

4BIRD® Frit

Effective bird protection in glass architecture with solar control coating associated to screen-prints



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According to the American Bird Conservancy (ABC) „each year up to 1 billion birds die after hitting glass surfaces in the United States.“¹ The reasons why birds hit windows and glass facades are diverse - not to say that a sparrow has a different perception of glass than a pigeon. In general, there are two, seemingly contradicting reasons why birds may collide with glass but that are unique to the material in itself: reflectivity and transparency.

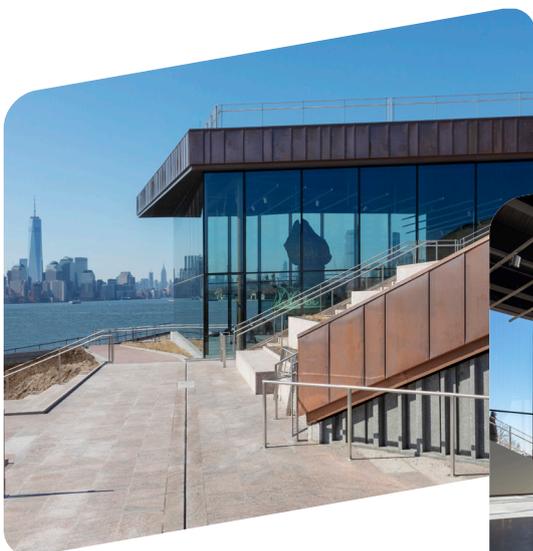
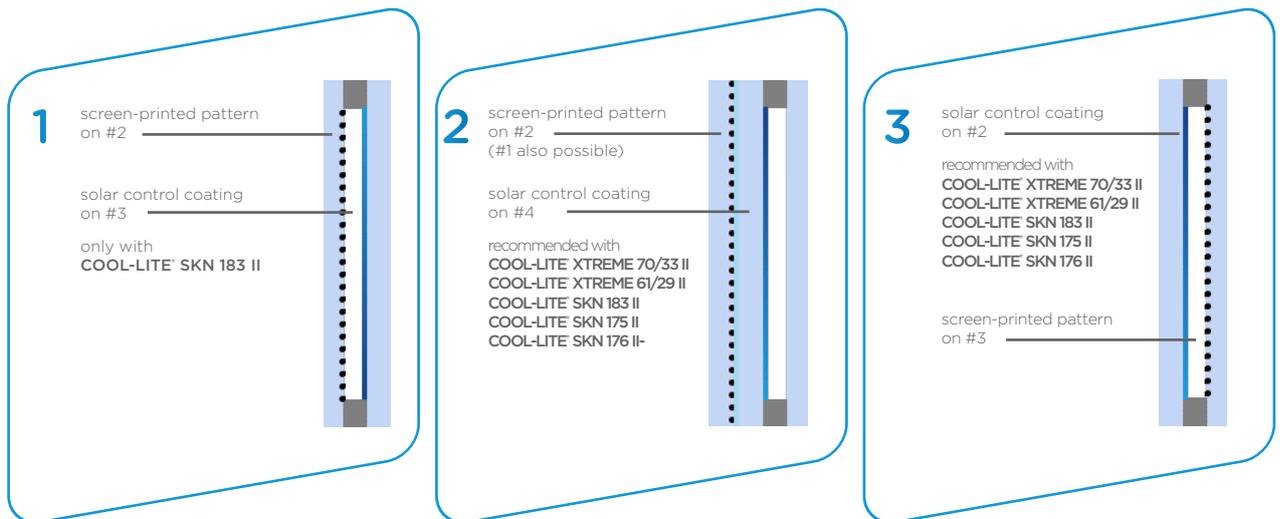
All glasses, of course, reflect the (natural) surroundings of their buildings - from the sky with its clouds down to bushes and trees in nearby streets or parks - which obviously presents to birds the continuity of their local habitat with „safe routes, shelter, and possible food ahead“² Likewise, the same perception may occur to birds if for them the glass seems to be transparent - especially corner glazings, skywalks or glass walls are known threats to birds.

With the **4BIRD® product family**, Saint-Gobain Glass offers a range of solar control glass with a special focus on an effective bird protection, offering both sustainable solutions for the preservation of the biodiversity and a wiser energy consumption of building, while keeping a homogeneous and neutral external aesthetic.

¹ abcbirds.org/glass-collisions/why-birds-hit-glass
² sfplanning.org/standards-bird-safe-buildings



combines Saint-Gobain Glass solar control coatings of the COOL-LITE® family with screen-printed pattern in several possible configurations.



Statue of Liberty Museum
New York, USA



Theodor Körner Hof
Vienna, Austria

4BIRD®Frit is a series of **specifically screen-printed pattern on #1, #2 or #3** together with selected **annealed or to-be-tempered COOL-LITE® solar control coatings on #2** (respectively #4 of laminated glass) or **#3** by **Saint-Gobain Glass** depending on the glazing configuration.

The pattern comply with all currently known local regulations and national guidelines. They meet the recognized **2x2“ and 2x4“ rules** and tighter mandatory or voluntary regulations like **LEED Pilot Credit #55: Bird Collision Deterrence**.

AESTHETICS

The low, external reflection as well as the colour-neutral external appearance of the COOL-LITE® products associated with subtle etched pattern create an excellent combination of function and aesthetics, thus offering a smooth and homogeneous façade design and taking care of both: bird protection and comfort of the user.

COMFORT

Offering all the benefits of COOL-LITE® solar control glass, with extreme transparency and neutrality to get as much as natural daylight as possible all year round with all its benefits for both, your power consumption and your health. And with highly efficient sun protection at all time and excellent insulation to reduce the energy consumption and associated cost.

