

Silicone Structural glazing guidelines

Following are the correct procedures used internationally to do the structural glazing.

1. The aluminum should be at least 15 micron anodized or pvdf coated. The aluminum should not be mill finish.
2. Cleaning of the glass and aluminum with two cloth cleaning method and with 50:50 solutions of iso propyl alcohol and water.
3. Right grade of silicone and spacer tape is to be use. The silicone should be specified structural silicone by the manufacturer. It should not be a weather sealant.

Sealant bite for windload On rectangular glass panels .

- **Wind load**

$$\text{Byte} = \frac{\frac{1}{2} \times \text{shorter side of the glass} \times \text{wind load}}{138}$$

- **Dead load**

$$\text{Byte} = \frac{\text{weight of the Glass (Kg)/Perimeter (mtr.)} \times 1000}{703}$$

For example: if a glass is 5mm thick ,with 1000 mm width and 1500 mm height and the area wind load is given 2 kpa. Following will be the calculations

For wind load

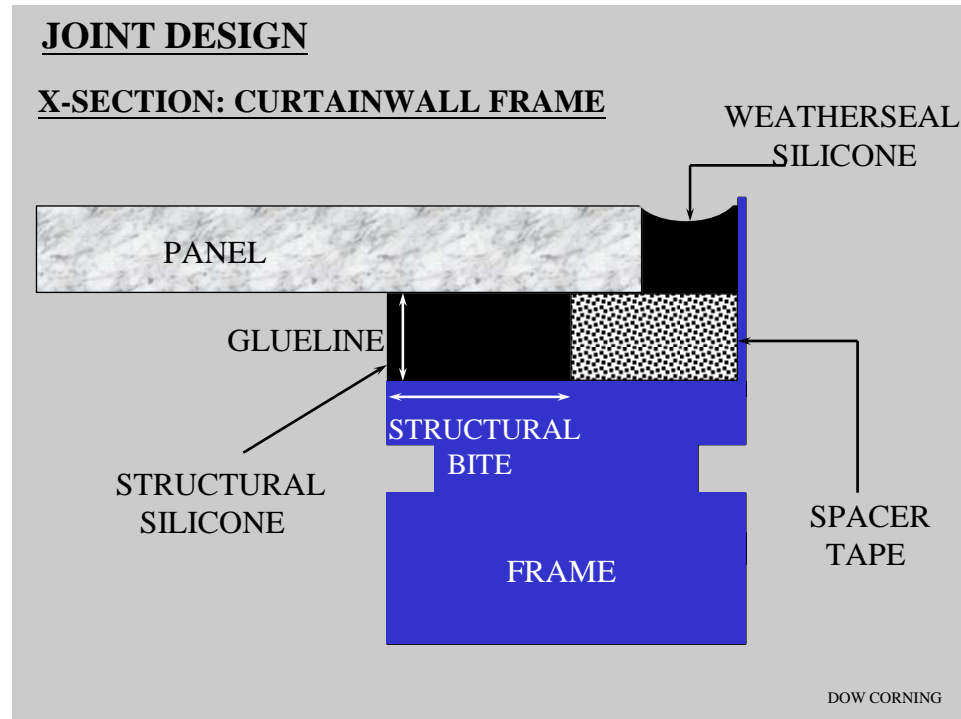
$$\text{Byte} = \frac{\frac{1}{2} \times 1000 \times 2}{138} = 7.24 \text{ or } 8 \text{ mm}$$

For Dead load

$$\text{Byte} = \frac{19/5 \times 1000}{703} = 5.40 \text{ or } 6 \text{ mm}$$

For the above glass the byte will be 8 mm. Always consider the higher value.

For each design project, the dimensions of the structural and weather seal joints are calculated individually. Special considerations must also be taken for double glass unit.



Typical structural glazing design

Structural Glazing Design Guidelines

1. *Glue thickness must not be less than 1/4".*
 2. *Structural bite must not be less than glue thickness.*
 3. *Structural bite (in) =*
 4. *Always round up when using the above equation. For instance, a 4' x 8' lite under a 40 psf windload requires 0.3333" of silicone. This is then rounded up to 3/8". Never round down.*
 5. *The structural sealant joint must be able to be filled using standard Caulking practices.*
 6. *The structural joint must not move during cure.*
- These are only preliminary guidelines for structural glazing details. Dow Corning must review all structural glazing details before any Warranty can be issued.*