

THERMAL-SHIELD RF

The High Tech **Eco-Friendly** Thermal Insulation Coating
Improves efficiency and reduces energy costs



Technical Datasheet

FOR
ROOFS



Ceramic Microspheres
Tech/Energy Saving



Waterproofs



Eco-Friendly



High Solar Reflectance



Many Colors Available

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Product description

Seal Thermal-Shield RF is a High Tech / High Performance liquid applied thermal insulation and energy saving roofing coating system. Seal Thermal-Shield RF having high quantity of ceramic micro-spheres of vacuum beads in an elastomeric emulsion of high grade acrylic resin is nontoxic (Environmentally friendly) and is designed to outlast other radiant barrier roofing systems. It is applied on most roofing material including that of concrete and metal. When applied on steel surface, Seal Thermal-Shield RF will act as Rust Inhibitor and thus stopping any steel corrosion by converting the iron oxide into iron phosphate.

Typical applied surfaces

- Powder coated / galvanized metal
- Concrete roofs / abutments
- Roof tiles
- Fiber glass
- Perspex

Specific gravity

1L/kg ± 2%

Theoretical spread rate

2.0 m² / Liter @ 500 Microns WFT

Solid content

65% by volume ± 2 Volume %

58% by weight ± 2 weight %

Approximate drying time

To re-coat: 4 hours, Fully dry 12 hours

Equipment

Roller or airless spray application is recommended

Thinning

Approx. 0%-5% with sweet water

Packaging size

Available in 5 litres and 20 Litres (Pail)

Colours

White or as per the roof colour chart

Benefits

- Reduces internal temperatures
- Increased thermal protection and saves energy
- Non-toxic, water-based, low VOC
- Available in a wide range of exterior colours
- Eliminates blistering, peeling & cracking
- Excellent bonding to most substrates
- Excellent breathability
- Water Resistance
- Very low maintenance/repair costs
- Stops corrosion when applied to steel
- High solar reflective index
- Non-combustible - Class A Fire Retardant

Recommended system

Primer on Concrete: Seal Acroprime	1 Coat
Primer on metal: Seal Metoprime	1 Coat
Seal Thermal-Shield RF	2 Coats

Product test and certificates

Type	Method	Results
Solar Reflectance	ASTM C 1549-09	88.3 (White)
Solar Reflectance Index	ASTM E 1980:01	110.5 (White)
Emittance	ASTM C 1371-04a	0.82
Thermal Conductivity	ASTM C 518-02	0.06 W/mK
Water Penetration	BS EN 12390	0mm @ 4kpa
VOC Content	BS EN ISO 11890:2	< 0.1 g/l
Light Reflectance Value	BS 8493:2008 + A1	93.18 (White)
Adhesion Strength	ASTM D 4541-09	7.0 N/mm ² Concrete
Abrasion Test	ASTM D 1044-99	0.9% Before 2.85% After
Fire Retardant	ASTM E 84	Class A
Elongation	ASTM C638-10	>250%





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Conditions during application

The temperature of the substrate upon application should not be less than 8°C and at least 3 °C above the dew point of the air, measured in the vicinity of the substrate. Good ventilation is usually required in confined areas to ensure proper drying.

Recommended film thickness / coat

Dry film thickness : 300 microns (µm)*

Wet film thickness : 500 microns (µm)*

* Film thickness can vary on different types of roof applications.

Surface preparation

The substrate must be sound, clean, dry and free from dust, oil, grease etc. A light sanding with suitable abrasive material is recommended before application. Any resulting dust/loose particles must be removed.

Drying times

The given below data must be considered as guidelines only. The actual drying time and time before recoating may be shorter or longer, depending on the ambient temperature, wind factor, film thickness, ventilation, and humidity.

Surface Temp.	10 °C	25 °C	40 °C
Surface (touch) dry	3h	1h	0.4h
Hard dry	10h	6h	3h
Dry for 2nd coat	4h	2h	1h

Specification of airless spray

Nozzle tip: 0.021" - 0.027"

Spray angle degrees: 65° - 80°

Pressure at nozzle: 1200-2100 psi

Airless spray type: Diaphragm pump

Health and safety (MSDS)

Safety Data Sheets (SDS) are available from Seal Coatings to help customers satisfy their own handling, safety and disposal needs and those that may be required by locally applicable health and safety regulations. For further questions consult your Seal Coatings agent.

Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Disclaimer

The information in this document is given to the best of Seal Coatings knowledge, based on laboratory testing and practical experience. Seal Coatings are often used under conditions beyond Seal Coatings control. Seal Coatings or authorized distributors or agents across the globe cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Seal Coatings reserves the right to change the given data without further notice.

