



---

## **A1 Fire-resistant cover board for (solar-integrated) roof systems**

### **FM 4470 & FM 4478 Approved**

---

**Product description:** AllShield BarrierSheet® is a high-performance, light weight, non-combustible fire barrier (A1) designed to be installed as a cover board beneath new roofing membranes for roofs with or without PV panel arrays. The product is composed of a multi-mineral, inorganic compound mixture laminated into a flexible, durable sheet. The BarrierSheet is engineered to **block vertical fire propagation** through the roof assembly by cutting off thermal transfer and energy access to underlying insulation and/or roofing materials.

**Working principle:** The BarrierSheet® limits fire spread by blocking the supply of additional fuel and thermal energy beneath the PV system. When a fire starts in a PV panel or the roofing membrane itself (TPO, PVC, EPDM or bitumen), only a very limited amount of combustible material is available—typically a narrow edge of around 2 mm. This creates a ring-shaped flame front, similar to a grassland fire. As this front expands, the available energy decreases and the fire naturally extinguishes, especially in the case of self-extinguishing membranes. The underlying insulation and BarrierSheet do not contribute to combustion, effectively preventing escalation. Only if the initial fire is strong enough to ignite multiple panels on its own will the fire spread within the PV system. Beyond the bounds of the array, the fire will once again extinguish due to lack of energy.

**Uses:** AllShield BarrierSheet® is intended for use as a cover board on existing roofing membranes (e.g. TPO, PVC, EPDM, Bitumen) as a retrofit solution or on top of a new insulation below a new waterproof roofing membrane with or without PV systems for new commercial or industrial flat roof installations where fire containment is critical.

---

**Important note:**

BarrierSheet® is not designed to replace structural roof layers or waterproofing membranes.

---

**EAN:**

- (GTIN): 8720844077014



---

**Certifications and tests:**

- FM 4470 approved
- FM 4478 approved
- A1 certified by Efectis
- NEN 7250:2021 (under review) fire tested
- ZAG Slovenian National Building and Civil Engineering Institute
- Broof(t1) by Efectis



---

**Characteristics / Advantages:**

- Thin profile and lightweight for easy integration
- UV-stable and flexible for installation under PV mounting structures
- Contributes to limiting fire size
- keeps fires self-contained
- reduced weight compared to other cover board solutions and mineral wool, making a lighter construction of buildings possible, improving Bream score



### Product information:

- **Chemical base:** Inorganic mineral blend
- **Top surface finish:** Woven top layer
- **Underside finish:** Non textured facing

### Fire resistant:

- **CEN/TS 1187:2012:** Broof(t1) **(PIR+PVC/TPO/MODBIT)**
- **EN ISO 1716:2018 / EN ISO 1182:2010 :** A1



### Dimensions:

- **Length:** ± 200 cm (±78,74 inch)
- **Width:** ± 100 cm (±32,80 inch)
- **Thickness:** ± 0.25 cm (±0,098 inch)
- **Weight:** ± 3.0 kg/m<sup>2</sup>, ± 10% (±0.62 lbs./sqft, margin ± 10%)

### Packaging:

- **Palletized,** wrapped in weather-resistant film
- **Pallet dimensions:** 1.00 m × 2.00 m (±78,74 \* 32,80 inch)
- **Pallet quantity:** 100x BarrierSheet ± 650kg (±1,433 lbs)
- **Square meters per pallet:** 200m<sup>2</sup> (±2,152.78 Sqf)

**Colour:** Light grey (underside)  
off-white natural mineral (inside),  
off-white (top)

**Storage conditions:** Store indoors in original, unopened packaging. If outdoor storage is unavoidable, elevate pallets and fully cover with waterproof sheeting. Wet or damaged material must not be installed until dry.

### Technical information:

Property	Value	Standard/Test Method
Reaction to fire	Class A1 / Non-combustible	EN ISO 1716:2018 & 1182:2010
Thermal conductivity		n.d.
Water absorption (24h)	< 10%	Internal test method
Compressive strength		n.d
Water vapor permeability	μ = 20-30	Internal test method
Operating temperature range	-30 °C to +1350 °C	Internal test method

### Contact:

Innsbruckweg 150  
3047 AH Rotterdam  
the Netherlands

tel: +31 85 4899950  
mail: [info@allshieldcoatings.com](mailto:info@allshieldcoatings.com)  
web: [www.allshieldcoatings.com](http://www.allshieldcoatings.com)

IBAN: NL71RABO362628912  
BTW/VAT: NL854723432B01  
KVK: 62242180



## Installation Guide Lines – AllShield BarrierSheet®

Take in consideration and follow the local building code and Safety regulations for roof work.

