



# **Frost Thermal Films: The Intelligent Solution for Glass**

Transform Light. Enhance Privacy. Maximize Performance.



# The Glass Dilemma: Balancing Openness with Control

Modern design demands glass for natural light and a sense of space. But this transparency creates inherent conflicts:



**Privacy vs. Light:** How do we create private spaces without blocking valuable daylight?



**Comfort vs. Views:** How do we manage solar heat gain and harsh glare without obstructing views?



**Aesthetics vs. Safety:** How do we protect interiors and occupants without compromising design?





# The Unseen Costs of Unprotected Glass

Left unmanaged, glass surfaces lead to significant operational and experiential drawbacks.



## High Energy Costs

Uncontrolled solar heat gain increases HVAC load in summer, while heat loss through glass increases heating costs in winter.



## Accelerated Fading

Harmful UV rays damage expensive furnishings, flooring, and artwork, leading to premature replacement.



## Reduced Occupant Comfort

Glare and hot spots create an uncomfortable and less productive environment for occupants and staff.



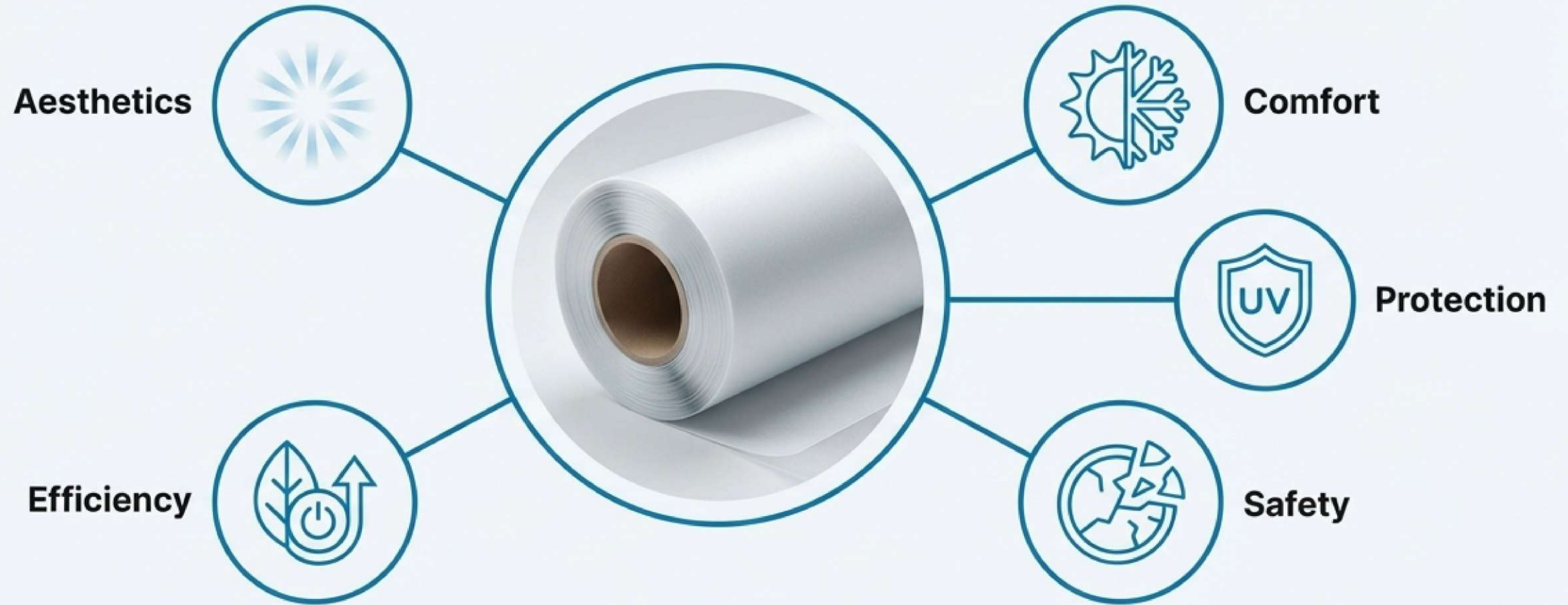
## Safety & Security Risks

Standard glass offers little protection, shattering into dangerous fragments upon impact.



