adhesive has an unopened shelf life of 9 months.
- Properly dispose of any expired primer and adhesive products.
- SRP160HT can be left in the SRP Oven for no more than 8 hours.
- SRP160HT has a working time of 10 minutes. Immediately install the replacement glass immediately after adhesive application to prevent skin formation and ensure proper adhesive bonding occurs.
- Refer to the SRP Drive-Away Chart to determine when the SRP160HT will achieve adequate strength for safe use. Do not allow customers to drive vehicle until the published Drive-Away Times have past.
Applying SRP180HV, SRP185HV, and SRP Velocity™ Adhesives

SRP180HV, SRP185HV, and SRP Velocity adhesives are all single component products that are applied identically. These products are among the easiest in the industry to use with high initial viscosities and superior decking properties. Once it is determined that these products are appropriate for the installation, follow the procedures listed below to extrude these products onto either the pinchweld or glass.

1. Inspect the expiration date on the SRP180HV, SRP185HV High Modulus, Non-Conductive adhesive, or SRP Velocity tubes to ensure that the product is fresh. The lot number and expiration dates are printed on the top of the cartridge. Note the product used, the expiration date and lot number of the adhesive on the Installation Record.

Never use any adhesive or primer product after the expiration printed on the bottle or tube. The use of expired product can result in failure of the urethane adhesive system in the event of an accident.

2. Using the appropriate caulking gun, air gun, or battery powered gun, apply the urethane adhesive to the bond line of either the prepared and primed glass or the primed pinchweld and paddle all joints according to the directions in the section of this manual entitled “Adhesive Application and Seam Paddling Procedures”

3. Immediately install replacement glass into the pinchweld. Adjust the glass as necessary to correctly align the glass and moldings.

Tech Tips

- SRP180HV has an unopened shelf life of 9 months.
- SRP185HV High Modulus, Non-Conductive adhesive has an unopened shelf life of 6 months.
- SRP Velocity has an unopened shelf life of 9 months.
- Properly dispose of any expired primer and adhesive products.
- All three urethanes have working times of 15 minutes. Install the replacement glass soon after adhesive application to prevent skin formation and ensure proper adhesive bonding occurs.
- Refer to the appropriate SRP Drive-Away Chart to determine when the adhesive will achieve adequate strength for safe use. Do not allow customers to drive vehicle until the published Drive-Away Time has past.
Auto Glass Installation

Once the adhesive bead has been extruded onto either the pinchweld or the glass, the technician should immediately install the replacement glass onto the vehicle. SRP recommends the use of suction cup tools to ease the installation process, and to prevent hand contact with either the adhesive or the primed bonding surfaces. SRP also recommends the use of two man installation teams to ensure proper glass placement and prevent problems and injuries during installation.

Steps
1. Using the selected suction cup tools as described by their manufacturer, attach the tools to the exterior of the glass being installed.
2. Pick-Up the glass using the suction cup tools. Installers can use their free hand to help steady the glass, but care should be taken to avoid contact with the bond line or adhesive on the glass and always wear nitrile gloves.
3. Place the glass into the vehicle pinchweld using tape marks from dry fitting to guide the placement correctly.
4. Gently press around the perimeter of the glass to ensure good contact is made between the fresh adhesive and the bonding surface of the glass or pinchweld.
5. Install any external moldings and/or make any necessary adjustments to the glass to provide a proper professional look. Use molding tape if necessary to ensure that the moldings stay in place until the adhesive cures.
6. Clean the interior and exterior of the glass using SRP Foaming Glass Cleaner to remove any fingerprints or dust form the glass.
7. Re-Install any trim pieces along the A-Pillars, the wiper arms, rearview mirror, and any other vehicle parts removed during the replacement process.
8. Complete the Installation Record and Hang Tag. Attach the Installation Record to the work order for the replacement and place the Hang Tag on the rearview mirror of the vehicle.
9. Finish any other cleaning tasks on the vehicle and advise the vehicle owner of the following items:
   - When the vehicle will be safe for use as determined using the SRP Drive-Away Charts. If necessary, explain the safety function of the windshield and that the vehicle occupants can be seriously injured in the event of an accident if the Drive Times are not respected.
   - Leave vehicle windows partially opened for at least 24 hours to allow air to circulate.
   - Do not slam car doors for at least 24 hours.
   - Do not take the vehicle through high-pressure car washes for at least 24 hours.
   - In cold weather (less than 55°F/13°C), run the defroster as much as possible to help accelerate the curing process.
SRP also manufactures and distributes several additional products for use in the AGR market. These cleaning products are designed to make auto glass installation clean ups easier, and provide value-added service options for the glass technician.

**SRP Foaming Glass Cleaner**
SRP Foaming Glass Cleaner is a non-ammonia cleaner designed for both automotive and flat glass. Its non-streaking and non-fogging formula will not interfere with the bonding or curing of SRP Totalseal urethane products.
- Non-streaking foaming formula
- Compatible with SRP Totalseal urethane products
- 19 oz aerosol spray can

**SRP High-Performance Hand Cleaner**
SRP High Performance Hand Cleaner is available to glass technicians to meet their personal cleaning needs. Containing a pumice abrasive to scrub tough grime, urethane, and soil, this product serves as an effective cleanser without drying skin.
- Available in 500ml and 3.5L sizes
- Contains pumice for deep cleaning

**SRP All Purpose Cleaner**
Specifically developed to remove urethane, SRP All Purpose Cleaner contains a citrus-based solvent that is both environmentally safe and non-hazardous. Safe to use on all surfaces including skin, clear-coat paint finishes, upholstery and metal. This product does not require water and will not dry skin.
- Available in 8 oz spray bottles and 64 oz bottles
- Environmentally safe and non-hazardous Citrus-Based cleaner is perfect for dirt, grease, tar, and urethane removal

**SRP Quick 'N Clean Bucket**
Using the same citrus solvent as SRP’s All Purpose Cleaner, Quick N' Clean Towels are effective at removing stubborn soil and urethane without scratching painted surfaces. Packaged in a convenient and economical “baby wipe” style bucket, these disposable towels provide cleaning convenience for mobile AGR technicians. Pre-Moistened towels also contain moisturizers to soothe dry and chapped hands.
- Sold in 1 gallon buckets containing 130 towels each
- Pre-Moistened towels are perfect for mobile units
- Environmentally safe and non-hazardous
- Contains moisturizers to soften and soothe hands
Appendix A

Drive away charts
Knowing the temperature and the humidity is a very important step in any auto glass replacement job. Since most urethanes rely on moisture and temperature to cure, a 10°F change in the temperature could mean several more hours your customer must wait before they can safely drive the car away.

