Glass Technical Document

Spandrel 4th surface vs. 3rd surface placement:

Please be advised that the preferred placement of ceramic frit in a spandrel area IGU is on the number four surface versus that of the number three surface. Found below is an explanation as to why that is so:

Due to the high temperatures experienced in spandrel much attention is paid to achieving the best possible primary IGU seal. This is to ensure the longevity of the unit.

We know from experience that the best possible seal is achieved with sealant to glass contact. With ceramic frit placed on the third surface you end up with sealant to ceramic frit contact in lieu of sealant to glass contact. By relocating the ceramic frit to the number four surface the desired sealant to glass contact is achieved, allowing for the best possible performance of the unit over its life time.

In addition, ceramic frit located on the number four surface serves to minimize the difference in appearance between vision and spandrel areas. In a vision area, light is both transmitted and reflected through both an outboard and inboard lite of glass creating an appearance of depth from the project exterior. When you locate a ceramic frit on the number three surface you lose this appearance of depth. This is a caused by light transmitting and reflecting through only one lite of glass. When viewed from the project exterior, the result is spandrel area glass appearing more noticeable in comparison to the vision area glass.

The technology used to produce a ceramic frit product is a roller-coater. This production process, while "state of the art", produces a spandrel area quality product.

There are and will be inconsistencies. When this material is placed in a spandrel area cavity on the number four surface and the back lighting in the cavity is eliminated the inconsistencies inherit to the product wash out. However, when the ceramic frit is placed on the number three surface any and all of these inconsistencies become more apparent from the project exterior.

In summary, Tristar can provide spandrel area units with the ceramic frit located on the number three or number four surfaces, the choice is yours. However, the purpose of this writing was to make you aware as to why a fourth surface location is preferred. Should you have any questions, please ask.

Sincerely,

Tristar Glass, Inc.
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