# One Film. Five Solutions.

Suberlev's Frost Thermal Film is an advanced polyester film engineered to solve the core challenges of glass with a single, elegant application.





# Aesthetic Privacy Without Sacrificing Natural Light

Achieve sophisticated privacy with our translucent white polyester film. The opal white finish with an elegant 'ice effect' diffuses light to create a soft, inviting atmosphere.

## 65% Visible Light Transmission:

Maintains bright interiors while obscuring direct views.

## Translucent White Finish:

Perfect for decorative partitions, screens, and sensitive environments like medical facilities.

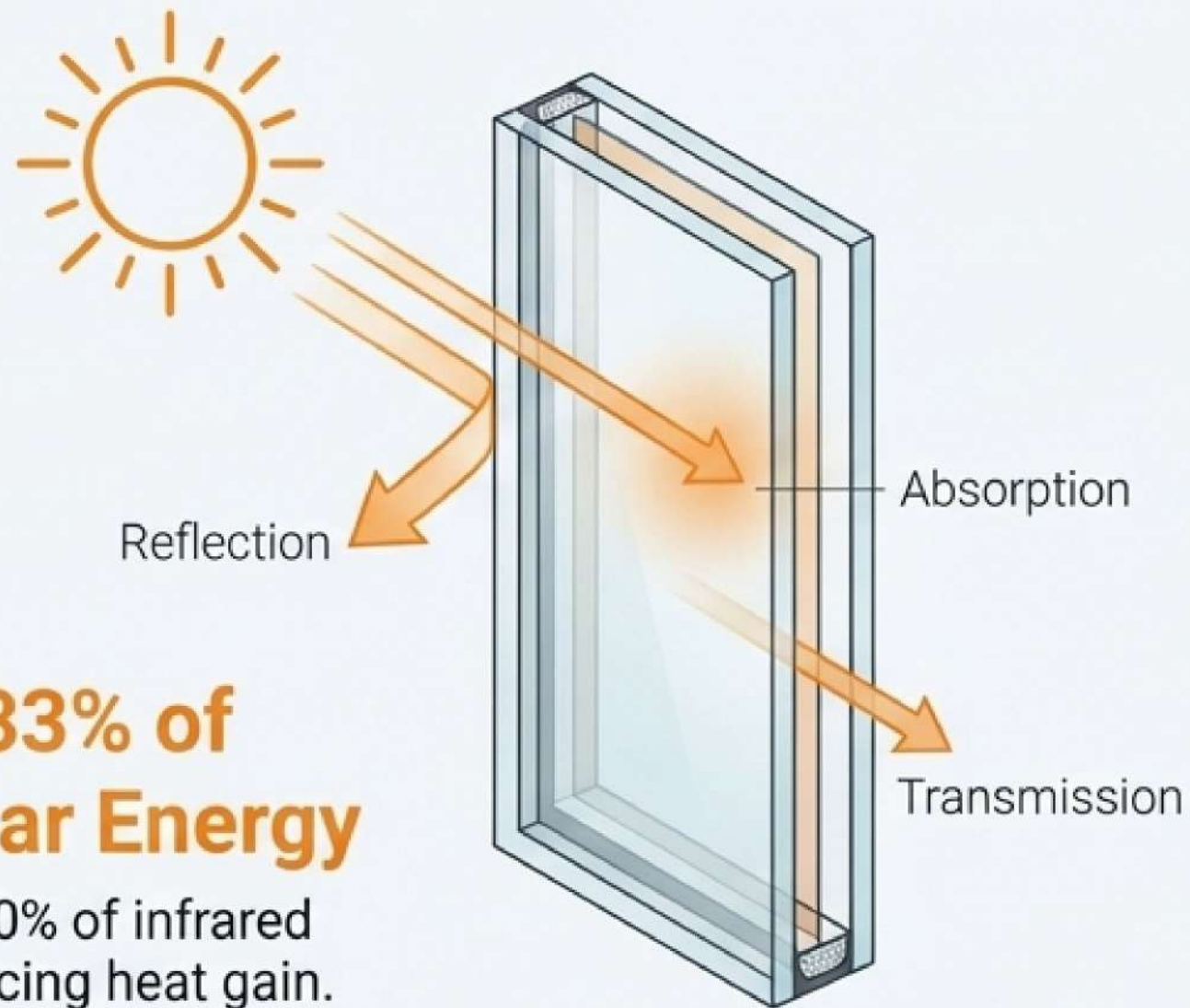




# Engineer a More Comfortable and Efficient Environment

Frost Thermal Films actively manage the thermal properties of your windows for year-round benefits, directly impacting occupant comfort and reducing HVAC costs.