So before you start any job, make sure you know the temperature and know the humidity.

### FMVSS Drive Away Times for Dual Airbag Vehicles

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Always use SRP Velocity™ when the temperature is 40°F (4°C) or below.

### FMVSS Drive Away Times for Single Airbag Vehicles

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Always use SRP Velocity™ when the temperature is 15°F (-9°C) or below.

Always follow the SRP Cold Weather Procedures when the ambient temperature is below 40°F (4°C).
<table>
<thead>
<tr>
<th>Temperature</th>
<th>20°-40°F</th>
<th>40°-60°F</th>
<th>60°-70°F</th>
<th>70°-80°F</th>
<th>80°F+</th>
<th>20°-40°F</th>
<th>40°-60°F</th>
<th>60°-70°F</th>
<th>70°-80°F</th>
<th>80°F+</th>
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<tbody>
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<td>80-100%</td>
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<td>0-20%</td>
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Always use SRP Velocity™ when the temperature is 20°F (-6°C) or below.
Always follow the SRP Cold Weather Procedures when the ambient temperature is below 40°F (4°C).

<table>
<thead>
<tr>
<th>Temperature</th>
<th>40°-50°F</th>
<th>50°-60°F</th>
<th>60°-70°F</th>
<th>70°-80°F</th>
<th>80°F+</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-100%</td>
<td>5 hours</td>
<td>3 hours</td>
<td>2 hours</td>
<td>2 hours</td>
<td>2 hours</td>
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<tr>
<td>60-80%</td>
<td>7 hours</td>
<td>3.5 hours</td>
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<td>40-60%</td>
<td>8 hours</td>
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<td>20-40%</td>
<td>9 hours</td>
<td>6 hours</td>
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<tr>
<td>0-20%</td>
<td>12 hours</td>
<td>8 hours</td>
<td>6 hours</td>
<td>4 hours</td>
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</table>

Always use SRP185HV when the temperature is 40°F (4°C) or above.

1 Hour

Always follow the SRP Cold Weather Procedures when the ambient temperature is below 40°F (4°C).
Appendix B

“SRP Cheat Sheets”
Or
Data You Need to Know
SRP101EZ Product Overview

The SRP101EZ helps you save time and money by taking some of the work out of applying urethane adhesives. The SRP101EZ is a primerless to glass product designed to speed up installation times without cutting corners or using questionable practices.

- Achieves dual airbag drive away times in as little as 3 hours.
- High viscosity formula.
- LYNX Services™ approved.

When Used

Always determine the correct urethane to use by determining the desired drive away time and climatic conditions (temperature, humidity, where the vehicle will be when curing – indoor or outdoor).

- The SRP101EZ is a product that does not require a glass prep or primer. Optional use of SRP7000 One Step for Glass is recommended when glass does not appear to be perfectly clean.
- The lower the temperature or lower the humidity, the longer it takes until the vehicle is safe to drive.
- SRP101EZ should be used when the temperature is above 40°F (5°C).

<table>
<thead>
<tr>
<th>Relative Humidity</th>
<th>FMVSS Drive Away Times for Dual Airbag Vehicles</th>
<th>FMVSS Drive Away Times for Single Airbag Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40°-50°F 4°C - 10°C</td>
<td>50°-60°F 10°C - 16°C</td>
</tr>
<tr>
<td>80-100%</td>
<td>7 hours</td>
<td>5 hours</td>
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<tr>
<td>60-80%</td>
<td>9 hours</td>
<td>7 hours</td>
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<tr>
<td>40-60%</td>
<td>12 hours</td>
<td>9 hours</td>
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<td>20-40%</td>
<td>15 hours</td>
<td>12 hours</td>
</tr>
<tr>
<td>20-40%</td>
<td>24 hours</td>
<td>18 hours</td>
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</table>

Always use SRP Velocity when faster drive away times are desired or when the temperature is 40°F (4°C) or below.

How Used

The SRP101EZ is a one-part urethane applied with a standard caulking gun, cordless gun, or battery operated gun.

1. Thoroughly clean autoglass and make sure all contaminates are removed.
2. If glass does not appear clean, the SRP7000 can be used.
3. Apply SRP primers to the pinchweld as needed.
4. Allow Preps and Primers to dry completely before applying urethane.
5. Cut notch in the nozzle so that the bead is 3/8” by 1/2” in shape.
6. Apply a continuous bead of urethane around the outside of the glass or around the pinchweld (installers choice or dictated by type of vehicle).
7. Once the glass and moldings are in place, allow urethane to cure (per drive away chart) before vehicle can be safely driven away.

Other Products that are Needed with the SRP101EZ

There are other SRP products an installer may/will need when replacing a windshield and using SRP Urethane.

- SRP Glass Cleaner
- SRP5025 Paint Primer
- SRP7000 (Optional)
- SRP Daubers
- SRP Quick ‘N Cleans
- SRP Hand Cleaner
Other Products in the Marketplace
Other manufacturers products that are similar and can be replaced by the SRP101EZ:

<table>
<thead>
<tr>
<th></th>
<th>40°F (4°C)</th>
<th>60°F (16°C)</th>
<th>75°F (24°C)</th>
<th>85°F (30°C)</th>
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</thead>
<tbody>
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<td>35%RH</td>
<td>65%RH</td>
<td>35%RH</td>
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<td>Dow U-418</td>
<td>36 hours</td>
<td>26</td>
<td>30</td>
<td>17</td>
</tr>
<tr>
<td>SRP101EZ</td>
<td>15</td>
<td>12</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

b Drive Away Times based on current published data furnished by competitor.

FAQ
Here is a list of the Frequently Asked Questions regarding the SRP101EZ.

Q. Is there any occasions when I need to use a primer with the SRP101EZ?
A. Yes and No. With over 2000 different frit surfaces on the market and glass coming from 25 different countries, it is hard to say that this product is primerless to 100% of them. Always clean the glass thoroughly with glass cleaner. If it appears there is still contamination on the glass, do everything possible to remove it. If that fails, or you have doubts, you can always use SRP7000 One Step for Glass or SRP7016/SRP5028 to make sure of a strong bond.

