

GLASPRO - BIRD SAFE GLASS

HIGHLY-EFFECTIVE BIRD-FRIENDLY SOLUTIONS
ULTRAVIOLET REFLECTIVE | ACID-ETCHED | CERAMIC FRIT PATTERNS

Collisions with glass claim the lives of millions of birds every year in North America. The reason is simple but tragic. Birds are unable to pick up clues that windows are present and frequently don't survive impact.

Cities and states are now adopting new building standards that require the use of bird-friendly building materials, such as architectural glass, to help prevent bird collisions with buildings, railings and other structures. For the glass to be effective, manufacturers and fabricators apply visible patterns in the form of ultraviolet reflective coatings, and acid etched or ceramic frit patterns that are visible to birds. According to the [American Bird Conservancy](#) the easiest way to stop birds hitting windows is to apply visible patterns, specifically vertical stripes spaced four inches apart or horizontal stripes spaced two inches apart, or ceramic frit dots, known as the 2 x 4 rule.

Selecting a bird-friendly glass solution depends upon the local bird-friendly building standards and the human visual experience specified by architects and designers. Keep in mind that, with an increase in patterns visible to people, the lower the transparency of the glass.

"In a time when wildlife faces unprecedented, human-driven challenges, we have an obligation to be responsible members of our environment and do what we can to mitigate our impacts on those we share this planet with. That can start with protecting wildlife from deadly collisions with our buildings."

"Including my amendment in HR 2 brings us that much closer to making the Bird-Safe Buildings Act law and would go a long way toward reducing the billions of fatal bird-building collisions that are contributing to the vanishing of America's native songbirds."

- House Representative, Mike Quigley, author of H.R. 919 - Bird Safe Buildings Act 2019



FEATURES & BENEFITS OF GLASPRO BIRD SAFE

- Highly-effective collision deterrent
- Safety glass ANZI z97.1
- Meets the performance standards required throughout North America when combined with high performance low-E glass.
- Can help you earn LEED Pilot Credit 55: Bird Collision Deterrence
- Range of prices to accommodate project budgets
- Fast lead times
- Made in the United States
- Requires minimum upkeep
- High quality offers extremely long-life

ULTRAVIOLET REFLECTIVE PATTERN

Fortunately, birds have a broader spectrum of vision than people and can see colors that are part of the ultraviolet spectrum, giving them better visual acuity than people. This is where GlasPro Bird-Safe with ultraviolet reflective can help prevent bird-window collisions while being highly-transparent to the human eye.

With an [American Bird Conservancy \(ABC\) Avoidance Index \(AI\)](#) of 79 percent, GlasPro's Bird-Safe glass significantly exceeds the ABC's minimum standard for effective bird collision deterrent materials of 70 percent. Under sunny conditions the product's AI is 84 percent which is considered highly-effective.

The GlasPro Bird-Safe solution is proven to effectively deter birds, improve energy efficiency, meet safety standards and maintain the human visual experience with its high transparency.

(An ultraviolet flashlight was used in the example on the right, to show the ultraviolet reflective panels that are visible to birds. These images are not photoshopped in any way.)

THIS IS WHAT HUMANS SEE



THIS IS WHAT BIRDS SEE



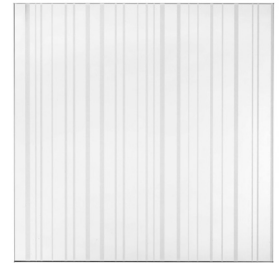
ACID ETCHED PATTERN

GLASPRO IS A PROUD SALES AND FABRICATION PARTNER OF WALKER AVIPROTEK

Walker AviProtek® is a bird-friendly glass designed with acid-etched patterns located on the outside (1st) surface allowing birds to see the glass and avoid collision

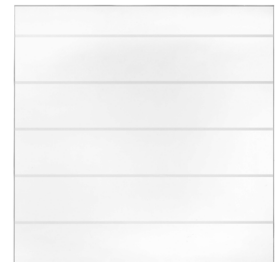
AVIPROTEK PATTERN 211

The AviProtek pattern 211 has acid-etched visual markers on the exterior surface of the glass. While initially being conceived as a vertical design pattern it can also be used horizontally. This pattern has been tested by the American Bird Conservancy with a threat factor of 23 and meets the industry-recognized 2 X 4 rule. This product has been tested by the American Bird Conservancy with a threat factor of 23 on position 1 (77% of times birds will avoid collision).



