

# Rethinking the Roofline: Transforming Skylights from a Liability into a High-Performance Asset

An Introduction to Thermo-Skylight Shield





# The Skylight Performance Dilemma

Skylights introduce valuable natural light, but they are often the **weakest point** in a building's envelope, creating a paradox for architects, owners, and facility managers. They represent a critical source of inefficiency and asset risk.



## Excessive Heat Gain

Unchecked solar radiation drives up HVAC costs and creates uncomfortable interior environments.



## Uncontrolled Heat Loss

Inefficient skylights act as thermal windows in colder climates, increasing heating expenses.



## Chronic Water Infiltration

Failing seals and material degradation lead to leaks, causing costly damage to interiors and structures.



## Accelerated Asset Damage

Constant UV exposure fades and deteriorates valuable merchandise, furniture, and flooring.



# A Unified Solution: Thermo-Skylight Shield

Thermo-Skylight Shield by Suberlev is a high-performance thermal corrective paint engineered to resolve the skylight dilemma. It transforms vulnerable rooflights into robust, efficient components of the building envelope.

Formulated with a water-based **aliphatic polyurethane membrane** and special **reflective micropigments**, it creates a seamless protective shield.

Neutralizes up to

**90%**

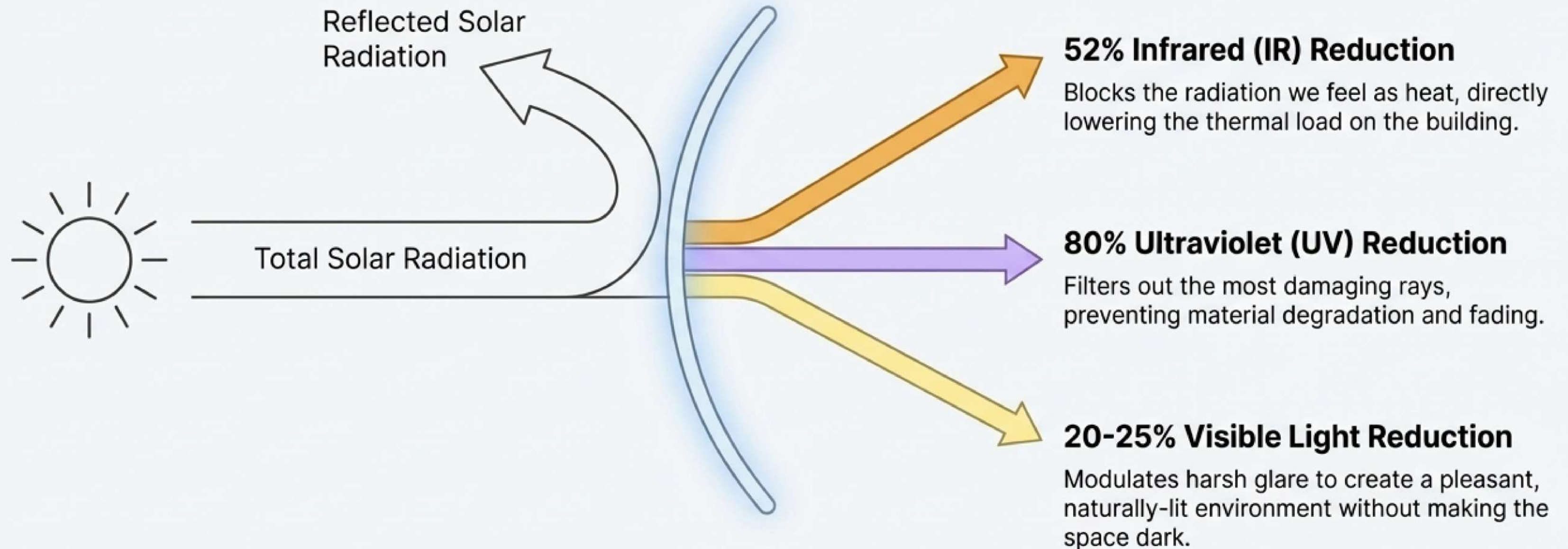
**of thermal transfer  
through skylights**





# The Science Behind the Shield

The coating's effectiveness comes from its ability to selectively manage the solar spectrum, preventing unwanted energy from penetrating the building envelope.



