For the Builders of a Better World™

Rayshield Heat Reflective Waterproofing Membrane

Rayshield Heat Reflective Waterproofing Membrane is a one component liquid applied waterproofing membrane that provides excellent reflectance & elastomeric properties designed for exposed applications. Ideal for use on all new & old rooftops, terraces & balconies floors & walls.

FEATURES/BENEFITS

- Reduce heat transmission
- Able to accommodate movement & bridge cracks up to 3mm
- Excellent resistance to ultraviolet rays
- Reduce dirt pick up
- Foot trafficable when cured
- High adhesion strength
- Anti-fungi

USES

- Interior and exterior
- Rooftops, roof terraces
- Balconies
- Over existing metal roof

MANUFACTURER/DISTRIBUTED BY

LATICRETE South East Asia Pte Ltd
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STANDARDS/CERTIFICATIONS

- ASTM D2240
- ASTM C836
- ASTM E96
- ASTM E154
- ASTM G154
- BS 476
- DIN 1048
- ASTM D4541
- ASTM D412
- ASTM D1640
- ASTM D624
- ASTM D903
- ASTM D1653
- ASTM E971

SINGAPORE GREEN BUILDING PRODUCT SGBC EXCELLENT

This product has been certified green by the Singapore Green Building Council.

Suitable Substrates

- Concrete
- Existing steel structures/ roofing
- Concrete & brick masonry
- Cement mortar beds
- Cement plaster
- Waterproofed glue plywood
- Gypsum wallboard*
- Ceramic tile & stone**
- Cement terrazzo**
- Cement backer board***

* Interior applications only.
** This type of substrate should be laid with Laticrete Latex Thin-Set Mortar prior to application
***Consult cement backer board manufacturer and LATICRETE Technical Department for specific installation recommendations and to verify acceptability for exterior use.

Packaging

Commercial Unit: 25kg pail liquid
(24 commercial units / pallet)

Color: White

Approximate Coverage

25kg of Rayshield Heat Reflective Waterproofing Membrane yields approximately 24 m² per 2 coats

Shelf Life

Factory sealed containers of this product are guaranteed to be of first quality for one (1) year1 if stored at temperatures >0°C and <40°C.

Limitations

- DO NOT bond to particle board, luan, Masonite or hardwood surfaces.
- DO NOT use over dynamic expansion joints, structural cracks or cracks with vertical differential movement
- DO NOT use over cracks >3mm in width.
- DO NOT use as a vapor barrier (especially in steam rooms).
- DO NOT expose to negative hydrostatic pressure, excessive vapor transmission, rubber solvents or ketones.
- Consult technical service if to be used as a primary waterproofing membrane over occupied space.
- LATICRETE concrete overlay's are not intended to be perfectly homogeneous in appearance. Shade of color may vary slightly as these use natural mined resources. The typical application procedures of spreading and smoothing, along with the sanding process, will result in optical variations in the appearance of the floor. The aesthetic appearance that is created is subject to possible technical and artistic tolerances. Variations in the overall finished appearance should be expected.

Note: Surfaces must be structurally sound, stable and rigid enough to support ceramic/stone tile, thin brick and similar finishes. Substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/360 for thin bed ceramic tile/brick installations or L/480 for thin bed stone installations where L=span length.

Cautions

Consult MSDS for more safety information.

- During wet weather, protect finished work until fully cured.
- May irritate eyes and skin. Avoid contact with eyes or prolonged contact with skin. In case of contact, flush thoroughly with water.
- Do not take internally.
- Keep out of reach of children.

TECHNICAL DATA

Physical Properties

Test	Test Method	Results
Water Penetration	Din 1048	0
Adhesion to Substrate (28 days cure)	ASTM D4541	≥ 1.5N/mm²
Tensile Strength (standard)	ASTM D412	≥ 2.0N/mm²
Elongation at Break	ASTM D412	≥ 500%
Set to Touch	ASTM D1640	≤ 2 hours
Crack Bridging	ASTM C836	No Crack
Hardness (Shore A)	ASTM D2240	≥ 70
Puncture Resistance	ASTM E154	≥ 550N
Tear Resistance	ASTM D624	≥ 20kN/m
Peel Strength	ASTM D903	≥ 20N
Water Vapor Transmission	ASTM E96	≤ 7g/(m2.24hrs)
QUV Accelerated Weathering	ASTM G 154	No crack, blistering & delamination
Permeance	ASTM D 1653	≤ 65 (ng/Pa.s.m^2)
Diffuse Daylight Reflectance %	ASTM E971	≥ 90%
Fire Resistance	BS 476	Class 1

* Results shown are typical but reflect test procedures used. Actual field performance will depend on the type of tile/stone/brick used, installation methods and site conditions.

Working Properties

Rayshield Heat Reflective Waterproofing Membrane can be applied using a paint brush, roller or trowel. Where movement is expected, Anti-Fracture Fabric /

reinforcing mesh is recommended to be used to embed within liquid membrane. All areas must have at least two coats to ensure waterproofing capabilities. When using a paint roller, substrate will not show through Rayshield Heat Reflective Waterproofing Membrane.

INSTALLATION

Surface Preparation

Surface temperature must be 5 - 40°C during application and for 24 hours after installation. All substrates must be structurally sound, clean and free of dirt, oil, grease, paint, laitance, efflorescence, concrete sealers or curing compounds. Make rough or uneven concrete smooth to a wood float or better finish with a LATICRETE underlayment. Do not level with gypsum or asphalt based product. Dampen hot, dry surfaces and sweep off excess water – installation may be made on a damp surface. New concrete slabs shall be damp cured and a minimum of 14 days old before application.

