

THERMALBOND® V2100 and V2200 Application Guide

THERMALBOND® V2100 and V2200 structural glazing spacers are finished goods, supplied in tape form, which are typically used in conjunction with structural sealants.

Primary Applications:

THERMALBOND® V2100 and V2200 series are the most commonly used structural glazing spacers in two and four sided structural glazing. THERMALBOND® performs a load bearing function while the structural sealant cures. Typical applications include curtain walls, storefronts, skylights, and other applications.

THERMALBOND® is designed to hold the glass, stone, ACM, or other cladding material at a set distance from the substrate to create the proper joint design. The products are available in a number of sizes and configurations to be used in conjunction with structural sealants.

The THERMALBOND® adhesive system temporarily secures glazing panels to the framework in shop fabrication; either for unitized structural silicone glazing or cladding systems.

THERMALBOND® adhesive system can also temporarily secure lightweight veneers to substrates while the structural sealant cures. The bonding can reduce weight and minimize the need for exposed fasteners when used with thin stone, tile, architectural panels and other lightweight components.

THERMALBOND® Products:

THERMALBOND® V2100 series is designed for the rigors of glazing either in the field or a controlled production environment. The superior load bearing ability, both in compression and shear, provides an additional design safety factor to ensure that critical structural sealant spacing is maintained.

THERMALBOND® V2200 series is slightly more conformable than V2100 and especially well suited for shop fabrication or field installation of two sided systems.

Design Considerations:

Thermal Resistance: The THERMALBOND® core is cellular foam that contributes to its low thermal conductivity. The foam acts as a thermal break to help reduce heat loss / gain through the curtain wall system, and can assist in reducing condensation at framing members. Thermal interruption is an important consideration when using insulated glass units, which commonly use a metal spacing material that can act as a thermal bridge, potentially exposing the curtain wall framing to exterior temperatures.

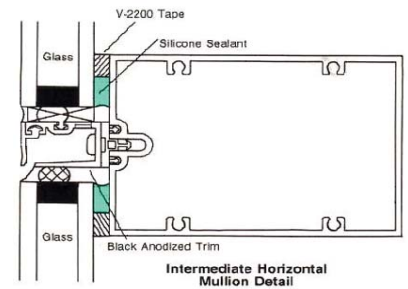
Compatibility: THERMALBOND® spacers have been tested by many structural sealants manufacturers and have not been found to have any compatibility issues. The products have been used with many of the construction materials frequently used for structural glazing and cladding. THERMALBOND® spacers will not significantly affect the color, physical properties or adhesion of compatible structural sealants.

Temperature Stability: The THERMALBOND® core has been designed to function under a variety of terrestrial conditions, from the cold winters of Antarctica to the hot temperatures of the Sahara desert and the Arabian Peninsula.

Curing of Silicone Sealants: THERMALBOND® foams are designed with an open cell structure to allow airborne moisture to reach the silicone for optimal curing.

Three Sided Adhesion: THERMALBOND® foam core is designed to avoid creating a three sided adhesion situation that could cause premature failure in the structural sealant over time.

THERMALBOND® is a registered trademark.



Saint-Gobain Performance Plastics S.A.
Avenue du Parc 18
B-4650 Chaineux (Belgium)
Phone : +32/87.32.20.11
Fax : +32/87.32.20.51
www.fff.saint-gobain.com
E-mail : sgpl.chaineux@saint-gobain.com

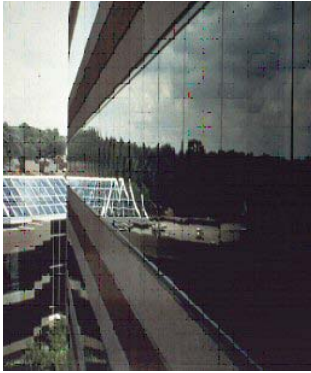
April 2008

High Performance Adhesive System: The aggressive adhesive system acts as a fabrication aid to securely anchor the spacer in place and to maintain proper alignment during fabrication while the structural sealant is being installed and cures.

THERMALBOND® adhesives are designed as a fabrication aid and are not intended to reduce or replace the structural sealant recommended by the structural sealant manufacturer or to be a part of the permanent fastening system. THERMALBOND® materials are designed to provide a spacing function only.

Four-sided on-site glazing, or cladding, requires the use of supplemental fasteners to hold the panels in place until the structural sealant has cured per the recommendations of the structural sealant manufacturer.

The thickness of the spacer required for a particular installation is determined through the spacing requirements of the structural sealant manufacturer.



THERMALBOND® products generally do not require maintenance after the structural sealant/adhesive has cured. THERMALBOND® products resist deterioration due to ultraviolet light and weathering. Industry standards often recommend annual inspections of the structural silicone systems to assure the integrity of the structural sealant and the weather proofing systems.

Monolithic glazing, or other applications where the THERMALBOND® is visible in the sight line, should take a number of potential visual effects into consideration. The visual considerations include air entrapment during assembly, shifting of the assemblies over time and dimensional mismatch. Special configurations in gray or with adhesive on one side may be appropriate depending on the design. Contact your local Saint-Gobain representative for special monolithic glazing design literature and potential solutions to supplement this guide.

General Application Procedures, suggested practices:

1. Clean the surface per the structural sealant manufacturer instruction. Typically this is finished with an isopropyl alcohol wipe (IPA), but stronger solvents may be necessary if oils or other contaminants are on the surface. Materials should generally be above 60°F/ 16°C for proper bonding.

2. Apply the THERMALBOND® tape to the surface by aligning the tape and then using firm hand pressure to make intimate contact between the adhesive and the substrate. A precision placement tool, such as Saint-Gobain's HA-10 applicator, may be used for precision placement.

3. Butt the tape together in the corners to create a tight joint.

4. "Dog Ear" the liner by lifting up the end of the liner and bending it away from the tape at a 90° angle. The resulting tab allows easier panel placement as the adhesive is covered, preventing premature bonding during assembly.

5. Use spacing blocks, slightly thicker than the THERMALBOND®, to prevent the panel from bonding with the exposed adhesive face until the unit is in the proper position is one option. (Or place the panel directly onto the liner, accurately positioning it in place.) Remove the first block to "tack" the cleaned panel in place. Remove the liner by pulling on the "dog ear" section. Press the panel securely around the perimeter to make contact. Ensure that minimal amounts of air are left between the panel and the THERMALBOND® adhesive system. NOTE: Visual consideration should be taken into account if the THERMALBOND® will be in the sight line.

6. Install the structural sealant per the manufacturer's instructions.

Note: This application procedure is intended for the general installation procedure and may require modification for your specific design to attain the desired goals.