# The Three Pillars of Value

The strategic benefits of Thermo-Skylight Shield are built on three foundational pillars that deliver a measurable return on investment.



## **Pillar 1: Energy Efficiency**

Reduce operational costs year-round.



## **Pillar 2: Enhanced Durability**

Fortify structural integrity and prevent damage.



## **Pillar 3: Asset Protection**

Safeguard interiors and their contents.





# Pillar 1: Driving Energy Efficiency

By creating a powerful thermal barrier, Thermo-Skylight Shield prevents heat exchange, directly reducing energy consumption and lowering utility bills.

## Key Mechanisms

- **Reduces Cooling Load**

Reflects **52%** of infrared radiation, minimizing solar heat gain and lessening the demand on HVAC systems in warm climates.

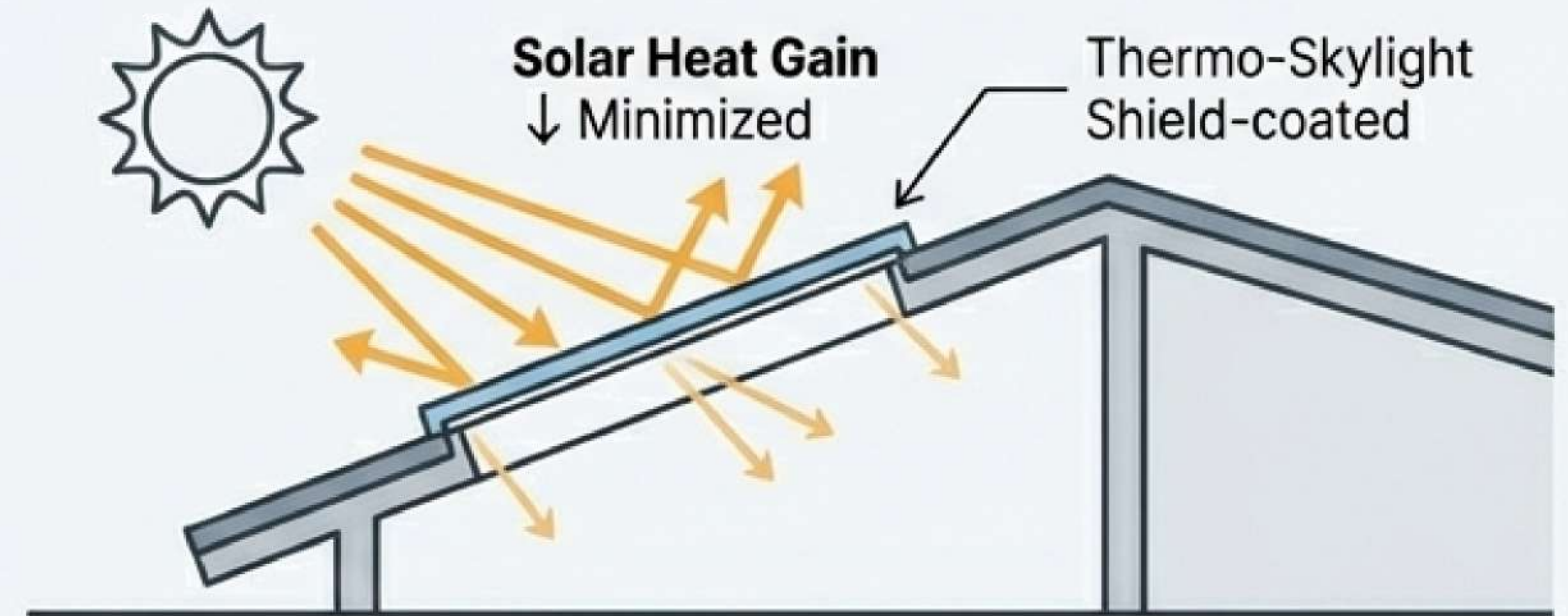
- **Minimizes Heat Loss**

Acts as a thermal insulator, reducing heating costs in cold climates.

