

THERMAL-SHIELD MARINE

The High Tech **Eco-Friendly** Waterproofing Coating for Marine use



MARINE USE
STS - MARINE

Technical Datasheet



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Product description

Seal Marine-Shield [SMS] is a high performance water based acrylic thermal insulation protective coating formulated with ceramic microspheres, anti-corrosion, antibacterial, anti-condensation and sound damping fillers for various types of marine applications. The combination of a high loading of the Ceramic Microspheres with their vacuum centers reduces the heat flow inside and reduces the sound transmission from bouncing off the surface and reduces condensation from within the cabin.

Seal Marine-Shield [SMS] can be used on interior & exterior surfaces above the water line and used on different types of marine applications such as workboats, barges, shipping vessels, yachts, landing craft and military crafts.

Typical applied surfaces

- Metal
- Galvanized Steel
- Fiber glass
- Wood

Theoretical spread rate

0.75 m² / Liter @ 1500 Microns WFT

Solid content

68% by volume ± 2 Volume %
58% by weight ± 2 weight %

Approximate drying time

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

Specific gravity

0.80 kg/L ± 2 ; theoretical for white colours

Equipment

Roller or airless spray application is recommended

Thinning

Approx. 0%-5% with sweet water.

Packaging size

Available in 4 litres and 18 Litres (Pail)

Colours

White or as per the marine colour chart

Benefits

- Reduces internal temperatures
- Anti-Condensation
- UV Protection
- Mildew & Bacteria Resistant
- Excellent adhesion to various metal substrates
- Anti-corrosion
- Reduction of structure-borne noise and vibrations
- Protects the surface from the harsh Marine environment
- Excellent bonding to most substrates
- Reduces maintenance costs
- Can be applied to difficult to reach places
- Applied in conjunction with traditional insulation to improve overall thermal insulation systems
- Environmentally friendly
- Lightweight
- Water Resistance

Applications Types

- Marine cabins, ceilings and walls
- Marine vessels interior hulls
- Interior of luxury yachts and super-liners
- Marine mechanical rooms
- Marine metal deck roofing
- Shipping containers
- Off-shore platforms - interior structures
- Marine interior pipes

Product test and certificates

Type	Method	Results
STC rating	* Depending on the room construction and environmental factors.	3-6 Points*
Solar Reflectance Index	ASTM E 1980:01	110 (White)
Thermal Conductivity	ASTM C 518-02	0.06 W/mK
VOC Content	BS EN ISO 11890:2	< 50 g/l
Water Penetration		Excellent
Light Reflectance Value	BS 8493:2008 + A1	93.18 (White)
Adhesion Strength	ASTM D 4541-09	4.0 N/mm ² Metal
Abrasion Test	ASTM D 1044-99	0.9% Before 2.85% After
Fire Retardant	ASTM E 84	Class A
Elongation		>150%

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Recommended system

Primer: Self priming on metal and fiber glass*

Seal Marine-Shield **2 Coats**

*Free from any types of containmanations on the surface.

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

Dry film thickness : 1000 microns (µm)*

Wet film thickness : 1500 microns (µm)*

* Film thickness can vary on different types of 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.

