

RADIANT HEAT BARRIER PAINT

There's no getting cool without it...



Marmoran Heatgard 4 Coating System was used on the entire roof (70,000 m²) of this shopping centre. Other recent retail projects include Mitchells Plain Promenade and NI City in Goodwood.

Heatgard 4 acts as a protective shield against Solar Radiation by re-radiating most of the infra-red & ultra violet rays back into the atmosphere.

PRODUCT FEATURES AND BENEFITS

- Radiant heat rejecting ability reduces internal temperature up to 20%.
- Rejects most solar and terrestrial radiation and keeps heat OUT of a structure.
- Exhibits solar reflectance of between 77 and 86 %, depending on substrate.
- Can save up to 40% of energy costs for cooling purposes.
- Reduces thermal stress and movement in structures.
- Protects against weathering.
- Water based with **LOW VOC LEVEL'S**
- Can easily be applied externally to a wide variety of materials such as concrete, plasterboard, cement render, wood, bricks, waterproofing membranes, clean and sound painted surfaces, fibre cement, properly primed metals and others



UNIQUE INTERNATIONAL GUARANTEE

MARMORAN 5 YEAR INTERNATIONAL GUARANTEE UNDERWRITTEN BY A THIRD PARTY is issued on condition that the system is applied by a Marmoran Licenced Applicator in strict accordance to the full specification and is accepted and signed by the relevant parties. Due to the demand for the highest standard of application and finish, it must be applied by a trained applicator that is skilled and experienced.

THE SYSTEM COMPRISES OF

1. Marmoran Heatgard 4 Undercoat or Heatgard Metal Primer [depending on the substrate]
2. Marmoran Heatgard 4



TESTED TO NATIONAL & INTERNATIONAL STANDARDS BY THREE INDEPENDENT LABORATORIES.

TEST STANDARDS

ASTM D4828	Easily cleaned up to 10,000 scrubs without exhibiting wear or signs or loss of adhesion
CGRI/R+H	Superior quality pure acrylic resin ensures resistance to dirt pickup
ASTM 4060	Tough & durable with high resistance to abrasion & scuffing
ASTM G53	UV resistant to prevent excessive chalking, colour change, flaking or peeling
ISO 1519	Exhibits outstanding flexible qualities, yet hard and durable to withstand the stresses of natural expansion and contraction of the substrate
ASTM E96	Controlled water vapour permeability allows the walls to “breathe” to maintain resistance to water ingress and prevent spalling, delamination, algae and dirt retention
ISO 2409	Superior adhesion to all suitably primed substrates
SABS 170	Excellent resistance to alkali salts to prevent coating delamination and adhesion
SABS 1586	Ability to withstand high temperatures with no signs of delamination, blistering or loss of adhesion
ISO 12040	Exceptional weathering, water repellency and ultraviolet resistant properties
ASTM C1549 & E9.3-96	Total Solar Reflectance – see report below

The Shepherd Color Company, 4539 Dues Drive, Cincinnati, OH45246

TEST: TOTAL SOLAR REFLECTANCE

INSTRUMENT: SOLAR SPECTRUM REFLECTOMETER MODEL SSR-ER

ASTM REFERENCE: C1549 & E903-96

SHEPHERD TEST METHOD REFERENCE: SCTM340

The Results of Solar reflectance of Heatgard 4 on 5 random samples using primers of various colours.

	MP1 Primer 1 coat	Heatgard 4 1 coat	MP1 Primer 1coat & 1 coat Heatgard 4	MP1 Primer 1coat & 2 coats Heatgard 4	% TSR Minimum Total Solar Reflectance	CONCLUSION
	TOTAL DFT [μ]	TOTAL DFT [μ]	TOTAL DFT[μ]	TOTAL DFT[μ]		
Sample 1 Colour of primer	46 white	94 white	140	234	86	Maximum solar reflectance is achieved using a white primer with a white topcoat. Total solar reflectance of a coating is the ability of a coating to reflect heat energy. Total solar reflectance is (TSR) is a measure of incident terrestrial solar energy reflected from a given surface. EPA ENERGY STAR specifies a minimum of 65%.
Sample 2 Colour of primer	41 light grey	43 white	84	127	83	
Sample 3 Colour of primer	43 light blue	66 white	109	175	82	
Sample 4 Colour of primer	33 grey	56 white	89	145	83	
Sample 5 Colour of primer	48 blue	46 white	97	143	81	

COLOUR RANGE

- The standard colour is near-white. Pastel shades are available on request. It is very important to note that the standard colour of near white is highly recommended, as it is the best performer.