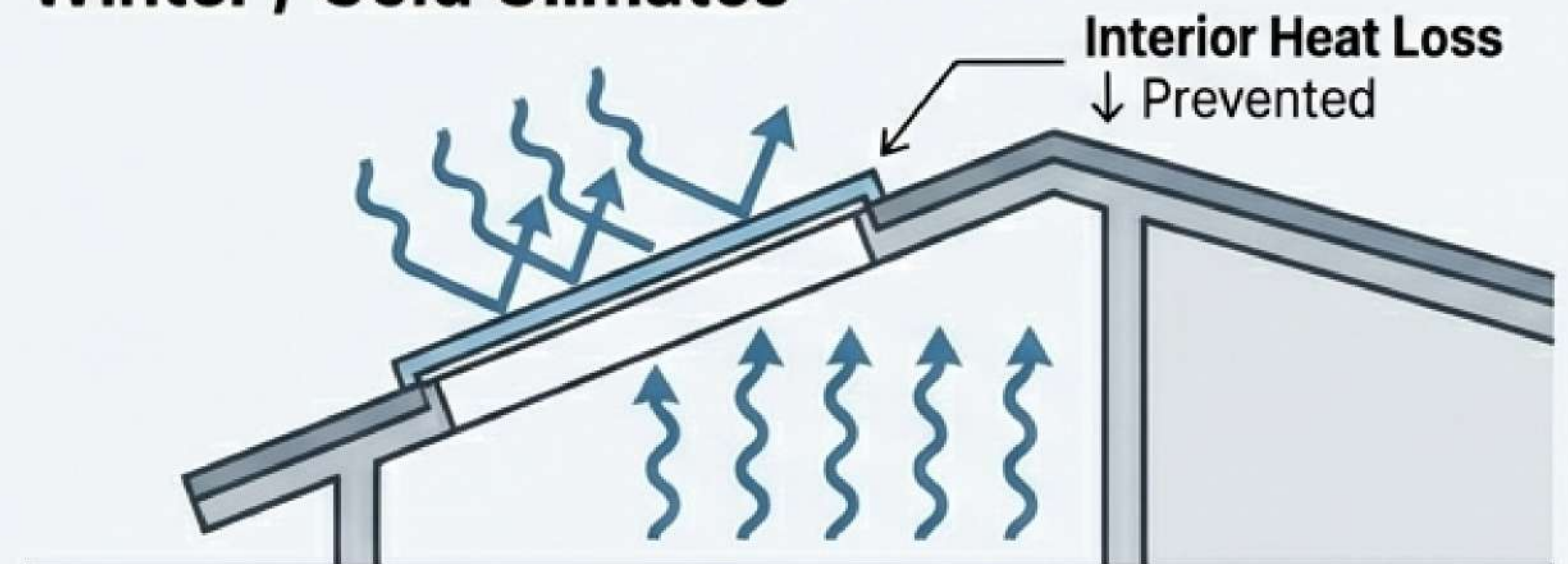
- **Controls Condensation**

Stabilizes the skylight surface temperature, preventing moisture buildup that can lead to mold and water damage.

## Summer / Warm Climates



## Winter / Cold Climates







## Pillar 2: Fortifying Durability & Integrity

The product's aliphatic polyurethane formulation is engineered for long-term resilience against weathering, UV degradation, and physical stress.

- **Exceptional Resistance:**

The cured membrane is resistant to hydrolysis, alkalis, and does not yellow over time, ensuring aesthetic and functional longevity.