Q. What is the drive away time for the SRP101EZ?
A. At 70°F and 50% relative humidity, it is 3 hour. Consult drive away chart for other temperatures and humidity levels.

Q. Can I heat the SRP101EZ?
A. No. There is no need to heat the SRP101EZ with a urethane-heating oven. Just make sure the urethane is room temperature (around 70°F/21°C), especially if the shop is cold or extremely warm.

Q. Where are the expiration date codes located?
A. The expiration date codes are found on the top of the cartridge and also on the box that the SRP101EZ came in. Never use expired products.

Q. How do I get urethane off the fender?
A. You can use SRP Quick ‘N Cleans or SRP All Purpose Cleaner to remove urethane from dashboards, fenders, upholstery, hands, tools, and clothing. Just make sure to clean it up immediately.

Technical Data
For technical data, please see SRP101EZ Sales Sheet or SRP Installers Guide.

Additional Information
Please contact your SRP Sales representative.
SRP160HT Product Overview

When fast drive away times are required, the SRP160HT single-component adhesive offers drive away times of as little as 1 hour for dual airbag vehicles.
- Applied preheated, it will meet your fast curing needs.
- High modulus formula.
- LYNX Services™ approved.

When Used
Always determine the correct urethane to use by determining the desired drive away time and climatic conditions (temperature, humidity, where the vehicle will be when curing – indoor or outdoor).
- The SRP160HT is a one-part urethane whose curing is accelerated by the preheating of the product along with special additives.
- SRP160HT should be used when the temperature is above 15°F (-9°C)

<table>
<thead>
<tr>
<th>Relative Humidity</th>
<th>15°-40°F</th>
<th>40°-60°F</th>
<th>60°-70°F</th>
<th>70°-80°F</th>
<th>80°F+</th>
<th>15°-40°F</th>
<th>40°-60°F</th>
<th>60°-70°F</th>
<th>70°-80°F</th>
<th>80°F+</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-100%</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>30 minutes</td>
</tr>
<tr>
<td>60-80%</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>30 minutes</td>
</tr>
<tr>
<td>40-60%</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>30 minutes</td>
</tr>
<tr>
<td>20-40%</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

Always use SRP Velocity when the temperature is 15°F (-9°C) or below.
Always follow the SRP Cold Weather Procedures when the ambient temperature is below 40°F (4°C)

How Used
The SRP160HT is a one-part urethane used in conjunction with the SRP Primer system and applied with a standard caulking gun, cordless gun, or battery operated gun.
8. Allow the SRP160HT to preheat for 1 hour in an SRP Oven or other apparatus that will allow the urethane to reach a temperature of 135°F.
9. Apply SRP preps and primers to glass and pinchweld.
10. Allow Preps and Primers to dry completely before applying urethane.
11. Cut notch in the nozzle so that the bead is 3/8" by ½" in shape.
12. Apply a continuous bead of urethane around the outside of the glass or around the pinchweld (installers choice or dictated by type of vehicle).
13. Once the glass and moldings are in place, allow urethane to cure (per drive away chart) before vehicle can be safely driven away.

Other Products that are Needed with the SRP60HT
There are other SRP products an installer may/will need when replacing a windshield and using SRP Urethane.
- SRP Oven
- SRP Glass Cleaner
- SRP5025 Paint Primer
- SRP5028 Glass Primer
- SRP7016 Glass Prep
- SRP7000 One-Step for Glass
- SRP Universal Molding
- SRP Quick 'N Cleans
- SRP Hand Cleaner
- SRP All purpose Cleaner
Other Products in the Marketplace
Other manufacturers products that are similar and can be replaced by the SRP160HT:

<table>
<thead>
<tr>
<th>Competitive Drive Away Comparison (Dual Airbags)(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°F (-9°C)</td>
</tr>
<tr>
<td>35%RH</td>
</tr>
<tr>
<td>Dow Express</td>
</tr>
<tr>
<td>SikaTack® - ASAP</td>
</tr>
<tr>
<td>SikaTack® - Ultrafast II</td>
</tr>
<tr>
<td>SRP160HT</td>
</tr>
</tbody>
</table>

\(^b\)Drive Away Times based on current published data furnished by competitor.

FAQ

Here is a list of the Frequently Asked Questions regarding the SRP160HT.

Q. Is the SRP160HT a High Viscosity product?
A. Yes. The SRP160HT is an ultra high viscosity product. This means no dam kit or supporting devices are needed to hold the glass in place which prevent the heavy windshield from sinking down against the pinchweld.

Q. What is the drive away time for the SRP160HT?
A. At 70°F and 50% relative humidity, it is 30 minutes. Consult drive away chart for other temperatures and humidity levels.

Q. Do I have to heat the SRP160HT?
A. Yes. The SRP160HT must be heated for 1 hour in an SRP oven or other oven that will heat the product to 130°F (54°C). The heat helps speed up the curing time, and also softens the product for easier dispensing.

Q. Where are the expiration date codes located?
A. The expiration date codes are found on the top of the cartridge and also on the box that the SRP160HT came in. Never use expired products.

Q. What primers do I need with the SRP160HT?
A. Use the SRP5025 Paint Primer, SRP5028 Glass Primer, and the SRP7016 Glass Prep.

Q. How do I get urethane off the fender?
A. You can use SRP Quick ‘N Cleans or SRP All Purpose Cleaner to remove urethane from dashboards, fenders, upholstery, hands, tools, and clothing. Just make sure to clean it up immediately.

Technical Data
For technical data, please see SRP160HT Sales Sheet or SRP Installers Guide.

Additional Information
Please contact your SRP Sales representative
SRP180HV Product Overview
SRP180HV High Viscosity Urethane Adhesive features the dependability that only an OEM adhesive can provide.
- Achieves dual airbag drive away times in as little as 2 hours.
- Meets or exceeds all FMVSS safety standards.
- High viscosity formula.
- LYNX Services™ approved.

When Used
Always determine the correct urethane to use by determining the desired drive away time and climatic conditions (temperature, humidity, where the vehicle will be when curing – indoor or outdoor).
- The SRP180HV is a one-part urethane that relies on humidity and temperature to cure.
- The SRP180HV should be used when the temperature is above 20°F (-6°C) – see drive away chart below.