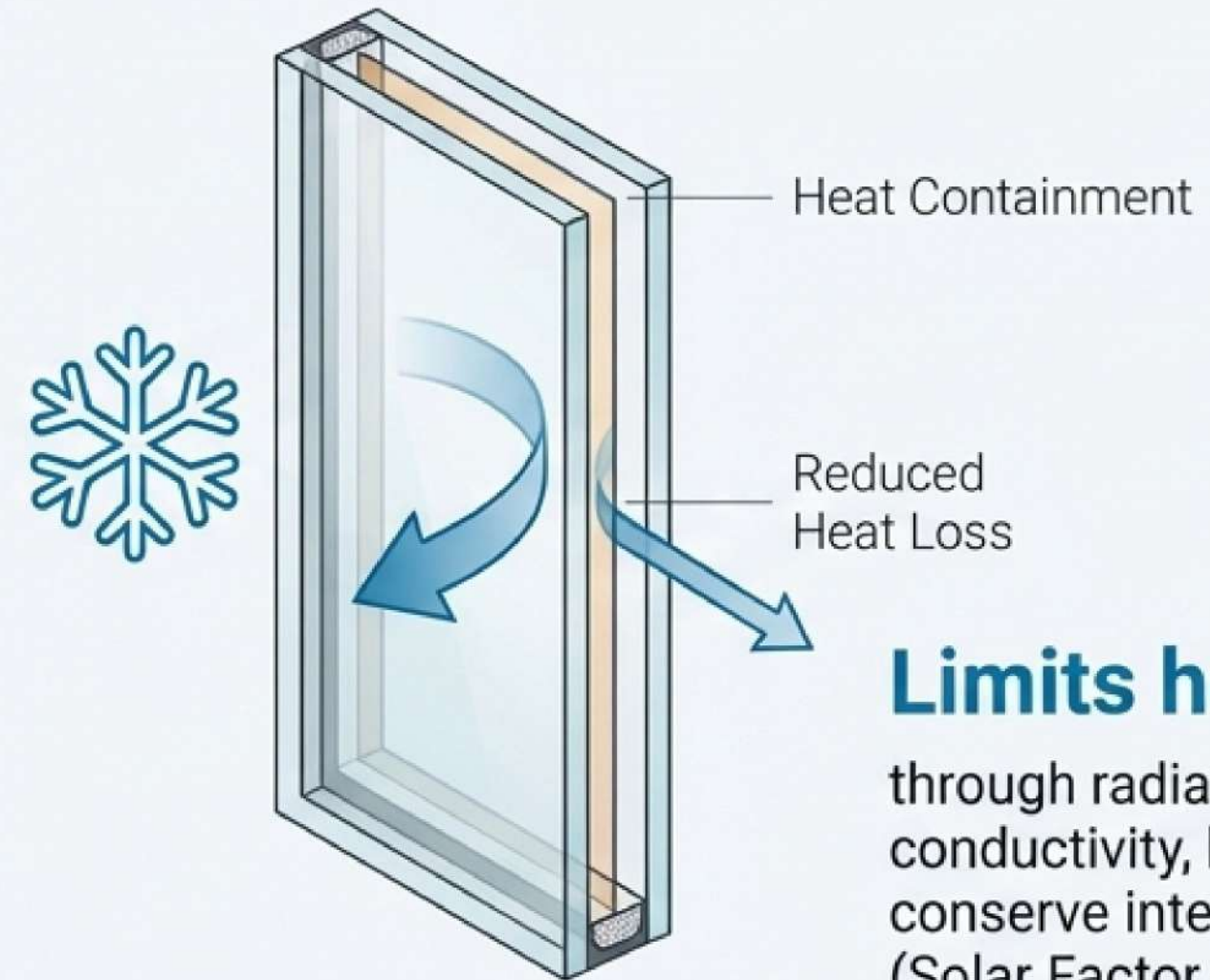
## SUMMER



**Rejects 33% of Total Solar Energy**

by reflecting 20% of infrared radiation, reducing heat gain.

