



**GUARDIAN®  
GLASS**

See what's possible™



This image is a representation of the Bird1st UV stripe coating.

## Guardian® Bird1st™ UV Protect birds with clear results

Twice a year, migratory birds embark on a long, cross-continental flight. But their journey is often cut short. From hummingbirds to colorful warblers, bird populations are decreasing—and glass buildings are one reason why. While humans can use environmental cues to identify glass as a barrier, there is growing realization that birds cannot. Unfortunately, researchers estimate that up to a billion birds die each year<sup>1</sup> in the U.S. due to glass and building collisions. A solution to this issue is to design buildings that are bird friendly in addition to being people and environmentally friendly.

### What humans see

Guardian Bird1st UV glass offers the right balance of solar performance, aesthetics and bird safety—so you can start designing your bird-friendly building through one trusted source. A patent-pending UV stripe coating on the first surface looks transparent in most viewing conditions<sup>2</sup>. Views remain pristine unlike traditional ceramic frit solutions, all while helping protect birds. Bird1st UV coated glass combined with a SunGuard® SN or SNX coating provides bird-strike protection and excellent solar performance.

### What birds see

The Guardian Bird1st UV stripe coating visually signals an impending barrier to birds and helps prevent collisions. With an acceptable Threat Factor<sup>3</sup> score of  $\leq 30$  from the American Bird Conservancy, the product follows the 2x2 rule to account for different sizes and species of birds.

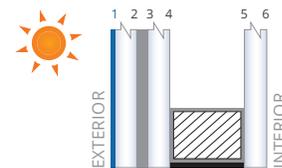
<sup>1</sup> Scott R. Loss, Sara S. Loss, Peter P. Marra and Tom Will, *Bird-building Collisions in the United States: Estimates of Annual Mortality and Species Vulnerability*, (The Condor: Ornithological Applications in January 2014).

<sup>2</sup> The visibility of the stripes is low when the coating is dry. The stripes are more visible when there is moisture on the #1 surface of the Bird1st UV glass.

<sup>3</sup> Threat Factor indicates the percent of times in which birds will not avoid collision, as tested by the American Bird Conservancy (ABC). ABC defines "bird-friendly" materials as having a Threat Factor  $\leq 30$ .

# Help save energy, help save birds

Guardian® Bird1st™ UV glass helps reach energy goals when paired with Guardian SunGuard® low-E coatings.



SunGuard low-E Product	Threat Factor	Visible Light				Color Rendering Index	UV Transmittance %	Solar Heat Gain Coefficient	U-Value		Light to Solar Gain
		Transmittance %	Reflectance		Winter Night				Air	Argon	
			Out %	In %							
SunGuard coating on surface indicated						6 mm/.060 pvb/6 mm/12.7 mm a.s./6 mm					
Bird1st UV with NU 78/65 (#5)	N/A <sup>1</sup>	76	12	13	95.5	0	0.58	0.30	0.26	1.30	
Bird1st UV with SN 68 (#4)	30 <sup>2</sup>	66	11	12	94.1	0	0.36	0.29	0.24	1.83	
Bird1st UV with SNX-L 62/34 (#5)	25 <sup>3</sup>	63	12	12	93.2	0	0.38	0.28	0.24	1.65	
Bird1st UV with SNX 62/27 (#4)	25 <sup>4</sup>	60	11	12	91.7	0	0.27	0.28	0.23	2.20	

- Figures may vary due to manufacturing tolerances. All tabulated data is based on NFRC methodology using Guardian's Performance Calculator.
- Values are for indication purposes only and are subject to variation according to conditions of measurement, manufacture and/or application.

<sup>1</sup> Bird1st (#1) with NU 78/65 has not been tested by ABC or a third-party. This configuration is allowed by Guardian's Science & Technology Center as suitable for bird deterrent applications where a third-party Threat Factor is not required. NU 78/65 (#4) is also similarly permitted.

<sup>2</sup> Bird1st (#1) with SN 68 (#4) has been tested by ABC and has received a Threat Factor rating of 30.

<sup>3</sup> Bird1st (#1) with SNX-L 62/34 (#5) has been tested by ABC and has received a Threat Factor rating of 25. The use of SNX-L 62/34 (#3) and SNX-L 62/34 (#4) has also been tested and approved by ABC and given this same Threat Factor.

<sup>4</sup> Bird1st (#1) with SNX 62/27 (#4) has been tested by ABC and has received a Threat Factor rating of 25. The use of SNX 62/27 on any other surface has not been approved by ABC.

## Bird1st UV product details and availability

- *Four SunGuard coatings:* Neutral 78/65, SN 68, SNX-L 62/34 and SNX 62/27
- *Two substrates:* Guardian UltraClear® low-iron glass and standard clear glass
- *Size:* 102" x 144" (maximum)
- *Thickness:* 6mm
- *Safety:* Heat-treating, lamination required

**Protect** + **Preserve**  
the birds your view



To birds, the vertical stripe coating is visible (this image is a representation of the Bird1st UV stripe coating).

To the human eye, the Guardian Bird1st UV coating looks transparent in most viewing conditions.

For more information on Guardian Glass bird-friendly products, visit [GuardianGlass.com/Bird1st](http://GuardianGlass.com/Bird1st).

[www.guardianglass.com](http://www.guardianglass.com)

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