

The Use of
Broken Glass Stabilizer™
for the
Securement of Glass Evidence



Instructors:
King C. Brown MS. CSCSA. CFPH. CLPE.
M. Dawn Watkins MS. CSCSA. CLPE.

Broken Glass Stabilizer

- Crime Scene Investigators and Crime Scene Reconstructionists have in the past been able to photograph glass evidence that was perforating, penetrated or partially shattered by a bullet or an object in commission of a crime as the only available avenue of preserving this type of valuable evidence.
- BGS™ is the powerful new tool for securely recovering all broken glass evidence.



What is Broken Glass Stabilizer™?

BGS™ is a two components system:

- A is Polyurethane “Isocyanate” compressed gas.
- B is Polyurethane “Polyol” compressed gas.
- Contains Amines and Fluorocarbons.
- The two chemicals come in separate pressurized containers, which when sprayed with the provided mixing gun produces yellowish foam, which is extremely adhesive and hardens very quickly to a 2” layer of foam.
- The kits do not contain any Urea Formaldehyde.



Safety Precautions

- Both cans of chemicals are under pressure so goggles should be worn for eye safety, gloves should be worn to avoid contact with the skin, the chemicals, when combined, are extremely adhesive. Should BGS™ come into contact with skin, it should be washed with soap and water to remove.
- Polyurethane components are potentially hazardous and accidents due to carelessness or disregard of cautions and operating instructions may occur.



Safety Specifics

- **BGS™** should be used in a well ventilated area or the user should use a self-contained breathing apparatus.
- **Both of the chemicals are irritating to the eyes, skin and respiratory tract.**
- **BGS™** may cause sensitization by skin contact and/or inhalation.
- **For accidental contact with the eyes flush with water for 15 minutes.**
- **Skin contact, remove contaminated clothing, and wash the skin with soap and water.**
- **For inhalation, remove to fresh air.**
- **For ingestion give large quantities of liquids, DO NOT induce vomiting, consult a physician.**
- **BGS™** Flashpoint is >212 deg. F see the MSDS sheet for other specifications.



Broken Glass Stabilizer™ Kits and BGS™ Costs:

- **BGS™** comes in two convenient sizes for just about any size job and is reasonably inexpensive.
 - **BGS-240 Kit** yields 240 sq. ft. at ½ inch thick with an MSRP of \$295.00.
 - The kit also comes with two tanks, a mixing gun with approximately 4 feet of hose, several wide spray and direct spray nozzles.
 - **BGS-24 Kit** yields 24 sq. ft. at ½ inch thick with a MSRP of \$37.50 and come with two small cylinders, mixing gun, hose and 4 mixing nozzles.
 - **BGS-24 kit** is ideal for crime scene use is inexpensive and easy to use for any CSI. The BGS-24 Kit will cover most vehicles windows, the kit can be reused at a later date & time until the kit runs out of chemical.



Preparation & Application:

- It is best to determine which side of the glass evidence is most critical to the case before application of BGS™.
- BGS™ bonds to the surface and cannot be removed after application.
- BGS™ can only be used on a dry surface so be sure to allow the surface to dry before application.
- Preparation for BGS™ application is very simple simply use blue painters masking tape to mask around the window frame, this provides a barrier so the foam only adheres to the glass.



Preparation & Application:

- **BGS™** is applied directly to the broken glass; if there is a hole in the glass it may be covered with a piece of paper or light cardboard and then sprayed directly over the paper/cardboard. This action provides that no overspray continues through the hole and into the crime scene or vehicle.
- **BGS™** then hardens within minutes to a protective coating that allows the investigator to remove the glass from the frame with no danger of further damage to the window.



