



STERLING[®] ThermoCrete™ HRC

High Performance, Elastomeric, Heat Reflective
And insulating coating with UV protection.

Description:

Sterling® ThermoCrete™ HRC is a single-component, highly elastomeric white coloured emulsion comprising of acrylic polymers and specially developed and designed hollow "microspheres", less than 100 microns in diameter with nonconductive properties. These microspheres collectively acts as thermal insulation blanket covering the structure effectively reflecting solar radiation back into the atmosphere. This results in impressive temperature reduction behind the substrate, in air-conditioned areas, an attractive power saving of up to 20% can be noted during peak summer.

Sterling® ThermoCrete™ HRC provides excellent insulation protection and is a very effective weather barrier for many types of commercial and industrial applications, as well as insulation and roofing materials. **Sterling® ThermoCrete™ HRC** provides excellent UV protection. It exhibits superior adhesion to many substrates and has a high hide capability to create an aesthetically pleasing appearance. **Sterling® ThermoCrete™ HRC** provides highly efficient insulation performance over multiple years thereby reducing maintenance and total lifecycle costs while delivering maximum ROI in energy savings.

Application Includes:

Sterling® ThermoCrete™ HRC is recommended for use as a thermal insulation coating on roof slabs and walls of buildings. It can also be used on the interior walls and the roof of freezer rooms and cold storage facilities.

- Roofs & Terrace of Buildings
- Asbestos, GI sheet and other metal surfaces
- External and internal walls
- Corrosion Under Insulation (CUI)
- Commercial Buildings Sheds
- Weather resistant membrane
- Wood, Concrete & concrete roofs.
- Air-Conditioned Building
- Wood, tiles, PU foams and asphalt shingles.
- Fabric embedded membrane
- Refrigerated Cold storage Facilities
- Walking decks & balconies
- Stair ways & pool area
- Green Buildings

Features & Benefits:

- Sterling® ThermoCrete™ HRC Enhances durability of the roof and reduces both building cooling loads and the urban heat island effect.
- Sterling® ThermoCrete™ HRC is also an effective alternative to bulk insulations under the roofs in humid tropical climates. Bulk insulation can be to an extent replaced by Sterling® ThermoCrete™ HRC that reflect solar radiation and provide emission to the sky.
- Sterling® ThermoCrete™ HRC has excellent abrasion and water resistance it is also resistant to fungal growth.
- Sterling® ThermoCrete™ HRC is recommended for reduction in the "carbon foot print" of building as it reduces fuel consumption of the air-conditioning plant.
- Your building remains cool even under intense sunlight conditions.
- Your staff remain cool and maintain higher level of productivity.
- Your humidification and air conditioning costs cut upto 20%.

Application Instructions:

Surface Preparation

All the surfaces which are to receive **Sterling® ThermoCrete™ HRC** coating, must be free from oil, grease, wax, dirt or any other form of foreign matter which might affect adhesion. Spalled and deeply disintegrated concrete should be removed to sound concrete and repaired with TechFin® system. Metal surface must be thoroughly abraded to ensure proper mechanical key. Application areas to be cleaned with a hard brush to remove all dust, weak point, fungus etc. Cleaned area to be washed with water, Bleaching Powder (If required)

Priming:

Priming is not required on metallic and non-porous surfaces. On highly porous cementitious surfaces, apply a coat of TechnoSeal® FlexiPrime using a clean roller/brush and allow the surface to dry for at least 2-3 hours, prior to Sterling® ThermoCrete™ HRC application.

Mixing:

Stir product to an even smooth consistency before use.

Typical Properties at 23°C & 50% RH

Appearance	White coloured, pasty consistency
Bulk Density	Approx. 1.25kg/litre
Solid Content	Approx. 60% by weight
Ultimate Elongation	> 200%
Ultimate Tensile Strength	> 6 Mpa
Adhesion Strength	> 2.5N/mm ²
Shore A Hardness	> 60
Drying Time	24 hours depending on temperature and RH
Full cure	7 days @ 23°C 5 days @ 40°C
Application & Service Temperature	5°C to 50°C
Solar Reflectance ASTM C1549	.92 Initial
Thermal Emittance	.87 Initial
SRI Calculated	122

Design Criteria:

Sterling® ThermoCrete™ HRC should be applied in two coats to achieve a total dry film thickness of not less than 400 microns.

- Reduction of roof heat about 8°C to 20°C

In general the roof temperature is in the range of 60°C to 80°C in summer and this can be substantially reduced by coating the roof with Sterling® ThermoCrete™ HRC. Below mentioned is an example of reduction in surface temperature after the application of Sterling® ThermoCrete™ HRC coating:

- RCC terraces- Up to 14°C
- Asbestos cement sheets - Up to 16°C
- GI or powder coated sheets- Up to 22°C

The above figures are indicative and will vary according to ambient atmospheric conditions.

Storage & Shelf Life:

12 months from the date of manufacturing when stored in unopened, original sealed and dry condition at a temperature range from +10°C to 30°C.

Packaging:

Sterling® ThermoCrete™ HRC is supplied in 10 kg, 20 kg and 25 kg drums.

Limitations/Cautions:

Sterling® ThermoCrete™ HRC is formulated for application to clean, sound concrete, aluminium or galvanized steel. Where application over existing sound coatings or paints is required, trials should be conducted to ensure compatibility and retention of the bond between the underlying coating and the substrate.

Sterling® ThermoCrete™ HRC should not be applied where there is a likelihood of exposure to frost within 48 hours of the application. The product should not be applied in windy conditions where early-age dust adhesion may occur, or where rain is likely within 3 hours at 23°C or 5 hours at 40°C (up to 75% RH).

Disclaimer: The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

Edition: 10/2017/001 Identification No: PD-062
This datasheet supersedes all previous versions.

Coverage;

This depends on the roughness & porosity of the substrate. The approximate coverage on Concrete: 1.5-2.0 m² /2coats/ Litre @ 400 microns dft. Steel: 2-2.5 m² /2coats/Litre @ 400 microns dft. A minimum of 2 coats are recommended for effective performance. Allowances should be made for any possible wastages when estimating.

Health & Safety Instructions:

Sterling® ThermoCrete™ HRC should not come in contact with the skin and eyes, or be swallowed. Wear suitable protective clothing, gloves and eye protection. The use of barrier creams provide additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately- do not induce vomiting. Protect your health while working with this material, always use safety goggles, gloves and safety clothing. When handling hazardous materials or pressurized materials, or during any application that may result in spills, splashes or airborne particles, a full face shield is strongly recommended. Protect yourself and others on the jobsite.

Consider property in proximity of the application area to prevent loss or damage. Protect your jobsite from unauthorized persons. Store all materials and equipment safely and out of reach of children and animals.

Observe container labels, SDS, applicable laws and regulations and all instructions before using the product and equipment. In case one of the components comes in contact with the skin, wash thoroughly with soap and water. Provide adequate ventilation in volume and pattern in working area

Additional Information: Techno Builders Solutions® By Sterling Technotrade India Pvt.Ltd -The Specialist Construction Chemicals Company® range of associated products includes high performance concrete Admixtures, Adhesives, Protective Coatings, Concrete Repairs, Industrial Flooring, Grouts & Anchors, Joint Sealants, Surface Treatments, curing compounds, repair mortars, release agents, Grinding Aids & Waterproofing.

*Separate datasheet are available on these products.

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