- **Walkable Surface:** Becomes trafficable for maintenance within 48-72 hours. A non-slip finish can be achieved by adding quartz aggregate.

### **System-Based Protection (Critical Note)**

For complete waterproofing and enhanced breakage protection on glass or fiberglass, a mandatory preparatory application of a pure acrylic membrane (1.5-2 L/m<sup>2</sup>) is required. This creates a continuous, seamless film that reinforces the substrate.





## Pillar 3: Safeguarding Interior Assets

Beyond protecting the building structure, Thermo-Skylight Shield provides a crucial layer of defense for the valuable assets within.

- **Prevents UV Degradation:** By blocking 80% of UV radiation, the product acts as a powerful screen against the primary cause of fading and material breakdown.
- **The 'So What?':** This directly prevents costly deterioration of furniture, commercial merchandise, flooring, and artwork, extending their service life and preserving their value.



**Before**

**After**





## Performance Data: Technical Snapshot

The following specifications validate the performance characteristics of Thermo-Skylight Shield.

Attribute	Specification
Composition	Water-based aliphatic polyurethane membrane with reflective micropigments
Solar Radiation Reflection	Up to 90%
Infrared (IR) Reduction	52%
Ultraviolet (UV) Reduction	80%
Visible Light Reduction	20-25%
Finish / Color	Very silky, satin / Translucent, Snow-White
Recommended Consumption	0.15-0.25 L/m <sup>2</sup> (in 2-3 coats)
Walkable Time	48 to 72 hours
Application Temperature	5°C to 45°C
Density	1 kg/L ± 5%



# Ensuring Performance & Quality Assurance

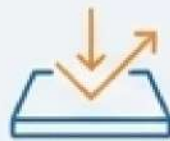
Achieving specified performance is dependent on a systematic approach to quality control, from substrate to final coat.

## The Framework for Success

1.

### Substrate Suitability

Engineered for optimal adhesion and performance on Polycarbonate, Fiber, and Glass skylights.



2.

### Meticulous Surface Preparation

A mandatory prerequisite. The surface must be perfectly clean, dry, stable, and free of contaminants. Polished surfaces must be abraded to open their pores. Existing biological growth must be treated with a fungicide (e.g., Fungilev).



3.

### Professional Installation Mandate

To guarantee results and validate the warranty, SUBERLEV products **must be applied by manufacturer-approved installers.**



4.

### Third-Party Validation

Performance specifications are verified by independent laboratories, including **AIDICO**, providing an **additional layer of confidence.**





# Ideal Applications

Thermo-Skylight Shield is engineered as a targeted solution for specific materials and building challenges to ensure optimal performance.

## Perfect for these Skylight Materials:

- ✓ Polycarbonate
- ✓ Fiber
- ✓ Glass

## Ideal for these Scenarios:

- ✓ Buildings with excessive solar heat gain and high cooling costs.
- ✓ Facilities where condensation on skylights is a recurring issue.
- ✓ Commercial spaces requiring protection for UV-sensitive merchandise or interiors.
- ✓ Projects aiming to reinforce older glass or fiberglass skylights against breakage.
- ✓ Roofs where skylights require a walkable, non-slip surface for maintenance access.

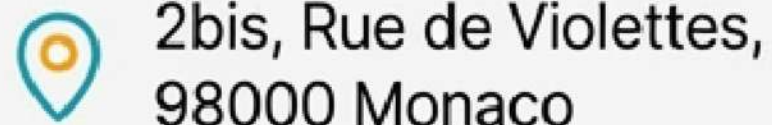
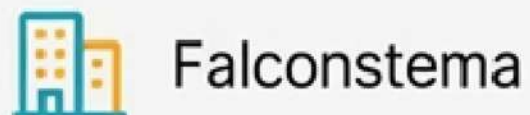


# Help Us Help You

## 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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