QUICK ANSWERS

The 6 questions applicators ask most

How much heat does it reflect?

Solar reflectance **≥ 88%**, SRI **≥ 112**, thermal emittance **≥ 0.88** — 3M microspheres reflect radiation instead of letting the roof absorb it and pass the heat below.

What about old, rusty sheet roofs?

You must **grind off the rust** (step 2), **pressure-wash** (step 3), then **spray an anti-rust primer** (step 5) before coating. Coated straight over rust, the film will peel off with it.

How are fasteners and ribs treated?

Step 4 seals **fastener heads and gaps** — the most common leak points on sheet roofs, sealed before spraying.

How many coats, and how much per coat?

Spray for large areas; roller or brush for details and edges. At least **2 coats**, each coat **at right angles** to the previous one, and the **full coverage**: **0.3 - 0.6kg/m²** painted surfaces, new walls; **1.0 - 2.0kg/m²** metal and concrete roofs. Each coat **no more than 0.5kg/m²**, wait 20 - 45 minutes.

Which substrates?

Galvanised, aluminium-zinc and colour-coated sheet · steel and metal surfaces · concrete and cement mortar · pitched concrete roofs · concrete and externally rendered walls.

Does it waterproof too?

Yes — waterproofing and heat reduction in one system. Liquid water permeability **< 0.1kg/m²·h$^{0.5}$** to EN 1062-3:2008, crack bridging **≥ 0.75mm** (BS EN 14891:2017).

More questions? **Scan the Zalo OA code on the back cover** — a BUMATECH engineer will assist you directly during working hours.

BUMATECH

Tile Adhesive • Waterproofing • Dry Mix • Construction Chemicals

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TEST BASIS
Heat-reflective and waterproofing properties tested to ASTM E903-20 · ASTM E1980-24 · BS EN 15976:2011 · EN 1062-3:2008 — full results in the table in section 02.

WATERPROOFING · HEAT REFLECTIVE
White acrylic coating with reflective microspheres, for metal and concrete roofs

BUMA-WP · WATERPROOFING

HEAT-REFLECTIVE ROOF WATERPROOFING

SolarSHIELD

White acrylic coating with 3M microspheres — solar reflection and waterproofing in one system, for industrial sheet and metal roofs.

REFLECTANCE ≥ 88%

SRI ≥ 112

EN 1062-3

SOLAR REFLECTANCE
≥ 88
% to ASTM E903-20
SRI ≥ 112 · ε ≥ 0.88



≥ 112
Solar Reflectance Index SRI (ASTM E1980-24)

BUILD BETTER
LIVE GREENER

01 WHY SolarSHIELD?

Factory sheet roofs absorb solar radiation and pass the heat below. **SolarSHIELD** uses **3M microspheres that reflect solar radiation** right at the roof surface, while forming an elastic waterproof acrylic film — cooler and watertight in one coating.

REFLECTANCE ≥ 88%

Solar reflectance to ASTM E903-20 — limits heat absorbed by the roof

SRI ≥ 112

Solar Reflectance Index to ASTM E1980-24, thermal emittance ≥ 0.88 to BS EN 15976:2011

WATERPROOF AS WELL

Liquid water permeability < 0.1kg/m²·h$^{0.5}$ to EN 1062-3:2008, crack bridging ≥ 0.75mm

02 STANDARDS & TECHNICAL PROPERTIES

ASTM E903-20 · ASTM E1980-24 · BS EN 15976:2011 · EN 1062-3:2008

Property	Standard	Result
Density	ASTM D1475-13(2020)	**0.80 ± 0.05g/cm³**
Elongation at break after 28 days	ASTM D412-16(2021)	**30% ± 3%**
Maximum tensile strength	ASTM D412-16(2021)	**≥ 2.0MPa**
Adhesion strength to concrete	ASTM D7234-21	**≥ 1.1MPa**
Adhesion strength after heat aging	ASTM D7234-21	**≥ 1.5MPa**
Shore A hardness	ASTM D2240-15	**≥ 50**
Liquid water permeability	EN 1062-3:2008	**< 0.1kg/m²·h$^{0.5}$**
Crack bridging ability	BS EN 14891:2017	**≥ 0.75mm**
Solar reflectance ρ	ASTM E903-20	**≥ 88%**
Thermal emittance ε	BS EN 15976:2011	**≥ 0.88**
Solar Reflectance Index (SRI)	ASTM E1980-24	**≥ 112**

*Data per TDS **SolarSHIELD** v2026.10 — laboratory test results.*

03 TECHNICAL DATA

≥ 88 % solar reflectance	**≥ 112** SRI index	**≥ 0.88** thermal emittance
0.80 g/cm³ density	**30%** elongation at break	**≥ 50** Shore A hardness

*Packed in **03kg and 15kg pails** · white. Coverage **0.3 - 0.6kg/m²** on previously painted surfaces and new walls; **1.0 - 2.0kg/m²** on metal and concrete roofs. Max 0.5kg/m² per coat; 20 - 45 minutes between coats; full cure about 5 - 7 days. Apply by spray, roller or brush; spray for large areas.*

04 SCOPE OF USE

- ✔ Heat reduction and waterproofing for sheet, metal and concrete roofs and external walls
- ✔ Reduces solar absorption and heat transfer into the building
- ✔ Factories, warehouses, logistics centres, pre-engineered buildings
- ✔ Refurbishing existing roofs and walls, extending surface life



COMPLETE SYSTEM: SolarSHIELD goes over sheet roofs after the anti-rust primer in step 5; on concrete, prime with **PRIMER F**. Sheet laps are reinforced with **BuMaTAPE** embedded in wet coat 1.

05 APPLICATION IN 8 STEPS


1 Check roof and weather


2 Grind off rust


3 Pressure-wash


4 Seal fasteners and gaps


5 Spray anti-rust primer


6 Coat 1, embed **BuMaTAPE**


7 Spray finish coat


8 Inspect and hand over

Key reminders: Remove all rust before coating · Max 0.5kg/m² per coat · Do not apply when surface is below dew point + 3°C