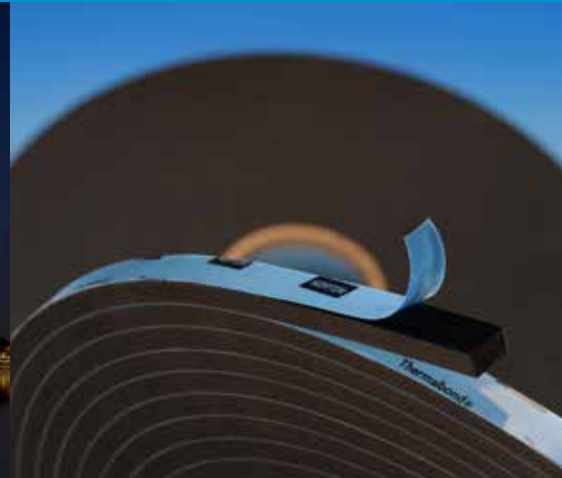


# Distinct Advantage

# Thermalbond® Spacer Tapes



## Load Deformation Performance

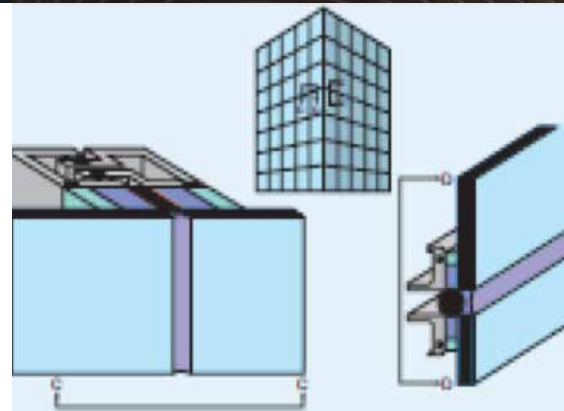
Structural Silicone Glazed (SSG) façade systems depend on the performance of the structural silicone to ensure the glass remains fixed in the aluminum or steel substructure for the life of the building. The silicone joint design takes into consideration numerous factors, including weight of components in shear mode, negative and positive wind loading (affected by building location, height, nearby buildings, etc.), and seismic activity. It is critical during the fabrication of the SSG system that no deviation is made to the specified sealant dimensions.

In the SSG system, the spacer tape ensures that the gap for the silicone remains as specified and stable during the cure cycle of the structural silicone. While some spacer tapes appear to have the proper dimensions at the beginning, it's important to understand how they perform once the weight of the glass is in place and the silicone is applied in the joint.

As stated in the *Tremco Sealant Solutions Structural Silicone Glazing Manual* (Tremco Europe): "The SSG joint must be static during cure to prevent stress on the sealant as it cures and develops full adhesion and strength."

Sika notes in their *Structural Silicone Glazing General Guidelines, Version 3*: "Bonded units should not be exposed to stress until certain strength has developed."

This Load Deformation evaluation was conducted to understand how the thickness of the spacer is affected by the normal loading of the glass during fabrication. Any deformation in thickness means the joint is moving during the cure cycle and the end joint dimension is not as originally specified. In either case, there is a risk that the structural silicone joint is compromised.

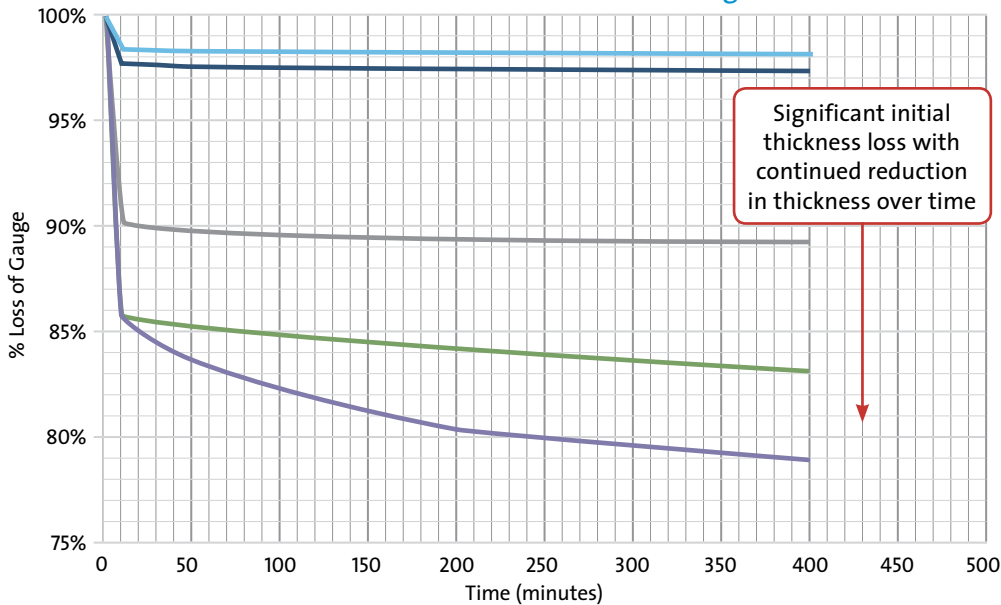


## Thermalbond® Spacer Tapes

- More than 35-year history in SSG
- Open cell structure to optimize silicone curing
- Durable, high-performing acrylic adhesive
- Firm, high-density polyurethane foam core for joint stability

## Thermalbond® vs. Closed Cell EVA Spacer Tape

### Load Deformation 800 minutes with 25 kPa Loading



Thermalbond V2108 Thermalbond V2208 EVA Tape - SEA EVA Tape - China EVA Tape - EUR

NOTE: EVA tapes from Asia and Europe markets

### Test Methodology

- A constant force of 25 kPa is applied on the samples for an 800-minute period (13+ hours)
- 25 kPa corresponds to the load of a standard window in SSG designs
- Calculation assumption:  
2.5 LM x 1.5 LM x 10 mm IG = 50 kg/m<sup>2</sup> glass weight;  
8 LM x 8 mm tape width = .064 m<sup>2</sup> tape = 2,922 kg/m<sup>2</sup>/28 kPa loading
- Tape gap variation is measured and load deformation is expressed in % of original thickness
- Measurements performed using an Anton Paar MCR301 plate/plate rheometer

## The Results

### Thermalbond V2100 and V2200 Series:

- Minimum deformation < 3%, from the 25 kPa loading
- No continued gauge loss during the 800-hour test period (13+ hours)

### EVA Spacer Tapes:

- Initial deformation approximately 5% from initial loading
- Continued gauge loss from the 25 kPa load for a 10-hour period
- Data demonstrates a concern with closed cell EVA tapes to sufficiently hold the glass load during the cure cycle of SSG façade systems.

Thermalbond® is a registered trademark of Saint-Gobain Performance Plastics.



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