

“Wet glaze” attachment system for safety and security window film

To enhance the protective capabilities of safety and security window films, attaching the filmed glass to the window or door frame may be required. This is especially true for hurricane protection and some bomb blast requirements but it also improves the protection against entry from “smash and grab” type burglars.

While there are numerous ways to attach the film to the frame, the “wet glaze” method is one of the easiest and least expensive. This attachment system consists of applying a Dow 995 Structural Silicone Sealant to the film and the frames by using a caulking gun. While the film is adequate in containing the shards of broken glass, the broken glass/film composite can be removed from the frame if enough pressure is exerted. This pressure can come from air pressure (hurricane or bomb blast) or from physical pressure from an intruder. The application of the attachment system can resist these forces well beyond what an unattached film could resist.

The installation instructions listed below are for the installation of the sealant only. It is assumed that the film has already been installed satisfactorily to the glass.

Materials

Sealant: Dow 995 Structural Silicone Sealant is a single component neutral cure system, which will dry at room temperature. Dow 995 is recommended since we have test data to support its use as an anchoring system. Tests using the Dow 995 include both bomb blast and hurricane testing. The Dow 995 is available from your service center and comes in black, gray and white.

The sealant should be fully cured within seven (7) days and possesses excellent bond strength and elongation after curing. The drying or “tooling time” is 8 to 15 minutes after application. The sealant only comes in a 20 oz. “sausage” and a larger caulking gun is required. We suggest the Cox caulking gun – part number 0764.

Backer Rod: Backer rods are simply expanded urethane foam in circular form, which come in various diameters. Macklenburg-Duncan (MD) is probably the best known manufacturer of the backer rods but other manufacturers’ products will work equally as well since the product is used as a spacer and performs no other function. These products are available at any home center or hardware store. They are usually found in the insulation section.

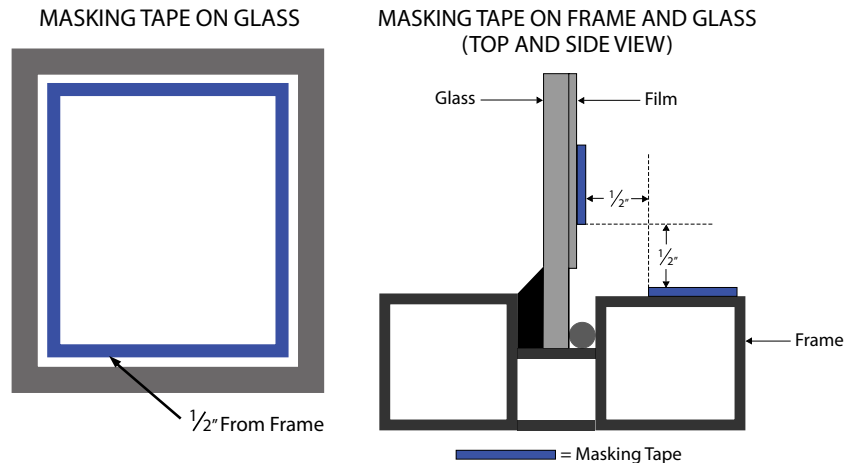
Preparation for Installation

Step 1: Clean window or door frames:

The best way to clean the frames is to use isopropyl alcohol with a lint free towel. Simply wipe the frames and let dry. Stubborn stains may require some rubbing to remove. Make sure frames are dry prior to installing sealant.

Step 2: Mask area to be caulked.

Using a good grade of painter’s masking tape, mask around the entire perimeter of the filmed glass and the frame. Masking tape should be a minimum of 1 to 1 ½” in width to provide adequate protection. For bomb blast protection, you should mask the film a minimum of ½” away from the frame and ½” away from the glass. For hurricane protection, you should mask a minimum of ¼” away from the glass and ¼” away from the frame.



