3form® poured glass™

Product Description

3form Poured Glass is produced by encapsulating organics and fabrics with a poured resin. This artisan technique creates a beautiful 3-dimensional appearance without sacrificing clarity or the natural beauty of the interlayer materials. 3form Poured Glass is based on a patent-pending liquid lamination technology which sets itself apart in two ways: first, the lamination process allows even distribution of objects throughout the glass, and second, it makes possible clean, exposed edges that allow for a frameless application.

FEATURES AND BENEFITS

- Certified for use in safety glazing applications
- Made to order size, ready to install
- Timeless properties of glass - durable, long-lasting, easy to care for
- Non-combustible surface finish
- Optically clear - to showcase crisp aesthetic interlayers
- Easy to clean
- Excellent chemical resistance - reduces harm from cleaning agents

AVAILABLE INTERLAYERS

Bubble
Cascade: Lime, Scarlet, Tangerine, Turquoise
Creekside*
Curly Willow*
Harmony*
Larkspur*
Pineapple Weave
Seaweed*
Sequins Silver

*Poured Glass utilizing natural products as a decorative interlayer may change in appearance over time. Natural materials are also subject to inherent inconsistency in color, texture and shape.

GLASS TYPES

3form Poured Glass is produced with standard clear float glass. Low Iron (colorless) or specialty glass finishes and etching may also be incorporated with 3form Poured Glass. Specialty glass products are custom and additional fees apply. 3form Poured Glass is not able to be produced with tempered glass.

PANEL SIZES AND TOLERANCES

Panels are offered in 4' (1.2 m)* widths and 4' and 8' (1.2 and 2.4 m) lengths. Standard gauge is 3/4" (19.0 mm)**. In addition to these sizes, check with your 3form Representative about custom sizes and thicknesses which may also be available. All dimensions and squareness (standard or custom) are subject to a +/- 0.125" (30 mm) tolerance.

*Cascade interlayers limited to 36" (0.9 m) widths
*Pineapple Weave interlayer is limited to 43" (1.1 m) widths
**Larkspur standard gauge is 7/8" (22.2 mm)

Gauge tolerances are an inherent part of working with resin. Given the unique casting process for 3form Poured Glass a given gauge is subject to a +/- 1/8" (3.1 mm) thickness tolerance.

Specifications

FLAMMABILITY

3form Poured Glass uses a non-combustible surface finish. As the outer surfaces are glass, Poured Glass can be used in all glazing applications, interior finish, and light transmitting applications.

SAFETY GLAZING

3form Poured Glass has passed the boil and impact requirements of ANSI Z97.1-2004 *American national Standard for Safety Glazing materials Used in Buildings - Safety Performance Specifications and Methods of Test*. Poured Glass also qualifies for 16 CFR 1201 (Consumer Product Safety Standard / CPSC), *Safety Standard for Architectural Glazing Materials*.

PANEL WEIGHT

THICKNESS (INCHES)	WEIGHT FLUX (LB/FT²)
3/4" (19.0 mm)	7.5 lb/ft² (36.6 kg/m²)
7/8" (22.2 mm) Larkspur only	8.6 lb/ft² (41.8 kg/m²)

EXPANSION/CONTRACTION ALLOWANCES

The resin used in manufacturing of 3form Poured Glass will expand and contract nominally with fluctuations in temperature. Because the glass does not expand and contract at the same rates as the resin, cracking or delamination may occur if panels are subjected to temperature fluctuations.

USAGE LIMITATIONS

3form Poured Glass is not suitable for use in exterior applications. Do not install 3form Poured Glass in applications that may experience wide temperature fluctuations.

FABRICATION LIMITATIONS

- 3form Poured Glass is NOT to be horizontally or vertically point supported
- 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 cut-outs must be at least 2" (50.8 mm) from the edge of the glass panel
- The edge of any cut-out larger than 0.5 ft² should be located 5" from the edge
- The minimum diameter cut-out that can be cut in poured glass is 3/8" (9.5 mm)

EDGE SEALING

3form Poured Glass panels that incorporate organic or fabric interlayers should be either fully framed of edge sealed with SilGlaze II SCS 2801 Silicone when used in wet/high moisture applications. This will prevent moisture from wicking into the interlayer. If moisture is allowed to wick into the interlayer, aesthetic, mechanical and physical properties may be compromised.