## WINTER



**Limits heat loss**

through radiation and conductivity, helping to conserve interior heat. (Solar Factor of 0.67).



# Uncompromising Protection for Interiors and Occupants

Beyond thermal performance, the film provides a crucial layer of protection against invisible threats and physical hazards.



## UV Protection

Blocks over **98%** of harmful UV rays, safeguarding valuable interiors, furniture, and equipment from fading and degradation.



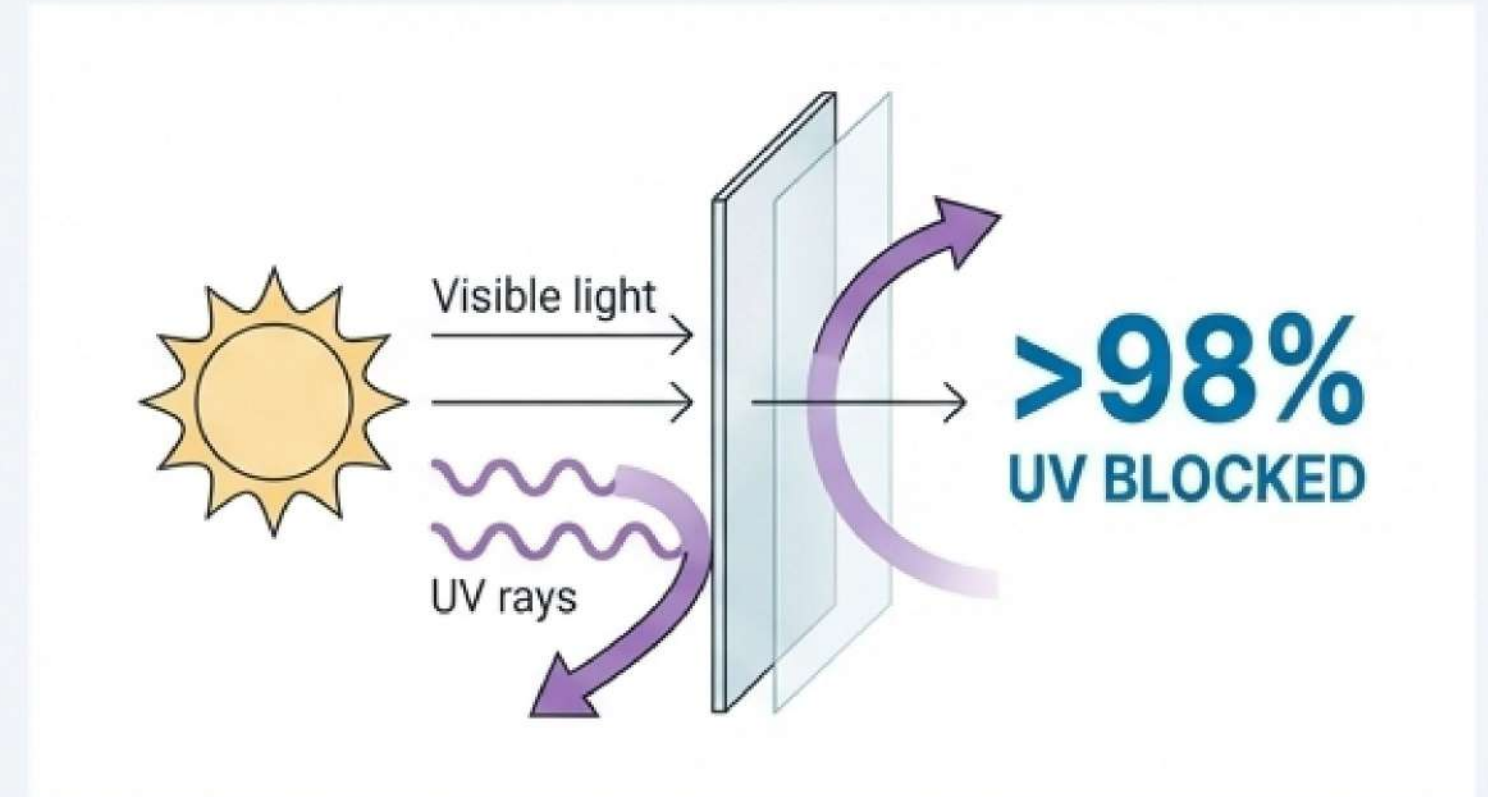
## Shatter Resistance

In case of breakage, the durable **50µm** film holds glass fragments together, significantly increasing safety and minimizing risk of injury.



## Durability

A tough, scratch-resistant coating ensures long-lasting performance and clarity.





# Performance at a Glance



**>98%**

UV Blocked

**33%**

Total Solar Energy Rejected



**50μm**

Film Thickness



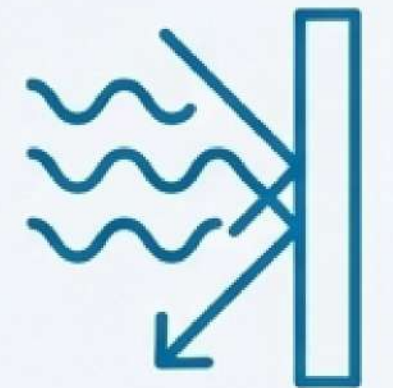
**65%**

Visible Light Transmitted



**20%**

Infrared Radiation Rejected





# Ideal for Demanding Applications

Frost Thermal Films offer a versatile and elegant solution where privacy, safety, and solar control are paramount.



Ambulances & Medical Vehicles



Hospital Facilities



Commercial & Office Spaces



Residential Buildings



# Technical Specifications: Frost Thermal Film

Comprehensive performance data for project planning and specification.

Physical Properties		Solar Energy	
Description	Translucent white polyester film	Transmission	61%
Color/Appearance	White, Opaque, Translucent	Absorption	19%
Thickness	50 µm	Reflection	20%
