# **ENVIROSPAN**

### Lead-Free Ceramic Frit Spandrel

#### COLOR SELECTION

ENVIROSPAN™ can be specified in virtually any color. JEB offers five (5) standard pre-formulated colors. Custom formulated colors are available to meet your specific color design requirements.

When making color selections keep the following in mind:

- Spandrel glass is for non-vision areas only.
- Frit color should be viewed through the glass substrate.
- Frit color will appear different when viewed through different glass make-ups due to shading characteristics of glass coatings, glass substrate and interlayer.
- Frit color will vary depending on the type of viewing light.
- Actual production line samples are recommended for final color approval.
- Frit color chips shown are as close as possible to actual colors.
- Full scale/size mock-ups are recommended.





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#### The Spandrel Process

Lead-free colored ceramic frit is applied with a roller coater and fire-fused at 1150°F to the interior surface of the substrate glass (second surface) to create an environmentally safe Envirospan<sup>™</sup> opaque panel. Since the ceramic frit is lead-free, there are no disposal concerns with Envirospan<sup>™</sup> panels.

Heat treating of spandrel glass, whether it is monolithic single glazed or a component lite in an insulating glass unit, is required to permanently fuse the ceramic frit and make the glass more resistant to heat build-up and potential thermal stress breakage. The heat treating process produces either heat strengthened or fully tempered glass. Fully tempered glass is required for safety glazing applications. Fully tempered glass is more resistant to excessive heat build-up. However, in the event of breakage, due to a function of mechanical or thermal conditions, the break pattern of tempered glass produces small particles. If breakage should occur with heatstrengthened glass, the break pattern produces large pieces of glass, which tend to stay in the framing system. Both options should be reviewed for risk of added heat build-up, particularly in a spandrel IG unit, with the combination of coated glasses, field applied insulation behind the spandrel unit, unknown shading conditions and orientation of the building.

Today's glazing conditions often combine spandrel and a mate lite of high performance coated Low-E glass in an overall IG Unit with the addition of insulation materials behind the unit. **JEB recommends when the inboard lite is spandrel, combined with an outboard lite of coated/low-e glass, the inboard lite should be fully tempered to withstand higher temperatures.** The outboard lite of coated/low-e glass, used in a non-safety glazing area, should be heat strengthened to accommodate the required break pattern and to prevent fallout.

#### **Product Applications**

Envirospan<sup>™</sup> lead-free spandrel is used in **NON-VISION AREAS ONLY**. It should not be used in settings where the #2 surface of the glass can be viewed from both sides, such as partitions, transoms and interior walls. It can also be used as the inboard lite of an insulating glass unit.

\* Factory applied insulating backing for spandrel may be available on a project basis. Please consult J.E. Berkowitz Customer Service for more information.

#### Sizes

- Minimum size manufactured is 12" X 12"
- Maximum size is 84" X 130"

#### Shapes

See on-line pattern cutting chart under Float Glass Distribution/Fabrication.

#### Edgework

Standard edgework is seamed or swiped with a 120 grit belt. Monolithic Envirospan™ must be used in a four-sided captured glazing system. Monolithic Envirospan™ cannot be used in butt, structural or exposed edge glazing applications, due to 1/8" cutback on the frit occuring during processing.

#### Standard Color Options

Five standard colors available:

Custom colors and tinted or low iron substrates are available upon request. 1/4" pyrolytic reflective glass is available in grey, green, bronze or blue with standard black frit on the #2 surface.

| Identification | Color        |
|----------------|--------------|
| #101           | Black        |
| #106           | White        |
| #109A          | Warm Grey    |
| #109B          | Subdued Grey |
| #109C          | Medium Grey  |

#### Warranty

Standard warranty is five years from date of manufacture against peeling, cracking or deterioration of the coating under normal conditions.

#### Certification

Float glass used in Envirospan<sup>™</sup> lead-free ceramic frit spandrel complies with the quality requirements of ASTM C1036, Standard Specification for Float Glass. Heat treated Envirospan<sup>™</sup> glass complies with ASTM C1048. Glass-Kind HS, Kind FT Coated and Uncoated Glass. Tempered Envirospan<sup>™</sup> is a safety glazing product meeting the performance requirements of Consumer Product Safety Commission Standard 16 CFR 1201, as well as ANSI Z97.1. Since the ceramic frit does not contain lead, there are no special disposal requirements.