DEFLECTION

3form Poured Glass will exhibit different amounts of deflection given a variety of factors: fastening techniques, loads, thicknesses and panel dimensions to list a few. The 3form Technical Help Desk can assist you with general deflection guidelines for your application. If your application has specific engineering requirements, please contact the 3form Product Technology team for additional direction.

HEAT FORMING/COLD BENDING

3form Poured Glass cannot be heat formed or cold bent and is only sold as flat sheets.

EDGE FINISHING

3form Poured Glass comes standard with a swiped edge free of glass shards. In addition, edges can be polished or beveled, which is the recommended finish for applications where the edges are exposed.

STORAGE

Follow these guidelines to avoid damage to 3form Poured Glass while in storage:

1. Store 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 3form Poured Glass

2. Cover crates with plastic or canvas. Sufficient air circulation (under, across the top, around the sides, and between the crates) is encouraged to reduce the potential of condensation within the crates. Tenting may be required 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. Never store 3form Poured Glass in standing water.

INSTALLATION GUIDELINES

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

SOUND TRANSMISSION CLASS (STC) VALUES FOR VARIA ECORESIN

Measurement protocol: ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

THICKNESS	STC VALUES
3/4" (19.0 mm)	36

THERMAL INSULATION VALUES FOR POURED GLASS

GAUGE	WINTER U-VALUE	SUMMER U-VALUE	% TOTAL SOLAR ENERGY REJECTED	RELATIVE HEAT GAIN	SHADING COEFFI-CIENT	SOLAR HEAT GAIN COEFFI-CIENT
3/4" (19.0 mm)	1.01	1.00	34	167	0.76	0.66

Selected Mechanical and Physical Properties for 3form Poured Glass

		0.236" (6 MM)	
PROPERTY*	**ASTM METHOD**	**SI**	**U.S.**
GENERAL			
Continuous Max Use Temperature	–	100°C	212 °F
MECHANICAL			
Youngs Modulus	D 623 @ 5.0 mm/min (0.2 in./min)	72 GPa	10,442,000 psi
Shear Modulus	D 623 @ 1.27 mm/min (0.05 in./min)	2,000 GPa	4,350,000 psi
Flexural Strength	D 790 @ 1.27 mm/min (0.05 in./min)	83 MPa	12,000 psi
Hardness (Moh's Scale)	—	—	6-7
Knoop Hardness	C1326	585 kg/mm^2	832,065 lb/in^2
Safety Glazing	ANSI Z97.1 @ 75°F (23.8°C)	PASSES	

* Unless noted otherwise, all tests are run @ 73°F (23°C) and 50% relative humidity, using specimens with a thickness as indicated.

Cleaning Instructions

3form Poured Glass, like all glass materials, should be cleaned periodically. Since glass products can be permanently damaged if improperly cleaned, 3form recommends strict compliance with the following procedures for properly cleaning glass surfaces.

DO NOT:

- Use scrapers of any size or type for cleaning glass.
- Allow dirt and residue to remain on glass or adjacent materials for an extended period of time.
- Begin cleaning glass without knowing if a coated surface is exposed.
- Begin cleaning without rinsing excessive dirt and debris.
- Use abrasive cleaning solutions or materials.
- Allow metal parts of cleaning equipment to contact the glass.
- Trap abrasive particles between the cleaning materials and the glass surface.
- Allow splashed materials to dry on the glass surface.

DO:

- Clean glass when dirt and residue appear.
- Exercise special care when cleaning coated glass surfaces.
- Soak the glass surface with clean water and soap solution to loosen dirt and debris.
- Use a mild, non-abrasive commercial window cleaning solution.
- Use a squeegee to remove all of the cleaning solution.
- Dry all cleaning solution from window gaskets, sealants and frames.
- Clean one small area and check to see if procedures have caused any damage.

IMPORTANT

If a cleaning material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is not guarantee that actual end-use conditions have been duplicated. Therefore, these results should be used as a guide only and it is recommended that the user test the products under actual end-use conditions.

For more information, please visit 3-form.com or call 877-649-2670.