<table>
<thead>
<tr>
<th>Relative Humidity</th>
<th>20°-40°F</th>
<th>40°-60°F</th>
<th>60°-70°F</th>
<th>70°-80°F</th>
<th>80°F+</th>
<th>20°-40°F</th>
<th>40°-60°F</th>
<th>60°-70°F</th>
<th>70°-80°F</th>
<th>80°F+</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6-14°C</td>
<td>10-16°C</td>
<td>16-21°C</td>
<td>21-27°C</td>
<td>27°C+</td>
<td>6-14°C</td>
<td>10-16°C</td>
<td>16-21°C</td>
<td>21-27°C</td>
<td>27°C+</td>
</tr>
<tr>
<td>80-100%</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
<td>1 hour</td>
</tr>
<tr>
<td>60-80%</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
</tr>
<tr>
<td>40-60%</td>
<td>2 hours</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
</tr>
<tr>
<td>20-40%</td>
<td>2 hours</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>30 minutes</td>
</tr>
<tr>
<td>0-20%</td>
<td>2 hours</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
</tr>
</tbody>
</table>

Always use SRP Velocity when the temperature is 20°F (-6°C) or below.
Always follow the SRP Cold Weather Procedures when the ambient temperature is below 40°F (4°C)

How Used
The SRP180HV is a one-part urethane used in conjunction with the SRP Primer system and applied with a standard caulking gun, cordless gun, or battery operated gun.
1. Apply SRP preps and primers to glass and pinchweld.
2. Allow Preps and Primers to dry completely before applying urethane.
3. Cut notch in the nozzle so that the bead is 3/8” by 1/2” in shape.
4. Apply a continuous bead of urethane around the outside of the glass or around the pinchweld (installer’s choice or dictated by type of vehicle).
5. Once the glass and moldings are in place, allow urethane to cure (per drive away chart) before vehicle can be safely driven away.

Other Products that are Needed with the SRP180HV
There are other SRP products an installer may/will need when replacing a windshield and using SRP Urethane.
- SRP Glass Cleaner
- SRP5025 Paint Primer
- SRP5028 Glass Primer
- SRP7016 Glass Prep
- SRP7000 One-Step for Glass
- SRP Universal Molding
- SRP Quick ‘N Cleans
- SRP Hand Cleaner
- SRP All purpose Cleaner
Other Products in the Marketplace
Other manufacturers products that are similar and can be replaced by the SRP180HV:

<table>
<thead>
<tr>
<th>Competitive Drive Away Comparison (Dual Airbags) b</th>
<th>20°F (-6°C)</th>
<th>60°F (16°C)</th>
<th>75°F (24°C)</th>
<th>85°F (30°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35%RH</td>
<td>65%RH</td>
<td>35%RH</td>
<td>65%RH</td>
</tr>
<tr>
<td>Dow U-400HV</td>
<td>NR</td>
<td>NR</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>SikaFlex® - Drive</td>
<td>NR</td>
<td>24</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>SikaFlex® - 220+</td>
<td>NR</td>
<td>NR</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>SRP180HV</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

b Drive Away Times based on current published data furnished by competitor.

FAQ
Here is a list of the Frequently Asked Questions regarding the SRP180HV.

Q. What does High Viscosity Mean (as in SRP180HV)?
A. The SRP180HV is very thick out of the tube, it is said to have a high viscosity. Honey has a high viscosity, water has a low viscosity. This means no dam kit or supporting devices are needed to hold the glass in place which prevent the heavy windshield from sinking down against the pinchweld.

Q. What is the drive away time for the SRP180HV?
A. At 70°F and 50% relative humidity, it is 1 hour. Consult drive away chart for other temperatures and humidity levels.

Q. Which European OEMs use SRP Totalseal products?
A. Manufacturers such as Fiat, Renault and BMW all use Totalseal products on production lines.

Q. Can I heat the SRP180HV?
A. No. There is no need to heat the SRP180HV with a urethane-heating oven. Just make sure the urethane is room temperature (around 70°F/21°C), especially if the shop is cold or extremely warm.

Q. Where are the expiration date codes located?
A. The expiration date codes are found on the top of the cartridge and also on the box that the SRP180HV came in. Never use expired products.

Q. What primers do I need with the SRP180HV?
A. Use the SRP5025 Paint Primer, SRP5028 Glass Primer, and the SRP7016 Glass Prep.

Q. How do I get urethane off the fender?
A. You can use SRP Quick ‘N Cleans or SRP All Purpose Cleaner to remove urethane from dashboards, fenders, upholstery, hands, tools, and clothing. Just make sure to clean it up immediately.

Technical Data
For technical data, please see SRP180HV Sales Sheet or SRP Installers Guide.

Additional Information
Please contact your SRP Sales representative.
SRP185HV Product Overview

SRP185HV High Modulus, Non-Conductive Urethane Adhesive was designed to meet the higher adhesive needs of today's luxury vehicles.

- Necessary for vehicles that have electronics embedded in the windshield and also have aluminum body frames.
- SRP185HV meets or exceeds the High Modulus and Non-Conductive specifications of luxury automakers worldwide as well as all FMVSS safety standards.
- Drive away times in as little as 2 hours with dual airbags.
- LYNX Services™ approved.

When Used

The SRP185HV High Modulus, Non-Conductive urethane must be used on vehicles with electronics in the windshield (such as radio antennas, GPS systems, and cell phone antennas).

- Manufacturers such as Audi, Jaguar, Porsche, Mercedes, VW, Saab and Volvo all require High Modulus urethane on vehicles produced after 1994.
- These same manufacturers, plus BMW require a Non-Conductive urethane on most models.
  - If a vehicle has electronics in the windshield and an aluminum body frame, a Non-Conductive urethane will prevent damage due to galvanic corrosion.
- The SRP185HV provides both a High Modulus and a Non-Conductive urethane in one tube.

The SRP185HV is a one-part urethane that relies on humidity and temperature to cure. The lower the temperature or lower the humidity, the longer it takes until the vehicle is safe to drive.