### Substrate preparation:

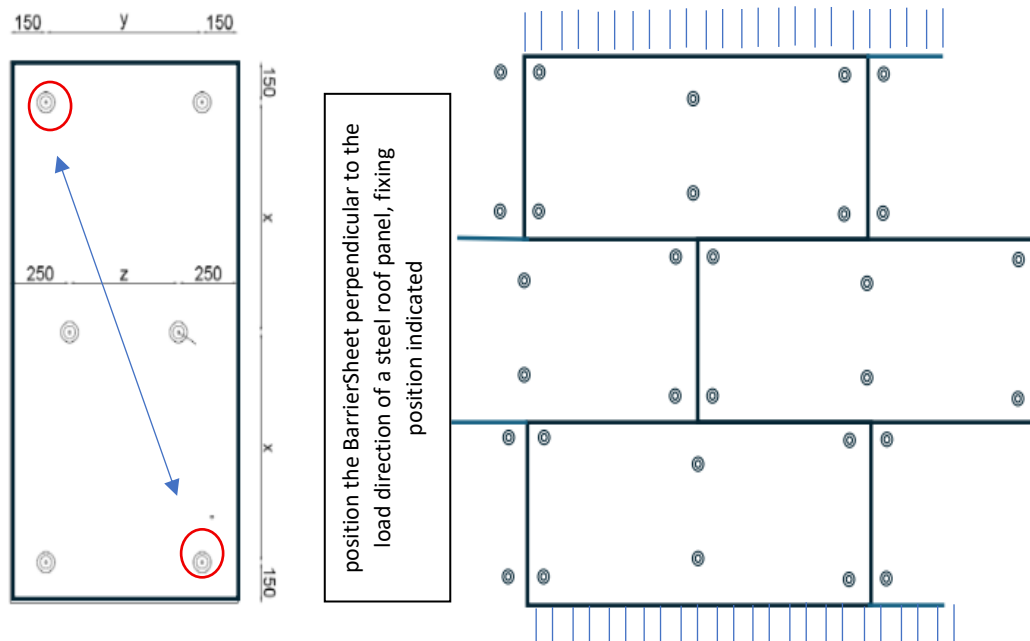
The substrate must be clean, smooth, and free from debris, sharp edges, moisture, water, and oil. Uneven or soft insulation must be levelled before application.

Application	Method of Placement	Specific Notes
New construction or retrofitted	Install BarrierSheet® butt-jointed (tight against each other, no gaps).	Apply in staggered bond pattern. Lay boards flat, without deflection.

Method	Application	Specific Notes
Mechanical	Screws with stress plates (e.g. Ø 70 mm) or Tules.	Minimal 2 fixings per board (temporary) or according to wind uplift calculation. Screws flush with the surface, not overdriven. Final roofing to be fixed as per manufacturer's guidelines
Minimal mechanical fixation	A minimum number of screws to prevent shifting during installation. If the roof is not flat; use the 6x fixing pattern as indicated	If the BarrierSheet is not counted in wind uplift calculation. Typically combined with new PVC or TPO roofing membrane. Final roofing to be fixed as per manufacturer's guidelines.

### Fixing pattern of fasteners (example):

To be calculated by structural engineer per project based upon wind load, height, substructure, location.



### Installation must be performed by trained professionals.

Only approved contractors with experience in membrane-based roofing systems should apply AllShield BarrierSheet®.



---

### Installation of PIR Insulation:

Follow the manufacturer's installation instructions, taking into account wind load and roof design. Use high-compressive-strength PIR boards with aluminum foil facings, suitable for mechanical fastening. Where required, install a vapor control layer according to the roof design. The insulation must provide full support for BarrierSheet® to prevent deflection or point loading.

---

### positioning and fixing of the BarrierSheet®

- **Installation direction:**

- The BarrierSheet® must be installed perpendicular to the load-bearing direction of the steel deck;
- Use a staggered bond pattern;
- Sheets must be laid cold, edge-to-edge, without overlap;
- Joints must be dry, tight, and flat, with no visible gaps.

- **Fixing materials:**

- Use metal self-tapping screws with SP70 stress plates from i.e. SFS Guardian or Eurofast (Ø 70 mm) or other locally available (FM Approved) fixings;
- The screw length must comply with the fixing manufacturer's requirements and ensure full penetration through the steel deck for complete mechanical anchorage.



- **Fixing pattern:**

- Minimal 2 fixings per sheet in to prevent movement during installation due to foot traffic, unless otherwise defined by the project engineer

- **Inspection:**

- Ensure all panels lie flat, with tight joints, and without any stress or buckling.
- 

### Moisture protection:

- Apply only as many sheets as can be covered with roofing membrane on the same day;
- Protect uncovered areas during work breaks from rain;
- Do not install wet material—let it dry out if exposed to moisture before placement;
- Protect during storage against weather.



---

### Cold weather handling:

For applications below +5 °C, follow national safety and installation regulations for handling, storage, or installation. Always refer to the product label and packaging for safe use.

---

### Ecology, health and safety:

This product is classified as an article under REACH Regulation (EC) No 1907/2006. It contains no SVHCs (Substances of Very High Concern) above 0.1% and does not require a Safety Data Sheet.

---

### Personal protection:





---

### LEGAL INFORMATION

*The information provided here, including any recommendations regarding the use and application of AllShield Coatings products, is based on our current knowledge and experience. This information applies under the condition that the products are properly stored, processed, and applied in accordance with the guidelines of AllShield Coatings and under normal conditions.*

*Since building situations, materials, and substrates may vary significantly, AllShield Coatings cannot guarantee that the information or recommendations provided are fully applicable in every case. Other than the statutory warranty against hidden defects, no guarantee is given for suitability or fitness for a particular purpose. Nor can any liability be derived from this information.*

*It is the responsibility of the user to carry out practical tests to verify whether the product is suitable for the intended application and conditions. AllShield Coatings reserves the right to modify its products without prior notice. Liability for damages resulting from use that does not comply with our guidelines is expressly excluded.*

*The intellectual property rights of third parties must always be respected. All deliveries and orders are subject to the current **General Terms and Conditions of Sale and Delivery** of AllShield Coatings. Always consult the most recent version of the product documentation, available on our website or upon request.*

---

### Contact:

Innsbruckweg 150  
3047 AH Rotterdam  
the Netherlands

tel: +31 85 4899950  
mail: [info@allshieldcoatings.com](mailto:info@allshieldcoatings.com)  
web: [www.allshieldcoatings.com](http://www.allshieldcoatings.com)

IBAN: NL71RABO362628912  
BTW/VAT: NL854723432B01  
KVK: 62242180