AVAILABILITY

- Made to order

PACKAGING

- 5 & 20 Litre containers

GENERAL CONSIDERATION REGARDING APPLICATION

CLIMATIC CONDITIONS

Adequate protection should be provided against rain and sub-zero temperatures for a period of not less than 24 hours after application. The coating should never be applied during adverse weather conditions, or on wet surfaces. Even if the weather seems fit for painting, there may be condensation if the temperature of the substrate is at or below the dew point (temperature at which the atmospheric humidity condenses e.g. as dew) the product should only be applied when the temperature of the substrate is at least 2 deg C above dew point. In hot climates, the coating should be applied during the morning and late afternoon hours and if possible away from direct sunlight. Variations in temperatures will affect drying times.

APPLICATION

- Stir thoroughly before use
- Preferably applied with an airless spray (Airless tip size: 0.48 - 0.58 mm / 0.019 - 0.023 in.) but may be applied by brush or roller.
- Equipment may be cleaned with water and dry paint removed with Methylated spirits.
- **Always allow for drying between coats.**

SURFACE PREPARATION and SPECIFICATION

- **Inspect and prepare** the substrate appropriately to ensure that the surface is clean [if necessary use Marmocide to disinfect followed by Marmoclean], dry and sound.

- **Prime** with 1 or 2 coats of the appropriate primer to achieve complete obliteration of the substrate:
Heatgard 4 Undercoat at a spread rate of 6-8m² / L / coat **WFT** 167-125 µ per coat **DFT** 80-60 µ per coat
Allow to cure for 12 -24 hours before applying Heatgard 4

OR

Heatgard MP at a spread rate of 8-10m² / L /coat **WFT** 125-100 µ per coat **DFT** 46-37µ per coat
Allow to cure for 24 hours

- Apply 2 or 3 coats **Marmoran Heatgard 4** at a spread rate of 4-4.5m² / L / coat so as to achieve complete obliteration. **WFT** 250-222 µ per coat **DFT** 105-93 µ per coat

PRODUCT DATA

	Heatgard 4 Undercoat	Heatgard Metal Primer	Heatgard 4
Composition	Inert pigments, fillers and additives dispersed in a co polymer resin	Zinc phosphate primer water borne pure acrylic emulsion	Pure acrylic resin, special pigments and unique fillers.
Solvent Type	Water		
% Volume Solids	48% ± 2%	37% ± 2%	42% ± 2%
% Mass Solids	59% ± 2%	47% ± 2%	61% ± 2%
Drying Times [hours]@ 25 deg C, 65% RH Higher temperatures will accelerate the drying times [± halved for every 10 deg C increase] Lower temperatures will retard the drying times [± doubled for every 10 deg C decrease]			
Touch dry	2 hours	2-4 hours	2 hours
Recoat	12-24 hours	24 hours	12-24 hours
Spread rate: This figure is indicative, and subject to applicator skill and substrate type and condition. Actual spread rates must therefore be determined by the Applicator			
	6-8m ² / L / coat	8-10m ² / L / coat	4-4.5m ² / L / coat
Wet Film Thickness per coat	167-125 µ per coat	125-100 µ per coat	250-222 µ per coat
Dry Film Thickness per coat	80-60 µ per coat	46-37 µ per coat	105-93 µ per coat
No of coats to achieve complete obliteration of the substrate	1 to 2 coats	1 to 2 coats	2 to 3 coats
VOC LEVEL	21g/L 1.9%	26g/L 2.15%	19g/L 1.39%
Solvent for cleaning	Water, use Methylated spirits for dry paint		
Shelf Life and Storage	6-8 months in unopened containers. Store in a cool dry and well ventilated place away from excessive heat or open flame. Do not allow to freeze.		

TRANSPORT

This product is non hazardous in accordance with Transportation and Classification of Dangerous Goods Act (1996)

HANDLING & SAFETY

This product is water based and non-toxic. Keep out of reach of children. It does contain chemicals that may be irritants to mammalian tissue. Appropriate protective clothing must be worn. Protect eyes and skin from exposure. If the product is being sprayed, ensure adequate ventilation and ensure the use of proper ventilated masks. Wash spillages immediately with water. Do not induce vomiting if swallowed. Consult a physician if irritation of skin persists or if product is ingested. Gather up environmental spillages, and dispose of in accordance with regulations of the local authorities.

DISCLAIMER

All information contained herein is given in good faith, based on our specialised knowledge and experience. We reserve the right to effect changes to product and specification alike in the interest of product development and improving technology.