<table>
<thead>
<tr>
<th>Relative Humidity</th>
<th>40°F-50°F</th>
<th>50°F-60°F</th>
<th>60°F-70°F</th>
<th>70°F-80°F</th>
<th>80°F-100°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-100%</td>
<td>5 hours</td>
<td>3 hours</td>
<td>2 hours</td>
<td>2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>60-80%</td>
<td>7 hours</td>
<td>3.5 hours</td>
<td>2 hours</td>
<td>2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>40-60%</td>
<td>8 hours</td>
<td>4 hours</td>
<td>2 hours</td>
<td>2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>20-40%</td>
<td>9 hours</td>
<td>6 hours</td>
<td>3.5 hours</td>
<td>2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>0-20%</td>
<td>12 hours</td>
<td>8 hours</td>
<td>6 hours</td>
<td>4 hours</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature</th>
<th>40°F-50°F</th>
<th>50°F-60°F</th>
<th>60°F-70°F</th>
<th>70°F-80°F</th>
<th>80°F-100°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>40°F-50°F</td>
<td>4 hours</td>
<td>2.5 hours</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>50°F-60°F</td>
<td>5 hours</td>
<td>3 hours</td>
<td>1.5 hours</td>
<td>1 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>60°F-70°F</td>
<td>6 hours</td>
<td>3.5 hours</td>
<td>2 hours</td>
<td>1 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>70°F-80°F</td>
<td>8 hours</td>
<td>4 hours</td>
<td>3 hours</td>
<td>2 hours</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>80°F-100°F</td>
<td>10 hours</td>
<td>6 hours</td>
<td>4.5 hours</td>
<td>3.5 hours</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

When using the SRP185HV, make sure the temperature is 40°F (4°C) or above.

How Used

The SRP185HV is a one-part urethane used in conjunction with the SRP Primer system and applied with a standard caulking gun, cordless gun, or battery operated gun.

1. Apply SRP preps and primers to glass and pinchweld.
2. Allow Preps and Primers to dry completely before applying urethane.
3. Cut notch in the nozzle so that the bead is 3/8" by 1/2" in shape.
4. Apply a continuous bead of urethane around the outside of the glass or around the pinchweld (installers choice or dictated by type of vehicle).
5. Once the glass and moldings are in place, allow urethane to cure (per drive away chart) before vehicle can be safely driven away.
Other Products that are Needed with the SRP185HV
There are other SRP products an installer may/will need when replacing a windshield and using SRP Urethane.

- SRP Glass Cleaner
- SRP5025 Paint Primer
- SRP5028 Glass Primer
- SRP7016 Glass Prep
- SRP7000 One-Step for Glass
- SRP Universal Molding
- SRP Quick ‘N Cleans
- SRP Hand Cleaner
- SRP All purpose Cleaner

Other Products in the Marketplace
Other manufacturers products that are similar and can be replaced by the SRP180HV:

<table>
<thead>
<tr>
<th>Competitive Drive Away Comparison (Dual Airbags)b</th>
<th>40°F (4°C)</th>
<th>60°F (16°C)</th>
<th>75°F (24°C)</th>
<th>85°F (30°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35%RH</td>
<td>65%RH</td>
<td>35%RH</td>
<td>65%RH</td>
</tr>
<tr>
<td>Dow 1502HMNC</td>
<td>28 Hours</td>
<td>20</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>SikaTack® - High Modul</td>
<td>24</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>SRP185HV</td>
<td>9</td>
<td>7</td>
<td>3.5</td>
<td>2</td>
</tr>
</tbody>
</table>

b Drive Away Times based on current published data furnished by competitor.

FAQ
Here is a list of the Frequently Asked Questions regarding the SRP185HV.

Q. What does High Viscosity Mean (as in SRP185HV)?
A. The SRP185HV is very thick out of the tube, it is said to have a high viscosity. Honey has a high viscosity, water has a low viscosity. This means no dam kit or supporting devices are needed to hold the glass in place which prevent the heavy windshield from sinking down against the pinchweld.

Q. What does High Modulus Mean?
A. On today’s luxury sports car, the windshield plays an important role in keeping the car stabilized and rigid, especially on corners. The stress that is placed on the adhesive to hold the glass in place is high. Therefore, an adhesive that can flex with the vehicle and still retain the glass in its original position is required.

Q. What does Non-Conductive Mean?
A. Non-conductive urethane will minimize current (electricity) to flow between the electronics in the windshield and the metal body frame of the car. If this is allowed to happen, radio and cell phone signals will be disrupted, and electronics will fail and damage may occur to these devices. Also if current is allowed to flow from the glass to an aluminum body frame, the current will eventually eat away at the aluminum causing major damage to the structure of the car.

Q. What is Galvanic Corrosion?
A. When electricity (current) is allowed to flow between electronics in the glass and aluminum body frames, it can (with the presence of moisture) pit and corrode certain metals. Aluminum is one of these metals.
Q. What is the drive away time for the SRP185HV?
A. At 70°F and 50% relative humidity, it is 2 hours. Consult drive away chart for other temperatures and humidity levels.

Q. Can I heat the SRP185HV?
A. No. There is no need to heat the SRP185HV with a urethane-heating oven. Just make sure the urethane is room temperature (around 70°F/21°C), especially if the shop is cold or extremely warm.

Q. Where are the expiration date codes located?
A. The expiration date codes are found on the top of the cartridge and also on the box that the SRP185HV came in. Never use expired products.

Q. What primers do I need with the SRP185HV?
A. Use the SRP5025 Paint Primer, SRP5028 Glass Primer, and the SRP7016 Glass Prep.

Q. How do I get urethane off the fender?
A. You can use SRP Quick ‘N Cleans or SRP All Purpose Cleaner to remove urethane from dashboards, fenders, upholstery, hands, tools, and clothing. Just make sure to clean it up immediately.

Technical Data
For technical data, please see SRP185HV Sales Sheet or SRP Installers Guide.

Additional SRP Information
Please contact your SRP Sales representative.
SRP Velocity™ Product Overview
SRP Velocity™ High Viscosity Urethane Adhesive features the dependability that only an OEM adhesive can provide.
- Achieves dual airbag drive away times in as little as 1 hour at 0°F (-17°C).
- Meets or exceeds all FMVSS safety standards.
- High viscosity formula.
- LYNX Services™ approved.

When Used
Always determine the correct urethane to use by determining the desired drive away time and climatic conditions (temperature, humidity, where the vehicle will be when curing – indoor or outdoor).
- The SRP Velocity is a one-part urethane that relies on humidity and temperature to cure.
- The SRP Velocity should be used when the temperature is above 0°F (-17°C) – see drive away chart below.

