



Better when bird-friendly

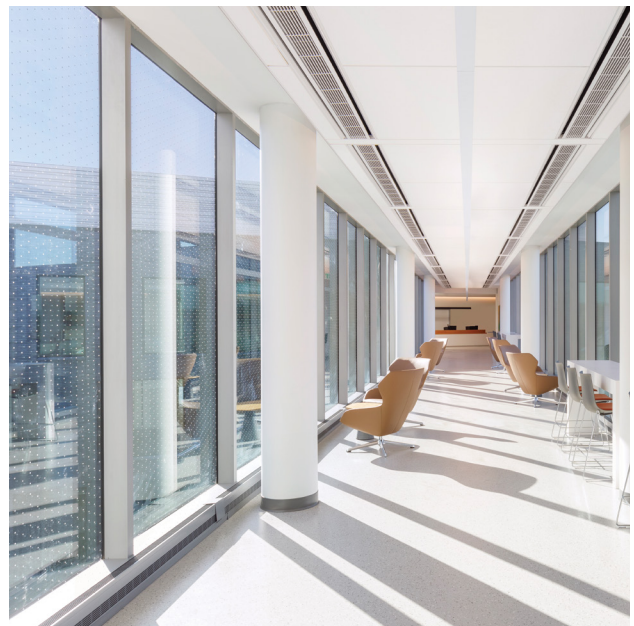
Building with glass blurs the boundaries between inside and out. It helps elevate aesthetics and the experiences of people. Glass is iconic and dynamic. Yet while humans can use environmental cues to identify glass as a barrier, there is growing realization that birds cannot. Researchers estimate that up to a billion birds die each year in the U.S. due to glass and building collisions.¹ Glass can pose an invisible threat for birds, made more hazardous by location, lighting, landscaping and more.

Birds are a significant part of the natural and built environments where we live and thrive. That's why there is growing interest and increasing regulations around glass design that delivers the aesthetics, safety and performance people want – while also protecting birds.

Guardian bird-friendly glass provides a range of options for safe, high-performing glass – giving architects and designers choice and control.

PERFORMANCE THAT TAKES FLIGHT

Guardian bird-friendly solutions pair with your favorite SunGuard™ low-E coatings to help meet energy performance requirements and support LEED Innovation Credit for Bird Collision Deterrence qualification. Tested by the American Bird Conservancy for proven effectiveness, so you can build better for birds without sacrificing performance or aesthetic.



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¹ Scott R. Loss, Sara S. Loss, Peter P. Marra and Tom Will, *Bird-building Collisions in the United States: Estimates of Annual Mortality and Species Vulnerability*, The Condor: Ornithological Applications in January 2014.

PRODUCT DETAILS AND AVAILABILITY

Threat factor ratings are based on American Bird Conservancy guidelines – the lower the number, the better it performed in the tunnel test.*

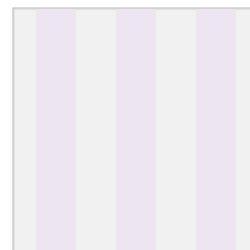
Guardian Bird1st™ UV

This UV coating is applied to surface 1 with the low-E coating on surface 4 of an outboard laminated IGU and helps limit bird collisions while leaving views clear and open.**

- *Pattern:* Vertical stripe orientation
- *Five SunGuard™ low-E coatings:* NU 78/65, SN 68, SNX 51/23, SNX 62/27 and SNX 70+
- *Two substrates:* clear and Guardian UltraClear™ low-iron glass
- *Maximum size:* 102" x 144"
- *Thickness:* 6mm
- Laminated outboard required

THREAT FACTOR (TF)

- 20 UV with NU 78/65
- 18 UV with SN 68
- 23 UV with SNX 51/23
- 25 UV with SNX 62/27
- 17 UV with SNX 70+
- 17 UV monolithic – laminated, no low-E coating



Guardian Bird1st Etch

Achieve a variety of looks while protecting bird safety. Choose from six translucent patterns applied to surface 1 with the low-E coating on surface 2. Available in large sizes that make bird-friendly glass bigger and more beautiful than ever.

- *Six patterns:* Bird1st Etch LV, Etch LH, Etch DX22, Etch DV24, Etch SqX22 and Etch SqX24 (both square patterns are nondirectional)
- *Five SunGuard low-E coatings:* SN 68, SNX 62/27, SNX 51/23, SN 54 and SNX 70+
- *Four substrates:* Guardian UltraClear low-iron glass, CrystalGray™ tinted glass, gray and standard clear glass
- *Sizes:* 96" x 130" (Bird1st Etch LV and LH); 102" x 130", 102" x 144", 102" x 204" and 64" x 204" (Bird1st Etch DX22, DV24, SqX22 and SqX24)
- *Thickness:* 6mm, 8mm and 10mm***

THREAT FACTOR (TF)



23 Bird1st Etch LV



30 Bird1st Etch LH



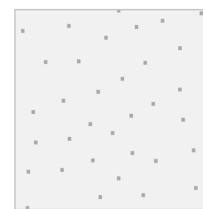
15 Bird1st Etch DX22



25 Bird1st Etch DV24



20 Bird1st Etch SqX22



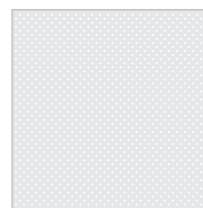
25 Bird1st Etch SqX24

Bird-friendly fritted glass

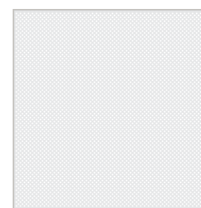
Fritted options are supplied by a Guardian Select™ Fabricator and pair a visual deterrent on surface 2 with the low-E coating on surface 3. This solution is most visible to the human eye and offers the greatest data around efficacy in protecting birds.

- *Four patterns:* 20% white dots, 40% white dots, 2" x 2" gray and 2" x 2" white dots, 2" x 4" gray and 2" x 4" white dots
- *Four SunGuard low-E coatings:* SNX 62/27, SNX-L 62/34, SN-L 68 and SNX 70+
- *Two substrates:* clear and Guardian UltraClear low-iron glass
- *Sizes:* 130" x 204" (on SNX 62/27 and SNX 70+); 102" x 144" (on SNX-L 62/34 and SN-L 68)
- *Thickness:* 6mm

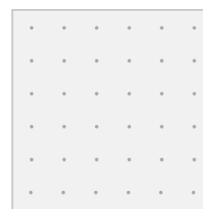
THREAT FACTOR (TF)



21 20% white dots



22 40% white dots



20 2" x 2" gray and 2" x 2" white dots



25 2" x 4" gray and 2" x 4" white dots

* Due to variation in visual environments and building design, tunnel test scores are not 1:1 predictive of real-world deterrent performance. When high efficacy is a priority, please consult with a Guardian Glass expert for application-specific guidance.

** The UV stripes are more pronounced when the glass is wet or when condensation forms. Surface residue can also make the stripes more visible.

*** Speak with a Guardian Glass sales representative to learn more about substrate options and thickness availability.

LEARN MORE ABOUT OUR BIRD-FRIENDLY APPROACH AT GUARDIANGGLASS.COM.

www.guardianglass.com

Phone: 1.866.482.7374

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GLASS**

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