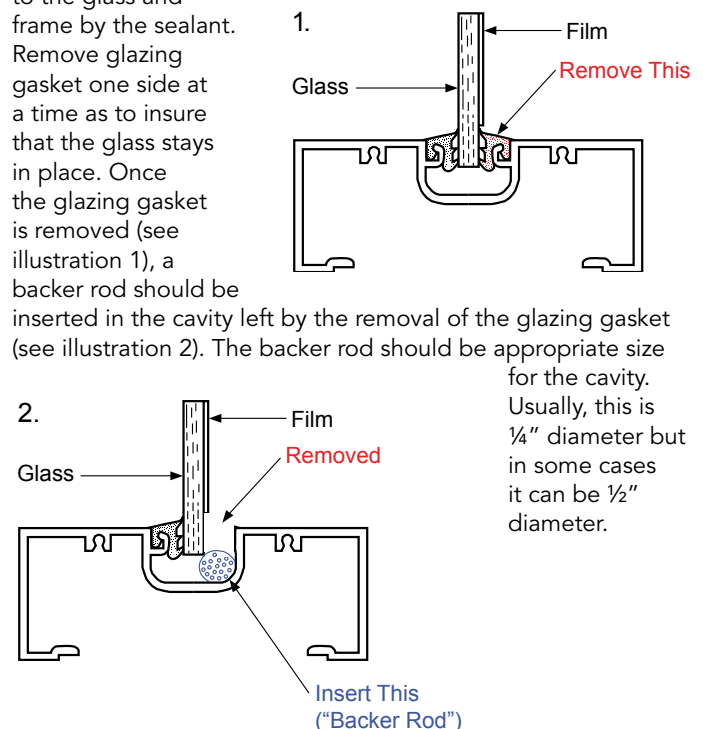
Step 3: Removing glazing gaskets and inserting backer rod:

Glazing gaskets should be removed to provide better bonding to the glass and frame by the sealant.

Remove glazing gasket one side at a time as to insure that the glass stays in place. Once the glazing gasket is removed (see illustration 1), a backer rod should be

inserted in the cavity left by the removal of the glazing gasket (see illustration 2). The backer rod should be appropriate size

for the cavity. Usually, this is ¼” diameter but in some cases it can be ½” diameter.



Application of Sealant

Step 1: Dry the filmed glass and framing members:

Using a dry towel, make certain that all the surfaces where you need to apply sealant are dry to the touch. Any residual water will negatively affect the sealant's ability to bond to the surfaces.

Step 2: Preparing the caulking gun:

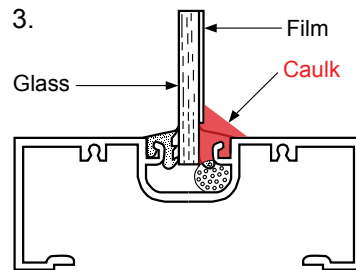
The tip of the caulking gun should be cut to allow the correct amount of sealant to be discharged from the gun. If you are sealing with a 1/2" coverage on the film and the frame, the opening should be 3/4" to 1" in diameter. If you are sealing with a 1/4" coverage on the film and the frame, the opening should be 1/2" to 3/4" in diameter. Make certain to use drop cloths in any areas where the sealant could possibly drip.

Step 3: Applying the sealant:

Place the tip of the caulking gun in the center of the channel formed by the masking tape and apply the sealant. Do this in as continuous a manner as possible avoiding stops and starts and go around the entire perimeter of the window. Make certain that sealant is completely filling the cavity between the frame and the glass.

Step 4: "Tooling" the sealant:

Smooth or 'tool' the sealant bead with a flat plastic putty knife or spatula to create a flat triangular bead when finished (see illustration 3). This should be done within 5 minutes after



application of the sealant. The tool should be wide enough to cover the width of the bead but not so wide as to bridge it.

Once the entire perimeter is tooled, the masking tape can be removed. This should be done as soon as tooling is completed so

the excess sealant will come away cleanly. Use every precaution when removing the tape since the excess sealant might come into contact with surroundings. Any residual sealant can be wiped away with a dry towel if done quickly. If not, then Xylene can be used to clean away the sealant that the towel could not remove.

Summary

By following these instructions, you should be able to create a satisfactory bead that will provide your customer with added protection for their windows and doors. Make certain you read any instructions provided by the manufacturer regarding the use of their products. If you have not had any experience in applying sealant, it is strongly suggested that you practice on some windows prior to applying sealant on a customer's windows.

www.solargard.com

Solar Gard® films, manufactured by Bekaert Specialty Films, LLC
4540 Viewridge Avenue, San Diego, CA 92123
877.273.4364