<table>
<thead>
<tr>
<th>Relative Humidity</th>
<th>FMVSS Drive Away Times for Dual Airbag Vehicles</th>
<th>FMVSS Drive Away Times for Single Airbag Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-100%</td>
<td>0°F-30°F -17°C-1°C 30°F-50°F -10°C-21°C 50°F-70°F 21°C-27°C 70°F-80°F 27°C+</td>
<td>0°F-30°F -17°C-1°C 30°F-50°F -10°C-21°C 50°F-70°F 21°C-27°C 70°F-80°F 27°C+</td>
</tr>
<tr>
<td>60-80%</td>
<td>1 Hour</td>
<td>1 Hour</td>
</tr>
<tr>
<td>40-60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-20%</td>
<td></td>
<td></td>
</tr>
</tbody>
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Always follow the SRP Cold Weather Procedures when the ambient temperature is below 40°F (4°C)

How Used
The SRP Velocity is a one-part urethane used in conjunction with the SRP Primer system and applied with a standard caulking gun, cordless gun, or battery operated gun.
1. Apply SRP preps and primers to glass and pinchweld.
2. Allow Preps and Primers to dry completely before applying urethane.
3. Cut notch in the nozzle so that the bead is 3/8” by ½” in shape.
4. Apply a continuous bead of urethane around the outside of the glass or around the pinchweld (installers choice or dictated by type of vehicle).
5. Once the glass and moldings are in place, allow urethane to cure (per drive away chart) before vehicle can be safely driven away.

Other Products that are Needed with the SRP Velocity
There are other SRP products an installer may/will need when replacing a windshield and using SRP Urethane.
- SRP Glass Cleaner
- SRP5025 Paint Primer
- SRP5028 Glass Primer
- SRP7016 Glass Prep
- SRP7000 One-Step for Glass
- SRP Universal Molding
- SRP Quick ‘N Cleans
- SRP Hand Cleaner
- SRP All purpose Cleaner
Other Products in the Marketplace
Other manufacturers products that are similar and can be replaced with the SRP Velocity:

<table>
<thead>
<tr>
<th>Competitive Drive Away Comparison (Dual Airbags)</th>
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<tr>
<td>0°F (-17°C)</td>
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<tr>
<td>Dow Express</td>
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<tr>
<td>SRP Velocity</td>
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b Drive Away Times based on current published data furnished by competitor.

FAQ
Here is a list of the Frequently Asked Questions regarding the SRP Velocity.

Q. What does High Viscosity Mean?
A. The SRP Velocity is very thick out of the tube, it is said to have a high viscosity. Honey has a high viscosity, water has a low viscosity. This means no dam kit or supporting devices are needed to hold the glass in place which prevent the heavy windshield from sinking down against the pinchweld.

Q. What is the drive away time for the SRP Velocity?
A. At 70°F and 50% relative humidity, it is 1 hour. Consult drive away chart for other temperatures and humidity levels.

Q. Which European OEMs use SRP Totalseal products?
A. Manufacturers such as Fiat, Renault and BMW all use Totalseal products on production lines.

Q. Can I heat the SRP Velocity?
A. No. There is no need to heat the SRP Velocity with a urethane-heating oven. Just make sure the urethane is room temperature (around 70°F/21°C), especially if the shop is cold or extremely warm.

Q. Where are the expiration date codes located?
A. The expiration date codes are found on the top of the cartridge and also on the box that the SRP Velocity came in. Never use expired products.

Q. What primers do I need with the SRP Velocity?
A. Use the SRP5025 Paint Primer, SRP5028 Glass Primer, and the SRP7016 Glass Prep.

Q. How do I get urethane off the fender?
A. You can use SRP Quick ‘N Cleans or SRP All Purpose Cleaner to remove urethane from dashboards, fenders, upholstery, hands, tools, and clothing. Just make sure to clean it up immediately.

Technical Data
For technical data, please see SRP Velocity Sales Sheet or SRP Installers Guide.

Additional Information
Please contact your SRP Sales representative.
SRP Preps and Primers

SRP Totalseal Preps and Primers are designed to work with all SRP Totalseal adhesives. Each product does a specific job and should always be used per SRP’s published procedures.

SRP5025 Product Overview
SRP offers a one-step solution to all of your pinchweld priming needs. The SRP5025 saves you money by eliminating the need for separate pinchweld primers.
- For exposed metal, painted surfaces and encapsulated parts as well as reactivates PAAS and urethane exposed for long periods of time.
- Packaged in a 30ml bottle to reduce wasted product from contamination and spoilage, the SRP5025 saves both time and money for installation professionals.

SRP7016 Product Overview
SRP7016 Glass Prep cleans and prepares the replacement glass for priming and urethane application. Used in conjunction with the SRP5028, the SRP7016 etches the glass and promotes bonding when the glass is not perfectly clean.
- The first step in every 2-step installation,
- Glass Prep is packaged in a 30ml bottle to save you money by reducing waste due to contamination.

SRP5028 Product Overview
SRP5028 Glass Primer is a black-out primer designed to promote adhesion between the urethane and the replacement glass while protecting the urethane from UV degradation on windshields without a frit.
- Applied to glass previously cleaned with SRP7016 Glass Prep.
- SRP5028 is packaged in a 30ml bottle to reduce wasted product and save money.

SRP7000 Product Overview
SRP7000 One Step for Glass is a safe alternative to the SRP7016 and SRP5028 on windshields that are free of contaminants. It is a popular choice for installers on the go and mobile jobs.
- SRP7000 is packaged in a 30ml bottle to save you money by reducing waste due to contamination.

When Used
The SRP Preps and Primers are always used in conjunction with SRP Totalseal Urethanes. The primers are a vital link in the urethane bonding to glass, glass frits, cut-back urethane, and painted and bare metal surfaces.

The Preps and Primers must be used with:
- SRP101EZ (Glass preparation optional)
- SRP160HT
- SRP180HV
- SRP185HV
- SRP Velocity
How to use SRP Preps and Primers

**SRP7016 Glass Prep (2-step method for glass)**
1. Clean the Replacement Glass with SRP Foaming Glass Cleaner
2. Using a clean, uncontaminated dauber or a lint-free, disposable cloth, apply SRP7016 Glass Prep in a smooth motion to the bond line of the replacement glass surface.
3. In a scrubbing motion, immediately wipe the treated surface remove any excess SRP7016 from the glass using a clean, lint-free, cloth or disposal towel. Let dry for 3 minutes.