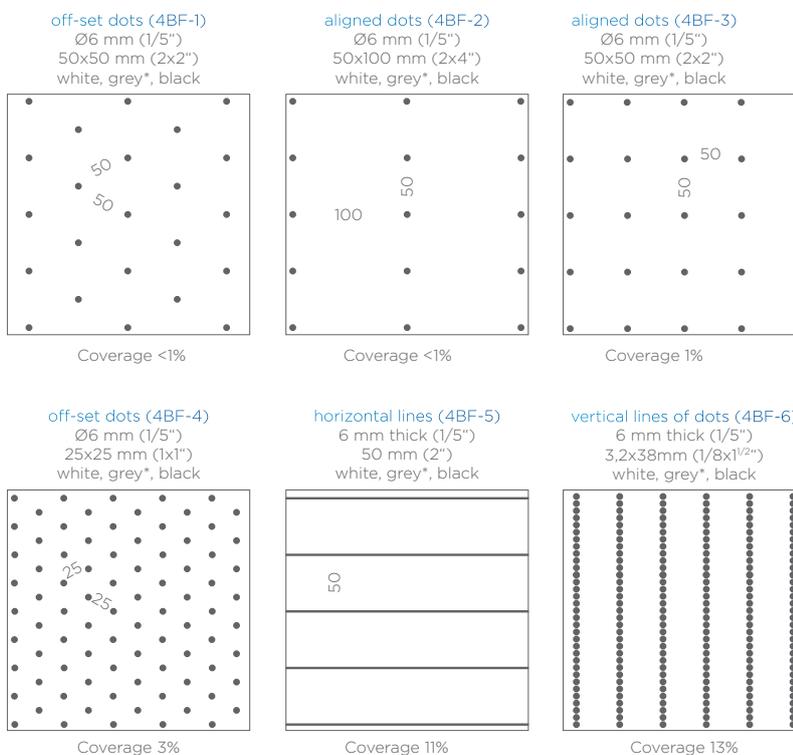
VERSATILITY

With a full range of possibilities, there are solutions available for all projects, dealing with different requested efficiency, aimed aesthetic or targeted budget. The versatility of COOL-LITE® SKN 183 II is opening new opportunities and offers among other simpler compositions with efficient bird protection and good performances.

DESIGNS

Several designs are possible with off-set or aligned dots as well as lines. Here are presented some possible design complying with regulations. Customized designs are available on request

*exact RAL to be defined

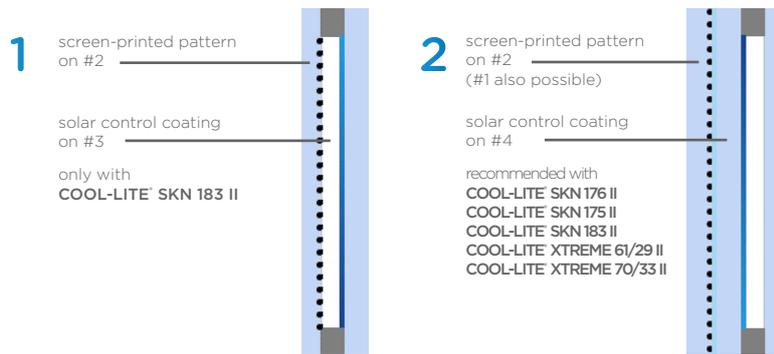


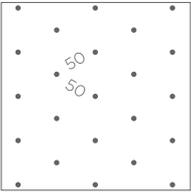
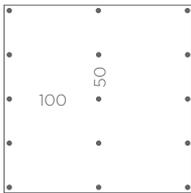
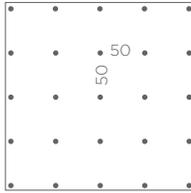
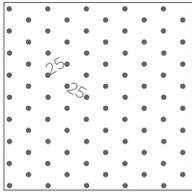
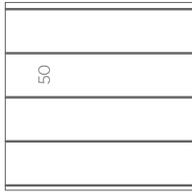
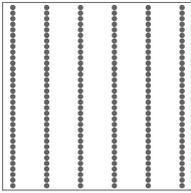
AVAILABILITIES

- thickness: 6-12 mm (1/4"-7/16")
- size: 6,000 x 3,210 mm (235" x 126")
- substrate: PLANICLEAR®, DIAMANT®, ORAÉ® (for COOL-LITE® XTREME only)

American Bird Conservancy (ABC) has evaluated several 4BIRD®Frit configurations and found that they **satisfied ABC's criterion for bird-friendly glass**. Corresponding **Material Threat Factors (TF)** have been given.

Opaque frit pattern on #2 and coating behind the pattern on clear or low-iron glass
Overall outdoor reflection of the assembly <15%



4BF-1	4BF-2	4BF-3	4BF-4	4BF-5	4BF-6
Off-set dots (2"x2")	Aligned dots (2"x4")	Aligned dots (2"x2")	Off-set dots (<2")	Horizontal lines	Vertical lines of dots
					
Dots Ø6 mm Pattern spacing: 50x50 mm (2x2")	Dots Ø6 mm Pattern spacing: 50x100 mm (2x4")	Dots Ø6 mm Pattern spacing: 50x50 mm (2x2")	Dots Ø6 mm Pattern spacing: 25x25 mm (<2")	Line thick 6 mm Pattern spacing: 50 mm (2")	Dots Ø6 mm Pattern spacing: 3,2x38mm (1/8x1 1/2")
Material Threat Factor (TF) = 20	Material Threat Factor (TF) = 25	Material Threat Factor (TF) = 20	Material Threat Factor (TF) = 25	Material Threat Factor (TF) = 20	Material Threat Factor (TF) = 25