

SOLAROOF
Updated July'25


Solarroof is a high-performance heat-reflective acrylic roof coating specially engineered to protect homes from Malaysia's intense tropical sun. Formulated with **Solareflect Technology**, it effectively reduces surface temperature by up to 5°C, helping to lower indoor heat buildup and improve energy efficiency.

Solarroof also features UV-resistant pigments, superior dirt resistance, and dual protection against algae and fungus, ensuring long-term colour brilliance and a cleaner roof finish. With a smooth gloss finish, low VOC formula, and excellent weather durability, Solarroof is the pinnacle of roof protection, offering advanced comfort and performance beyond conventional roof paints.

Product Features:

- **Solareflect Technology**
Reflects solar heat and reduces roof surface temperature by up to 5°C, enhancing indoor comfort naturally.
- **Superior UV & Colour Retention**
Tested to **ASTM G154 & G155**, ensuring long-lasting colour vibrancy and resistance against chalking and fading.
- **Excellent Dirt, Algae & Fungus Resistance**
Keeps the roof surface cleaner for longer, with dual biocidal protection against tropical biological growth.
- **Low VOC & Low Odour**
Environmentally safer formulation suitable for sensitive areas and eco-conscious projects.
- **High Coverage**
Covers **8–10 m²/L** with a smooth, protective gloss finish.
- **Ideal for Concrete Tile Roof & Metal Roof**
Engineered to bond and perform on multiple substrate types exposed to tropical extremes.

Paint Type	Product Type	Finishing	Recommended Substrate	Pack Size
Water based	Exterior	Gloss	Concrete tile roof, Metal / cladding roof	5 Litres, 20 Litres

Composition

Pigment	: Mainly Titanium Dioxide, Iron Oxide, Carbon Black, Organic Pigments and Mineral Extender
Binder	: Pure Acrylic
Thinner	: Water

Technical Data

Drying Time	: Touch Dry : 30 minutes (Dependent on temperature and humidity)
	: Hard Dry : 3 hours (Dependent on temperature and humidity)
Recoating Time	: 4 hours (Dependent on temperature and humidity)
Dry Film Thickness	: Around 30 µm per coat (based on substrate condition)
No. of Coats	: 2 coats
Theoretical Coverage	: 8 – 10 m ² per litre per coat (Actual coverage is dependent on substrate condition, application method, application condition and finishing appearance)
Volume Solid	: ~ 34%
Shelf Life	: Up to 36 months in tight sealed container

Application Method

Brush / Roller	: Dilute the paint with not more than 5% of water. Preferable not dilute for best performance.
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This Technical Data Sheet (TDS) replaces all earlier versions.

For details or to find your nearest Nippon Paint office, visit nipponpaint.com.my.

Recommended Coating System		
<u>New Substrate</u>		
Concrete Tile Roof		
Sealer / Primer	: Acrylic 5170 Wall Sealer	: 1 Coat
Top Coat	: Solaroof	: 2 Coats
Metal / Cladding Roof		
Sealer / Primer	: Hydro Wood & Metal Primer	: 1 Coat
Top Coat	: Solaroof	: 2 Coats
<u>Re-painting Substrate</u>		
Metal / Cladding Roof		
Sealer / Primer	: Acrylic 5170 Wall Sealer	: 1 Coat
Top Coat	: Solaroof	: 2 Coats
Surface Preparation		
Remove all loose, defective paint or powdery residues, loose chalk, dust, fungus, algae and foreign matter. Treat any areas affected by fungus growth with Fungicidal Wash Solution. Repair cracks, uneven surfaces with Nippon CrackREPAIR 1000 Compound or suitable exterior grade fillers. Smoothen the filler areas with sand paper. Surfaces to be painted must be cleaned thoroughly and dry, it must be free from dirt, grease and other foreign matters. Allow all surfaces to dry completely prior to painting. Avoid painting when the moisture content and alkalinity of the walls are still high. (Recommended painting specification requires the moisture content of the walls to be below 16% measured by protimeter and alkalinity of the walls to be below pH9.) Spot prime with Nippon Paint Sealer.		
Cleaning		
Clean up equipment with water immediately after use.		
Tests		
1. ASTM C1549, ASTM C1371 & ASTM E1980 on Solar Reflectance, Emittance and Calculation of Solar Reflectance Index (SRI) of Paint Measurements 2. ASTM D3719 on Dirt Pick-Up Resistance by Natural Weathering, tested in-house 3. ASTM G154 on QUV-A Colour Retention Resistance, tested in-house 4. ASTM G155 on Xenon Arc Accelerated Weathering, tested in-house 5. ASTM D2486 on Wet Scrub Resistance, tested in-house		
Safety Precautions		
• Keep container tightly closed and keep out of reach children or away from food and drink. • Ensure good ventilation during application and drying. • When applying paint, it is advisable to wear eye protection. • In case of contact with eye, rinse with plenty of water immediately and seek medical advice. • Remove splashes from skin by using soap or water. • Paint must always be stored in a cool place. • When transporting paint, care must be taken. Always keep container in a secure upright position. • Dispose any paint waste in accordance with the appropriate Environment Quality Regulations.		
Note		
* Theoretical Coverage is based on a mathematical formula $\left[\frac{\text{Volume Solid \%} \times 10}{\text{Dry Film Thickness}} \right] = \text{m}^2/\text{lit}/\text{coat}$ and does not consider LOSS FACTORS.		

Variables like porosity of substrate, application method, dilution ratio, dry film thickness, opacity and so on will affect the loss factor and can vary from 30% - 50% or even more.

Disclaimer

The information contained in this document is provided to the best of Nippon Paint's knowledge, based on laboratory testing and practical experience. As our products are considered semi-finished goods, their performance may be influenced by conditions beyond Nippon Paint's control. As such, we can only guarantee the quality of the product itself. Minor variations may be introduced to comply with local regulations. Nippon Paint reserves the right to modify the information in this document without prior notice.

Users are encouraged to consult Nippon Paint for specific guidance on the suitability of this product for their intended use and application method.

In case of discrepancies between language versions, the English (United Kingdom) version shall prevail.