**SRP5028 Glass Primer (2-step method for glass)**
1. Apply SRP 5028 Glass Primer with a clean, uncontaminated dauber to glass surfaces previously cleaned and prepared with SRP7016 Glass Prep.
2. Apply SRP5028 using a smooth motion in a single pass to the bond line of the glass.
3. Allow SRP5028 to dry, usually 5-10 minutes depending upon environmental condition, before applying fresh adhesive.

**SRP7000 One Step for Glass (1-step method for glass)**
1. Clean the Replacement Glass with SRP Foaming Glass Cleaner. Thoroughly remove all contaminants. Repeat until glass is perfectly clean.
2. Using a clean, uncontaminated dauber or a lint-free cloth, apply SRP7000 One Step for Glass in a smooth motion to the bond line of the replacement glass surface.
3. In a scrubbing motion, immediately wipe the treated surface remove any excess SRP7000 from the glass using a clean, lint-free, cloth or disposal towel. Let dry 3 minutes.

**SRP5025 Paint Primer**
1. Using a clean, uncontaminated dauber, apply the SRP5025 Paint Primer to exposed metal and painted pinchweld surfaces.
2. Using a clean, uncontaminated dauber, apply SRP5028 to cut-back urethane that has been exposed for more than 30 minutes or PAAS adhesive beads that require re-activation prior to adhesive application.
3. Allow SRP5025 to completely dry, normally 5-10 minutes depending on environmental conditions before applying fresh adhesive.

See the SRP Installation Manual for Complete Installation Instructions

**Other Products in the Marketplace**
All adhesive manufacturers have some type of Prep, Primer, or Activator. Only use SRP Preps and Primers with SRP Adhesives.

**FAQ**
Here is a list of the Frequently Asked Questions regarding the SRP Primers.

**Q. What sizes are the bottles of primer?**
**A.** All SRP Primers come in 1oz (30ml) bottles.

**Q. How long is the primer good for after it is opened?**
**A.** Once the primer has been exposed to air, the primer is good for 7 days. It is always a good idea to write the date on the bottle that it was first opened.
Q. Why do I need a Glass Prep?
A. The SRP7016 Glass prep is the first step in every safe installation. It will clean off the impurities and contamination from manufacturing, shipping, and handling. In some cases the SRP7000 can be used instead of the SRP7016 and SRP5028.

Q. Why do I need a Glass Primer?
A. The SRP5028 Glass Primer does two very important things. First it acts as a shield against harmful UV rays that can degrade urethane over time making the bond weak. Second, it ensures the urethane will bond to the glass. In some cases, the SRP7000 can be used instead of the SRP7016 and SRP5028.

Q. What is the SRP7000 and how does it compare to the SRP5028 and SRP7016.
A. The SRP7000 is a one-step product that activates glass. The advantage is it allows you to prep and prime the glass with one product. The only down side is you need to make sure the glass is perfectly clean before applying the SRP7000. If, after cleaning, grime, impurities, or release agents are still present it is a good idea to use the SRP5028 and SRP7016 instead. It will guarantee you the strongest bond.

Q. Why do I need a Paint Primer?
A. When you use the SRP5025, it can do several things. First, you can spot prime to cover over paint or exposed metal. Second, it can be used to reactivate urethane that has been exposed for a length of time. Third, you can use it to activate PAAS (Pre-Applied Adhesive System).

Q. I see in the instructions that I have to let the SRP5025 and SRP5028 “Flash Off” before laying down a bead of urethane, what does that mean?
A. “Flash Off” simply means the urethane must be totally dry before urethane is placed on top off it. After you prime with SRP5025 and SRP5028, you need to wait at least 10 minutes for the primer to dry. If the temperature is colder then 60°F, you may need to wait as long as 25 minutes. Failure to do this will cause an improper installation and put the vehicle occupants in danger.

Q. Can I use another company’s Primers with the SRP Urethanes?
A. No. You must use SRP Preps and Primers with SRP urethanes.

Q. Where can I find the expiration date?
A. The expiration date codes are found on the bottom of the bottle and also on the box that the SRP Primers came in. Never use expired products.

Technical Data
For technical data, please see SRP Preps and Primers Sales Sheet or SRP Installers Guide.

Additional Information
Please contact your SRP Sales representative.
SRP Cleaners

Product Overview and How to Use
SRP Cleaners are specially formulated for the AGR industry.

When Used

SRP Glass Cleaner: Use to clean glass before and after AGR installations. Professional strength cleaning without ammonia that can harm plastic surfaces.

SRP Quick ‘N Cleans: New improved 130 heavy-duty towels soaked in a D-Limonene solution. Removes dirt, grime, and urethane from hands, tools, dashboards, and anything else that may get dirty. Clean citrus scent.

SRP Hand Cleaner: High Performance hand cleaner for professional automotive technicians with pumice that removes the most stubborn grease and urethanes from skin. Formulated with D-Limonene and Aloe Vera to soothe skin and prevent chapping.

SRP All purpose Cleaner: This citrus based (D-Limonene) cleaner removes urethane, tar, bugs, gum, grease and other stubborn stains from skin, tools, fabric, and vehicles with ease.

FAQ
Here is a list of the Frequently Asked Questions regarding the SRP Cleaners.

Q. What is D-Limonene?
A. D-Limonene is a citrus based cleaner that is environmentally safe and biodegradable. It works particularly well removing grease, and is really the only thing that removes urethane off of hands, tools, and other items.

Q. What is pumice?
A. Pumice, as referred to in the High Performance Hand Cleaner, are tiny particles that help scrub off dirt, grease, and urethane from your hands.

Q. How many towels are there per bucket of the SRP Quick ‘N Clean?
A. 130 heavy duty towels per bucket.

Q. What is new and improved about the Quick ‘N Clean towels?
A. The towels now come with a weave of purple fiber that allows for better scrubbing.

Additional Information
Please contact your SRP Sales representative.
Appendix C

Other Tools By SRP to Help Your Business

SRP Windshield Repair Kit

SRP Surface Wizard™
SRP Windshield Repair Kit

Professional windshield repair can be a viable addition to auto glass replacement and other automotive related businesses. With the SRP Windshield Repair Kit, you’ll get the job done fast, easily and professionally in minutes.

