



### 1. Product description

Nearly transparent window film with special coating, which makes glass visible to birds. BirdShades birdprotection window film is highly effective in mitigating bird-window collisions, function scientifically tested (Swaddle et al 2020, Zysk-Gorczyńska et al 2022, Swaddle et al 2023). The bird protection window film is applied via wet application to the entire exterior window surface. For installation, we recommend choosing a specialist company that is specialized in the installation of sun protection window films.

#### Measurement on 2mm float glass

UV-transmission*	4-8%
Visible light transmission*	87%
g-value	0,76
Solar energy transmission*	80%
Film thickness	80 µm without release liner
Installation type	Outdoor
Recommended substrate	Float glass
Recommended surface	Flat
Adhesive	Water-based polyacrylate adhesive (solvent free)
Adhesive strength (ASTMD-903)	Instantly: ~ 5,4-6,4 N/25 mm
	After 1 week: ~ 20,1-23,5 N/25 mm
Service temperature during application	15° – 25°C
Application method	Wet application – please follow installation instruction BirdShades transfer liquid is recommended
Installation alignment	Film width (1,37m) parallel (horizontal) to window width
Installation information	Check weather forecast when planning the application. Do not install during precipitation or if the exterior temperature drops below 5°C within 15 days after installation.
Edge sealing	Required for warranty reasons, especially if water can accumulate in the edge areas of the window film.
Film width	1,37m
Roll length	50m
Film composition	PET
Visual impression	Depending on viewing angle at certain circumstances a transparent pattern can be seen and lead to optical contortions. A contrast area is created due to film application, therefore existing scratches and other damages on the exterior glass become more obvious.
Storability & Storage	1 year from date of delivery. Storage at 15-25°C, and a relative humidity of 50-60 %. To avoid possible pressure marks, we recommend securing the material back onto the remaining roll with suitable adhesive tape and storing it horizontally and on roll supports/end caps in its original packaging.

\* according to EN 410

### 2. Maintenance instructions

Do not clean in the first 30 days after installation.

Wet cleaning with commercially available glass cleaners. The cleaning agent must be wet and non-abrasive with a pH value between 6 and 8 (neither strongly acidic nor strongly alkaline).

Soft cleaning cloths (NO microfiber cloth), sponges or wash-leather recommend for cleaning. Aggressive cleaning agents, abrasive materials, brushes, pointed objects or high-pressure cleaning are not suitable and can damage the window film. Never dry-clean the surface.

Proper cleaning of the film is a prerequisite for maintaining the warranty claim. Due to environmental influences, cleaning intervals must be observed to ensure that the warranty claim is not voided.

Cleaning interval in areas with high air pollution: 2 times per year

Cleaning interval in rural areas: 1 time per year

### **3. Important notes**

The development of BirdShades bird protection film is based on scientific studies which showed that this film significantly reduces the probability of collision of songbirds with glass panes. There are currently no results on the effectiveness with pigeon species and birds of prey.

BirdShades bird protection window film only works when applied to the entire surface.

BirdShades products are not tested for automotive manufacturers specifications.

Exterior application on not vertical surfaces has distinct effect on durability function.

User is responsible for compliance of applicable laws and guidelines.

Potential glass damage (e.g. quality of edge processing of glass) cannot be forecasted and is therefore not subject to guarantee or warranty claims

### **4. Additional information**

Contact us for questions, comments and critique via:

[tweet@birdshades.com](mailto:tweet@birdshades.com)

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Product covered via various patent applications.

Subject to alterations

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