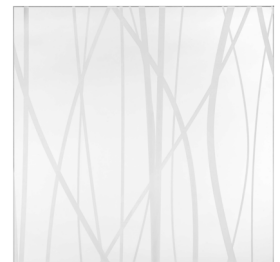
AVIPROTEK PATTERN 213

The AviProtek pattern 213 has acid-etched visual markers on the exterior surface of the glass. This pattern meets the recognized 2x4 rule and consists of lines spaced 2 inches apart. Although conceived as a horizontal design it can also be used as a vertical pattern. This pattern has been tested by the American Bird Conservancy with a threat factor of 29.8.



AVIPROTEK PATTERN 214

The AviProtek pattern 214 has acid-etched visual markers on the exterior surface of the glass. Inspired by nature, this design meets the industry-recognized 2x4 rule. The random curved lines were conceived to be oriented vertically but can also be installed running horizontally. This pattern has been tested by the American Bird Conservancy with a threat factor of 30.



DOT PATTERN SOLUTIONS

These dot pattern solutions meet the recognized 2×4 rule as established in many municipal regulations and guidelines.

AVIPROTEK PATTERN 215

The AviProtek pattern has acid-etched visual markers on the exterior surface of the glass. The pattern is made with 5mm dots spaced two inches apart in both the horizontal and vertical planes.



AVIPROTEK PATTERN 216

The AviProtek pattern 216 has acid-etched visual markers on the exterior surface of the glass. This pattern is made with 6mm dots spaced four inches apart in both the vertical and horizontal planes. This bird-friendly pattern meets local regulations where dots spaced at four inches in both planes are accepted, such as in the city of Toronto, Canada (as of 2019).



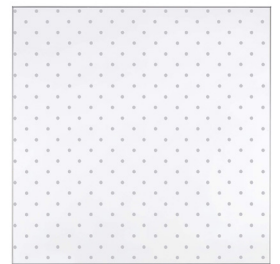
AVIPROTEK PATTERN 217

The AviProtek pattern 217 has acid-etched visual markers on the exterior surface of the glass. This pattern is made with 5 mm dots two inches apart centered and positioned in a diamond-shape.



AVIPROTEK PATTERN 219

The AviProtek pattern 219 has acid-etched visual markers on the exterior surface of the glass. This pattern is made with 4 mm dots one inch apart centered and positioned in a diamond-shape.



AVIPROTEK PATTERN 220

The AviProtek pattern 220 is a bird friendly solution with acid-etched visual markers on the exterior surface of the glass. This pattern is made with 6 mm dots four inches apart centered and positioned in a diamond-shape. This bird friendly pattern meets local regulations where dots spaced at four inches in both planes are accepted, such as in the city of Toronto, Canada.



AVIPROTEK PATTERN 221

The AviProtek pattern 221 has acid-etched visual markers on the exterior surface of the glass. The pattern is made with 5MM dots spaced two inches apart in the horizontal planes and four inches apart in the vertical planes.



FRIT PATTERN GLASS

GLASPRO'S FRIT PATTERNS FOLLOW THE 2 X 4 RULE FOR BIRD COLLISION AVOIDANCE

Silk-screened ceramic frit patterns on glass can reduce bird collisions with windows because they are always visible, even with strong reflections. Frit pattern glass is a long-lasting solution that blends bird-friendly function with performance and aesthetics. This cost-effective glass can reduce the transmission of light and heat while providing design detail on a building.

The Bird Safe Ceramic Frit pattern includes options with white ceramic frit dots covering 20 percent of the glass or 1/8" lines on the outermost (1st) surface of the glass. The line and dot patterns comply with the bird-friendly 2 x 4 rule. The 2 x 4 rule guidelines suggest that developing patterns on glass with horizontal lines spaced no more than 2" apart and vertical lines spaced no more than 4" apart can help birds avoid collisions.

BIRD SAFE FRIT WITH HORIZONTAL LINES

1/8" silk-screened ceramic frit lines spaced four inches apart horizontally.



BIRD SAFE FRIT WITH VERTICAL LINES

1/8" silk-screened ceramic frit lines spaced two inches apart vertically.



BIRD SAFE FRIT WITH 20% WHITE DOTS

Silk-screened ceramic frit dots covering 20 percent of the glass surface.



RESOURCES

[Q & A: What is Bird-Safe Glass?](#)

[Take A Minute for Bird-friendly glass](#)

WATCH THE BIRD SAFE VIDEO TO LEARN MORE

[Watch Video Here](#)

HAVE A QUESTION ABOUT BIRD-FRIENDLY SOLUTIONS?

[Contact us now!](#)