Crime Scene Preparation of a Broken Residential Window:

- **Photograph the damaged glass with & without scale.**
- **Note the specifics of each break or bullet hole.**
- **Measure each break or bullet hole for placement.**
- **Process the window for Latent Fingerprints & recover any fingerprints of value.**
- **DNA Swab the window area if needed.**

Crime Scene Preparation of a Broken Residential Window:

- **Determine which side to spray with BGS™.**
- **Tape the edges of the window frame.**
- **Cover the holes with heavy paper twice the size of the hole to prevent over spraying to the residence interior and to prevent adhesion to the interior side of the window.**
- **Prepare the BGS™ Equipment, put on gloves, goggles and a mask.**
- **Turn on tanks (if using BGS-240 Kit).**

Crime Scene Preparation of a Broken Residential Window:

- **Spray material from approximately 12 inches away, bottom first then left to right.**
- **Cover the entire surface, allow to dry for 10 minutes.**
- **Remove the tape around the frame.**
- **Remove the window as a cohesive mass.**

Residential Window



Crime Scene Preparation of a Bullet Hole in a Vehicle Window:



- **Photograph the bullet hole in the glass with & without scale.**
- **Note the specifics of each bullet hole.**
- **Measure each bullet hole for placement.**
- **Process the window for Latent Fingerprints & recover any latent fingerprints of value.**
- **DNA Swab the window if needed.**

Crime Scene Preparation of a Bullet Hole in a Vehicle Window:



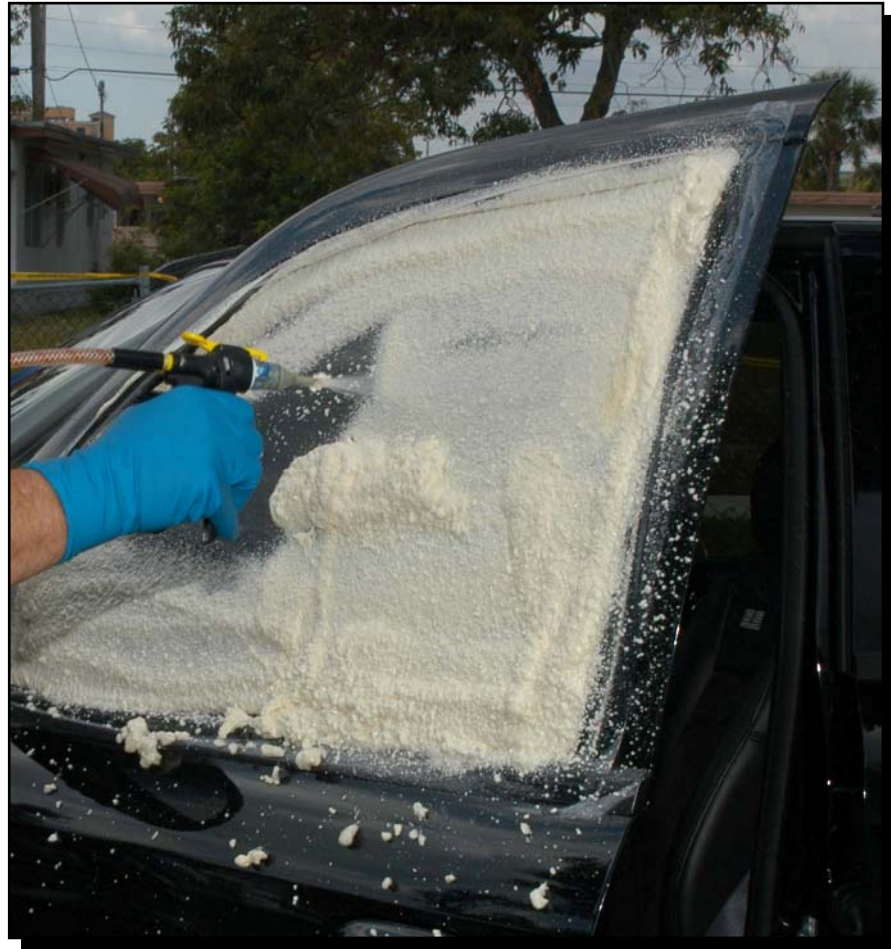
- **Determine which side to spray with BGS™.**
- **Tape the edges of the door's window frame.**
- **Cover the holes with heavy paper twice the size of the hole to prevent over spraying to the vehicle's interior and to prevent adhesion to the interior side of the window.**
- **Prepare the BGS™ equipment, put on gloves, goggles and mask.**
- **Turn on tanks (if using BGS-240 Kit).**