- **Fast** Complete repairs in a fraction of the time it takes for replacements.
- **Easy** The SRP repair process is quick and simple without sacrificing quality.
- **Flexible** Perform high quality, professional repairs in-shop or mobile
- **Versatile** Ideal for cars, trucks, vans and RV’s.
- **Proven** Thousands of repairs have been done around North America with SRP.

**When Used**
Use the SRP Windshield Repair Kit anytime chips, dings, cracks or small breaks are on laminated glass.

- Repair dings, chips, and breaks up to the size of a half dollar.
- Repair cracks up to the size of a dollar bill.
- Use in-shop or mobile
- As long as the glass is laminated, it can be repaired.
- Can work on cars, trucks, RV’s, and Vans.
- A good add-on business for anyone dealing in automotive glass replacement.
- Costs less than replacements.
- Stops the spread of damage

**SRP Windshield Repair Kit Contents**
The SRP Windshield repair kit comes with everything you need to make professional repairs in minutes. The kit includes:

- SRP Repair Fixture
- SRP UV Curing Lamp
- SRP Vacuum Pump
- SRP Cordless Drill and Charger
- SRP Professional Repair Resins
- Full Range of Repair Tools
- Crack Repair Fixture
- Detailed Instructional Manual
- Instruction Video
- Heavy Duty Tool Box
- SRP Tools and Accessories

**The SRP Difference:**
Unlike other repair kits on the market, you get a simple process, high quality products and exceptional results with the SRP Windshield Repair Kit.
FAQ
Here is a list of the Frequently Asked Questions regarding the SRP Windshield Repair Kit.

Q. What type of glass does the SRP Windshield Repair Kit work on?
A. The SRP Windshield Repair Kit (WSR Kit) will work on any type of laminated glass on automobiles, trucks, vans, and other overland vehicles.

Q. How does the SRP WSR Kit make the break nearly invisible?
A. The space that results from the actual breaking of the glass is full of air and creates a visual disruption. That space is filled with the specially formulated SRP Repair Resin and the air is removed. The resin is then cured, and the final cured product has the same refractive index as average windshield glass.

Q. How long does the average repair take?
A. The average repair takes about 10 minutes to complete, including the time it takes to cure the resin. Bigger or more complex breaks, and those with cracks, may take longer.

Q. Is the location of the break important?
A. While windshield repair is effective in all areas of the windshield, many insurance companies recommend that the repair should not be performed if it is in the driver’s critical vision area.

Q. Is the size of the break important?
A. Yes. Typical SRP repairs are done on breaks the size of a half dollar and cracks up to the size of a dollar bill.

Q. Can the SRP WSR Kit be used on tempered glass?
A. No. The repairs only work on laminated glass. The types of breaks that the kit is designed for rarely occur in tempered glass.

Q. Must the repair be completed indoor?
A. No. The kit is designed for in-shop or mobile jobs.

Q. Can the vehicle be driven immediately after the repair is completed?
A. Yes. As soon as the resin has cured, the vehicle can be safely driven.

Additional Information
Please contact your SRP Sales representative.
SRP Surface Wizard™ Surface Restoration Kit

Introducing the all-purpose surface restoration system that will help you stop scratches from cutting into your bottom line. With the SRP Surface Wizard, you can easily remove a scratch from that valuable piece of glass or plastic.

With a series of different quick change attachments, the SRP Surface Wizard will remove hard water stains from glass and restore plastics and acrylic surfaces that have been damaged by scratches, hazing, and discoloration - that includes headlamp lenses, collapsible windows on convertibles, motorcycle windscreens, boat windows, emergency vehicle light bars, and acrylic skylights just to name a few!

The SRP Surface Wizard is perfect for anyone who wants to remove light wiper blade scratches from auto glass, polish out faded plastics and acrylics, or wants to remove scratches and blemishes from auto, flat, and architectural glass.

The Power To Save Glass Is In Your Hands

SRP Surface Wizard Kit
The SRP Surface Wizard kit contains everything you need to remove costly scratches from glass and plastic surfaces. It even removes hard water stains! The Surface Wizard kit includes:

For Glass
- Heavy to light glass fining disks (20)
- Glass Polishing Pad
- SRP Fining Compound

For Plastics
- 3-Step Plastic Polish Kit
- Plastic Polishing attachment

For Hard Water Stains
- SRP Hard Water Stain Remover
- Scrubbing Pad Attachment

The Surface Wizard Advantage

For Glass
Removes scratches and stains
Removes hard water stains
Removes acid graffiti

For Plastics and Acrylics
Removes scratches
Eliminates hazing
Polishes out fading

Quick Change attachments and pads for easier setup.
FAQ
Here is a list of the Frequently Asked Questions regarding the SRP Surface Wizard.

Q. What is fining?
A. Fining is what you do to remove deeper scratches on auto or architectural glass. The SRP Surface Wizard Kit comes with 4 different grits of glass fining disks for light to heavy scratches. After fining, the polisher wheel returns the glass to its original sheen.

Q. How long does it take to restore glass that has been scratched or damaged?
A. It depends on what type of damage you are removing. A simple blemish on a sheet of glass or a windshield may take only a few minutes to polish out. A scratch that you catch your fingernail on may take up to 20 minutes to fine and polish out. Plastics can be restored in a matter of minutes. It would only take a few minutes to polish out a faded and pitted headlamp, for example.

Q. What type of polish is used on plastics?
A. Part of the Shat R Proof Corp. family of products is Novus® Plastic Polish. Novus Plastic Polish has been serving the plastics industry for over 30 years and is recognized as a giant in the plastics industry.

Q. What voltage does the SRP Surface Wizard run on?
A. 110/120Vac.

Q. What is the water bottle for?
A. It is very important to keep the glass moist and cool while fining and polishing. The water bottle is there to mist the glass during usage.

Q. Can the SRP Surface Wizard be used on tempered glass?
A. Yes, for minor blemishes, light scratches, and hard water stains, the SRP Surface Wizard is ideal.

Q. What type of plastics can I use the SRP Surface Wizard on?
A. Use on any hard surface plastics such as Lexan®, Lucite®, Plexiglas®, Palsun®, and Acrylite®, just to name a few. Do not use Novus #2 or #3 on vinyl and plastics that have any applied coatings on them.

Q. Can I use the SRP Surface Wizard on a large area of glass, like a bus shelter?
A. For small damage, yes. For large areas of damage, use the SRP Glass Restoration System. This system is much larger and will accommodate large areas of glass.

Additional Information
Please contact your SRP Sales representative.