Pre-Treat Cracks, Joints, Coves/ Corners & Backer Board Joints

Fill all substrate cracks, cold joints, and control joint to a smooth finish using a LATICRETE Latex Fortified Thin Set. Alternatively, a liberal coat of Rayshield Heat Reflective Waterproofing Membrane applied with a paint brush or trowel may be used to fill in non structural joints and cracks less than 3mm. Apply a liberal coat of Rayshield Heat Reflective Waterproofing Membrane approximately 200mm wide over substrate cracks, cold joints, and control joints using a paint brush or roller (heavy napped roller cover).

Fill all substrate coves and floor/wall transitions to a smooth finish and changes in plane using a LATICRETE latex fortified thin-set mortar. Alternatively, a liberal coat of Rayshield Heat Reflective Waterproofing Membrane applied with a paint brush or trowel may be used to fill in cove joints and floor/wall transitions <3mm. Apply a liberal coat of Rayshield Heat Reflective Waterproofing Membrane approximately 200mm wide over substrate coves and floor/wall transitions using a paint brush or roller (heavy napped roller cover). Imbed 150mm Anti-Fracture Fabric (if necessary) and then apply a second coat of Rayshield Heat Reflective Waterproofing Membrane.

Pre-Treat Drains

Drains must be of the clamping ring type, with weepers and as per ASME A112.6.3. Apply a liberal coat of Rayshield Heat Reflective Waterproofing Membrane liquid around and over the bottom half of drain clamping ring. Imbed 150mm Anti-Fracture Fabric (if necessary) and then apply a second coat of Rayshield Heat Reflective Waterproofing Membrane. When dry, apply a Latasil™ bead where the Rayshield Heat Reflective Waterproofing Membrane meets the drain throat. Install top half of drain clamping ring.

Pre-Treat Penetrations

Allow for a minimum 3mm space between drains, pipes, lights or other penetrations and surrounding ceramic tile, stone or brick. Pack any gaps around pipes, lights or other penetrations with a LATICRETE Latex fortified thin-set mortar. Apply a liberal coat of Rayshield Heat Reflective Waterproofing Membrane liquid around penetration opening. Imbed 150mm Anti-Fracture Fabric (if necessary) and then apply a second coat of Rayshield Heat Reflective Waterproofing Membrane. Bring Rayshield Heat Reflective Waterproofing Membrane up to level of tile or stone. When dry, seal flashing with Latasil.

Priming

Substrate must be sound, clean & free of dust, if not it is strongly recommended to use Admix & Primer. Shake thoroughly before using. Pour, mop, or spray primer onto the surface. Apply an even thickness of primer to the prepared substrate using a bristle broom to ensure the primer is absorbed into the substrate, removing any puddles or thick areas.

Allow the primer to dry to a clear film usually 30 – 45 minutes, but less than 3 hours before application of Rayshield Heat Reflective Waterproofing Membrane.

Note: Keep primed surface clean. Do not allow any foot traffic onto surface.

Mixing

Use direct from pail

Application

Allow any pre-treated areas to dry the touch. Apply a liberal coat of Rayshield Heat Reflective Waterproofing Membrane with brush or roller over substrate including pre-treated areas. Then embed the 150mm wide Anti-Fracture Fabric and allow to bleed through (if necessary). Let topcoat dry to the touch, approximately 1 – 3 hours at 21oC and 50% RH.

Apply second coat of Rayshield Heat Reflective Waterproofing Membrane. When second coat has dried to the touch, inspect final surface for pinholes, voids, thin spot or other defects. Use additional Rayshield Heat Reflective Waterproofing Membrane to seal defects. Provide protection for newly installed membrane, even if covered with a thin bed ceramic tile, stone or brick installation, against exposure to rain or other water for a minimum of 24 hours at 21°C and 50% RH.

Installing Finishes

Allow Rayshield Heat Reflective Waterproofing Membrane to dry for 24 hours before ceramic tile, stone or brick may be installed by the thin bed method with a LATICRETE Latex Thin-Set Mortar. Do not use solvent-based adhesives directly on Rayshield Heat Reflective Waterproofing Membrane.

Expansion Joints
Ceramic tile, stone and brick installations must include expansion at coves, corners, other changes in substrate plane and over any expansion joints in the substrate. Expansion joints in ceramic tile, stone or brickwork are also required at perimeters at restraining surfaces, at penetrations and at the intervals described in the Tile Council of North America (TCNA) Handbook Installation Method EJ171. Use LATICRTE Latasil and backer rod.

Cleaning
Clean tools with water.

AVAILABILITY AND COST

Availability
LATICRETE and LATAPOXY materials are available worldwide. For distributor information, call:
Telephone: (65) 6515-3028
Fax: (65) 6515-3037
For on-line distributor information, visit LATICRETE at **se.laticrete.com**

Cost
Contact a LATICRETE Distributor in your area.

WARRANTY

LATICRETE South East Asia Pte Ltd warrants that Rayshield Heat Reflective Waterproofing Membrane is free from manufacturing defects and will not break down, deteriorate or disintegrate under normal usage for a period of one (1) year from date of purchase subject to terms and conditions stated.

MAINTENANCE

LATICRETE® and LATAPOXY® grouts require routine cleaning with a neutral pH cleaner (e.g STONETECH® Stone & Tile Cleaner) and water. All other LATICRETE and LATAPOXY materials require no maintenance but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

TECHNICAL SERVICES/ CONTACT

Technical Assistance
Information is available by calling:

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Technical and safety literature
To acquire technical and safety literature, please visit our website at **se.laticrete.com**