3form Glass Handling and Maintenance

RECEIVING

These instructions should be made available to your receiving department personnel, your field captain, and any other individual, which may be required to receive delivered goods.

The following steps should be taken to avoid damage to 3form Glass after it has been received on the job-site:

1. Plan glass shipping schedule to minimize job site storage time and to avoid off-job storage and re-handling.

2. Minimize handling by scheduling shipments by floors and by initially locating crated products as close to their installation as possible.

3. Glass must never be stored or transported in a horizontal orientation.

4. Carefully inspect each shipment at time of delivery, paying particular attention to the crating and other packaging. Note on the freight bill or delivery receipt any evidence of shortage, abuse, damage, or wet packaging and have the delivering driver sign the receipt or freight bill. Immediately open any crate or packaged shipment, ideally in front of the driver, on which damage or abuse is evident from the inspection of the exterior. It is recommended to keep a camera available to take photos of any damaged material. Be suspect of any materials "laying down" on the floor of the carrier's vehicle. Often if a crate does not originally look damaged, the goods inside the crate may be damaged.

STORAGE

Follow these guidelines to avoid damage to 3form Glass, while stored on-site:

1. Store crated glass in a cool, dry, well ventilated area where it will not be subject to rain or direct sun. If storage is expected to be prolonged, or in areas where temperature differentials can become extreme, it is highly recommended that temporary temperature and humidity controlled storage facilities be utilized to prevent damage to laminated products.

2. If not opened immediately, cover cases with plastic or canvas. Sufficient air circulation (under, across the top, around the sides, and between the crates) is encouraged to minimize potential condensation within the crates. Tenting of the cover may be advised in order to achieve the necessary circulation.

3. Secure crates to building columns if possible, otherwise stand several cases together and fasten them to each other with scrap lumber, to prevent the crates from tipping onto their sides and possibly damaging the glass inside.

4. 3form Glass must never be stored in standing water.

INSTALLATION

3form recommends that Pressed and Poured Glass be installed and handled by an experienced glazier.

SEALING

When installing laminated glass, 3form generally recommends resilient non-hardening sealant compounds, tapes or elastomeric gaskets. 3form Glass should not be exposed to direct contact with organic solvents. For exterior applications, weeps systems should be incorporated to prevent exposure to water or humid air for prolonged periods. Either exposure can lead to delamination, haziness, or other discoloration along the

laminated glass edge. It is recommended that the compatibility between the sealant and the 3form Glass be examined for the same reasons. It is important to remember that although sealant compatibility with 3form Glass is an important from an aesthetic standpoint, the specifier must also consider a number of important factors prior to selecting a sealant including, but not limited to:

- Resistance to water penetration into the structure
- Sealant weatherability. (physical or aesthetic affects of UV exposure)
- Mechanical properties, such as the ability to accommodate thermal movement, adhesion, etc.
- Compatibility with the other elements in the glazing system.

3form recommends the following Silicones:

For glazing/sealing purposes: SilGlaze II SCS2801 (3form Part # 3-05-0069)

For structural glazing purposes: SilPruf SCS2002 (3form Part # 3-05-0071)

Both of these silicones are manufactured by Momentive Performance Materials (formerly known as GE Silicones). For further recommendations on adhesives, please reference the “3form Adhesives Selection Matrix.”

POINT SUPPORT LIMITATIONS

Poured Glass NOT permitted for vertical point supported applications

Pressed Glass panels must be tempered – no exceptions

7/16” minimum thickness (lites are no thinner than 3/16” over 3/16”)

Use a uniform interlayer (eg. Wood, HighRes, Fabric, Pressed Color etc.)

Use a balanced layup (eg. ABCBA vs. ABCDE)

Point supported panels cannot have any glass touching metal, spacers are always required. At least one surface spacer must be compressible and of a minimum 1/8” in thickness.

Holes must be positioned per 3form specifications:

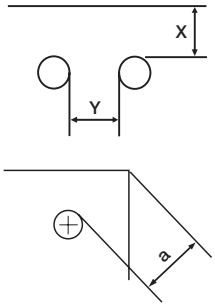
Circular holes for point support applications must have a minimum diameter of 5/8” (15.8 mm).

Placement of Holes:

The minimum distance (X) from any edge of the glass to the nearest point on the rim of a hole or cutout must be 1¼” (32 mm) for tempered glass

The minimum distance (Y) between the rims of adjacent holes must be 1” (25 mm).

Holes near corners must be located so that the nearest edge of the hole is a minimum of 3” (76 mm) from the corner (a ≥ 3”).



FABRICATION LIMITATIONS

All inside corners of cut-outs must have a minimum radius of 3/8” (9.53 mm). Cut-outs with radii smaller than 3/8” result in areas of stress concentrations that can result in glass breakage. The edges of holes and small cut-outs must be at least 2” (50.8 mm) from the edge of the glass panel. (1¼” (32 mm) for pressed glass using tempered glass lites) The edge of any hole or cut-out larger than 0.5 ft^2 should be located at least 5” from the edge.

MAINTENANCE AND CLEANING

All 3form Glass should be cleaned with a soft, clean, grit-free cloth, mild soap, detergents, or a slightly acidic cleaning solution. Rinse immediately with water and promptly remove excess rinse water with a clean squeegee. Grease and excess sealant materials should be removed with commercial solvents such as mineral spirits or naphtha. Follow with a normal wash and rinse. Avoid excessive application of all other solvents.

Razor blades or other sharp objects should not be used to clean glass surfaces. Such exposure will cause permanent damage.