Visible Light		Total Rejection	33%
Transmission	65%	Total Rejection	33%
Absorption	10%	Solar Factor	0.67
External Reflection	25%	Radiation Rejection	
Solar Energy		UV Reflection	>98%
Transmission	61%	Infrared Reflection	20%
Absorption	19%	Available Formats	
Reflection	20%	Rolls	1.52 m x 30.5 m (46.36 m <sup>2</sup> )
Total Rejection	33%	Boxes	0.76 m x 2 m (1.52 m <sup>2</sup> ) 0.76 m x 4 m (3.04 m <sup>2</sup> )
Solar Factor	0.67		



# Guidelines for a Flawless Installation

Adhering to best practices ensures optimal performance and longevity.



## 1. Surface Prep

Must be installed on smooth, clean glass. Not suitable for frosted, textured, or damaged glass.



## 4. Trimming

Leave a 1 mm gap from the window frame to allow for thermal expansion.



## 2. Temperature

Glass temperature should be between 0°C and 35°C. Avoid direct sunlight during installation.



## 5. Team

Installation by two people is recommended for windows wider than 1 meter.



## 3. Application

Use a soapy solution on both the glass and film to facilitate positioning. Use a squeegee to remove bubbles (center-out).



## 6. Curing

A slight foggy appearance is normal for 5-15 days as water vapor evaporates.

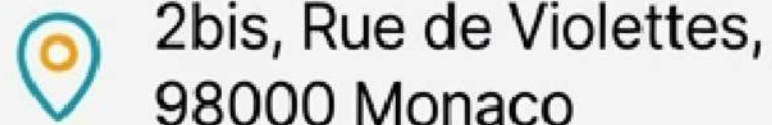
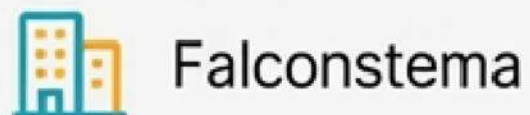


# Help Us Help You

## Innovation in Protection.



The information provided is based on extensive practical experience and laboratory testing.  
We recommend practical tests to ensure compatibility for each specific application.



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