Crime Scene Preparation of a Bullet Hole in a Vehicle Window:



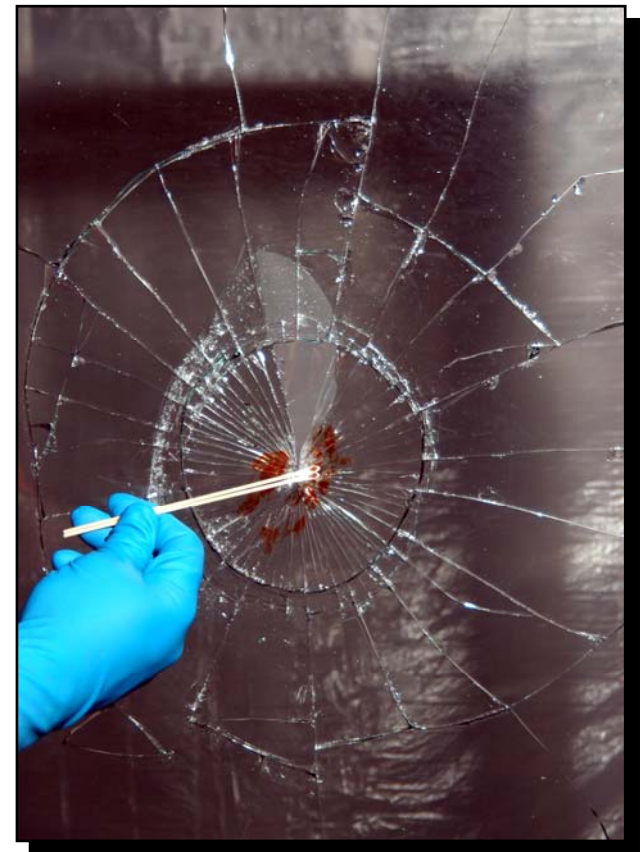
- **Spray material from approximately 12 inches away, bottom first then left to right.**
- **Cover the entire surface, allow to dry for 10 minutes.**
- **After the vehicle window is dry the vehicle can be transported to a processing bay for further evidence collection.**

Vehicle Window



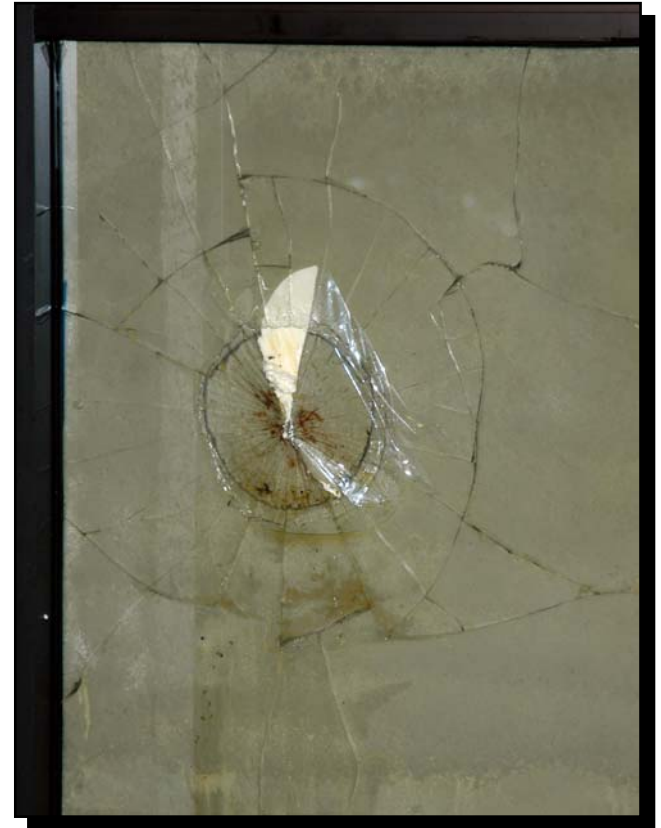
Biological Evidence Stained Broken Windows:

- **Photograph the damage and the biological evidence on the glass with & without scale.**
- **Note the specifics of the biological evidence.**
- **Measure the biological evidence for placement.**
- **DNA Swab the Window.**
- **Process the window for Latent Fingerprints & recover any Latent Fingerprints of value.**
- **Determine which side to spray with BGS™, usually opposite the biological evidence.**
- **Tape the edges of the window frame and protect from over spraying.**



Biological Evidence Stained Broken Windows (Continued):

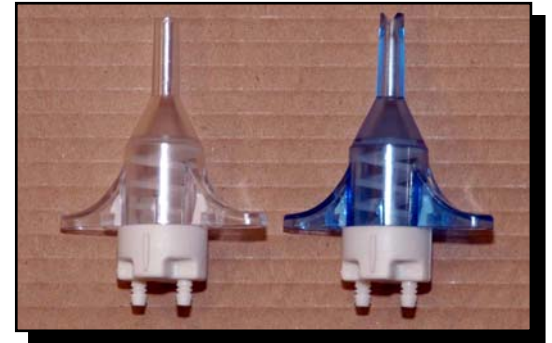
- **Cover the holes with heavy paper twice the size of the hole to prevent over spraying to the interior and to prevent adhesion to the interior side of the window.**
- **Prepare the BGS™ equipment , put on gloves, goggles and mask.**
- **Turn on Tanks if using BGS™ -240 Kit.**
- **Spray Material from Approximately 12 inches away, bottom first then left to right.**
- **Cover the entire surface, allow to dry for 10 minutes.**
- **After the vehicle window is dry the vehicle can be transported to a processing bay for further evidence collection.**



Broken Glass Recovery and Analysis:

After the recovery of the secured broken glass be sure before removal from the window mark the BGS™ with a sharpie pen as follows:

- **Which way is Up.**
- **Interior or Exterior Sides.**
- **Case Number.**
- **Date & Time Recovered.**
- **Location Recovered from.**
- **Initials & badge number of the investigator.**
- **BGS™ secured glass can then be taken to the laboratory to be tested, stored and analyzed. BGS™ has made the glass stable, safe and can provide an excellent court display.**



Bullet Holes in Window Glass:

- Photograph the bullet hole with & without scale.
- Note the specifics of the bullet hole.
- Measure the bullet hole for placement.
- Process the window for Latent Fingerprints.
- Recover any Latent Fingerprints of value.
- You may include a Scale before the application process of BGS™.
- Determine which side to spray with BGS™.
- Tape the edges of the window frame and protect from over spraying.



Bullet Holes in Window Glass:

- The bullet hole may be covered with heavy paper twice the size of the hole to prevent over spraying to the interior and to prevent adhesion to the interior side of the window.
- Prepare the BGS™ equipment.
- Put on gloves, goggles and mask.
- Spray material from approximately 12 inches away, bottom first then left to right.
- Cover the entire surface, allow to dry for 10 minutes.
- After the BGS™ is dry, the bullet hole can be photographed and transported for further evidence collection.



BGS™ Clean-Up

- **Goof Off® may be used to clean up any over spraying.**
- **Be sure to test the surface before the use of Goof Off® to prevent damage to the surface.**



Purchasing Broken Glass Stabilizer:

BGS™ can be purchased through:

- **Arrowhead Scientific, Inc. 1-800-953-3274**
- **Aranar Glass Tech, LLC**
312 Clematis Street; Suite 407
West Palm Beach, Florida 33401
Phone: 561-833-0082 Fax: 561-833-2005

For more information you can view the video of an actual demonstration at

www.BGSfoam.com



Credits:

Power Point Presentation By:

King C. Brown MS. CSCSA. CFPH. CLPE.

M. Dawn Watkins MS. CLPE. CSCSA.

Broken Glass Stabilizer™ and BGS™ By:

Aranar Glass Tech, LLC

312 Clematis Street Suite 407

West Palm Beach, Florida 33401

561.833.0082

Contact: Jeffrey H. Diamond, President

Patents Pending

