

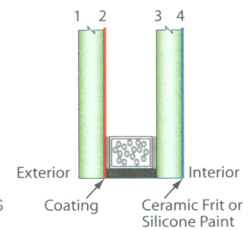
Spandrel Glass Guidelines

Spandrel glass is the glass that conceals structural building components such as columns, floors, HVAC systems, electrical wiring, plumbing, etc. Spandrel glass is typically located between vision glass on each floor of a building.

Curtainwall and structurally glazed designs often require the use of spandrel glass to achieve a designer's vision of the finished project. Spandrel glass applications can be complementary or contrasting in color when compared to the vision glass appearance. Spandrel glass must be heat-treated to avoid thermal stress breakage. Guardian has extensive experience with spandrel glass applications and can help architects and building owners achieve the desired appearance while reducing the risk of thermal stress breakage.

When high-light-transmitting or low-reflecting vision glass is specified, achieving an exact spandrel match is generally not possible. Daylight conditions can have a dramatic effect on the perception of vision to spandrel appearance. For instance, a clear, bright sunny day provides a higher reflective appearance, which will improve the vision to spandrel match. A gray, overcast day may allow more visual transmission from the exterior and produce more contrast between the vision and spandrel glass. Guardian recommends that full-size outdoor mockups be prepared and approved in order to confirm the most desirable spandrel option for a specific project.

Spandrel glass is typically an insulated glass unit with a SunGuard coating on the #2 surface and either ceramic frit or silicone paint on the #4 surface. Please see the adjacent diagram. In some cases, the spandrel can be monolithic glass with paint or frit. Matching vision glass with monolithic spandrel is difficult unless the vision glass has light transmission of 14% or below and is also high reflecting. In some cases, reflective coated glass can have ceramic frit or silicone paint applied directly to the coated surface for a monolithic spandrel. The primary advantage in doing this is cost savings; however, matching vision and spandrel can become more challenging with monolithic coated spandrel applications. Please contact Guardian for more information.



Insulated Spandrel Recommendations for SunGuard Products

The following table provides guidelines for the use of SunGuard products in insulated glass spandrel applications. All glass makeups are with the coating on the #2 surface and ceramic frit or silicone paint on the #4 surface of an insulated glass unit:

FLOAT GLASS SUBSTRATE	SUNGUARD PRODUCT SERIES	SUNGUARD COATING	RECOMMENDED SPANDEL COLOR	ALTERNATIVE COLORS
Clear	SuperNeutral	SuperNeutral 68	Warm Gray	Custom Color
Clear	SuperNeutral	SuperNeutral 54	Warm Gray	Custom Color
Clear	High Performance	Light Blue 63	Warm Gray	Blue or Harmony Blue
Clear	High Performance	Neutral 61	Warm Gray	Custom Color
Clear	High Performance	Neutral 50	Warm Gray	Blue, Harmony Blue or Black
Clear	High Performance	Neutral 40	Warm Gray	Blue, Harmony Blue or Black
Clear	High Performance	AG 50	Harmony Green	Warm Gray, Harmony Gray, Harmony Blue or Blue
Clear	High Performance	AG 43	Harmony Green	Warm Gray, Harmony Gray, Harmony Blue or Blue
Clear	High Performance	Royal Blue 40	Warm Gray or Harmony Blue	Harmony Gray or Black
Clear	Solar	Silver 32	Warm Gray or Blue	Harmony Blue, Harmony Gray or Black
Clear	Solar	Silver 20	Warm Gray	Blue, Harmony Blue, Harmony Gray or Black
Green	SuperNeutral	SuperNeutral 68	Warm Gray	Custom Color
Green	SuperNeutral	SuperNeutral 54	Warm Gray	Custom Color
Green	High Performance	Light Blue 63	Warm Gray	Blue or Harmony Blue
Green	High Performance	Neutral 61	Warm Gray	Custom Color
Green	High Performance	Neutral 50	Warm Gray	Blue, Harmony Blue or Black
Green	High Performance	Neutral 40	Warm Gray	Blue, Harmony Blue or Black
Green	High Performance	AG 50	Harmony Green	Warm Gray, Harmony Gray, Harmony Blue or Blue
Green	High Performance	AG 43	Harmony Green	Warm Gray, Harmony Gray, Harmony Blue or Blue
Green	High Performance	Royal Blue 40	Warm Gray or Harmony Blue	Harmony Gray or Black
Green	Solar	Silver 32	Warm Gray or Blue	Harmony Blue, Harmony Gray or Black
Green	Solar	Silver 20	Warm Gray or Blue	Harmony Blue, Harmony Gray or Black

Monolithic Spandrel Recommendations for SunGuard Products

SunGuard SuperNeutral and High Performance Series coated products cannot be used in monolithic spandrel applications. However, there are complementary custom silicone paints that can be utilized on uncoated glass for monolithic spandrel applications. Please contact Guardian for more information.

SunGuard Solar Series coated products may be used in monolithic spandrel applications but caution should be exercised. While insulated spandrel provides the best match, SunGuard Silver 20 or Silver 32 may be specified for monolithic spandrel applications when the same coating is used as the insulated vision glass. Guardian recommends that warm gray silicone paint be applied to the coated surface. There will be a color shift, and full-size mockups should be prepared and approved.

The above table is for information purposes only and does not constitute a warranty. Please see the SunGuard Coated Glass Limited Warranty, available at www.SunGuardGlass.com.

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