RedGard® Waterproofing and Crack Prevention Membrane

1 Product Name
RedGard® Waterproofing and Crack Prevention Membrane

2 Manufacturer
Custom Building Products
Technical Services
10400 Pioneer Boulevard, Unit 3
Santa Fe Springs, CA 90670
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Technical Services: 800-282-8786
Fax: 800-200-7765
Email: contactus@cbpmail.net
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3 Product Description
A ready-to-use elastomeric waterproofing membrane for both commercial and residential tile and stone application. Suited for interior and exterior substrates, RedGard® creates a continuous waterproof membrane barrier with outstanding adhesion and reduces crack transmission in tile and stone floors. It bonds directly to clean metal drains, PVC, stainless steel and ABS drain assemblies and can be used as a slab-on-grade moisture vapor barrier under all types of floor coverings.

Key Features
- Ready to use - Roll it on
- Quick dry formula
- Listed with IAPMO for use as a shower pan liner

Suitable Substrates
- Concrete, cement mortar, masonry
- Cement Backerboard
- Exterior Plywood and OSB (interior, dry areas only)
- Exterior Decks - Contact Technical Services
- Post-Tension Concrete - Contact Technical Services
- Lightweight Concrete (min. 2000 psi compressive strength)
- Gypsum-Based cement topping (min. 2000 psi compressive strength)
- Existing ceramic tile and resilient flooring
- Floor heating systems - contact Technical Services

Composition of Product
RedGard® is a liquid-applied elastomeric waterproofing material that cures to form a monolithic membrane.

Benefits of Product in the Installation
- Easy to use and can be applied by roller, trowel or airless sprayer
- Rated for extra heavy duty service
- Reduces curing time with quick-dry formula
- Isolates cracks to 1/8” (3 mm)
- Suitable for waterproofing pools, spas and water features
- Meets Uniform Plumbing Code specifications for use as a shower pan liner

4 Technical Data
Applicable Standards
American National Standards Institute (ANSI) ANSI A108.01, A108.17, A108.13, A118.10 and A118.12 American National Standards for the Installation of Ceramic Tile
ASTM International (ASTM)
ASTM C627 Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester
ASTM D638 Standard Test Method for Tensile Properties of Plastics
Tile Council of North America (TCNA) TCNA Handbook for Ceramic Tile Installation, TCNA Method EJ171, F125 & F125A

Published Date: 4/5/2021
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Approvals


Technical Chart

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Requirement</th>
<th>Typical Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fungus Resistance</td>
<td>A118.10 Section 4.1</td>
<td>No Growth</td>
<td>Pass</td>
</tr>
<tr>
<td>Seam Strength</td>
<td>A118.10 Section 4.2</td>
<td>&gt; 8 lbs&quot; width</td>
<td>16 lbs/2&quot; (7.3 kg/6 cm) width</td>
</tr>
<tr>
<td>Breaking Strength</td>
<td>A118.10 Section 4.3</td>
<td>&gt; 170 psi</td>
<td>484 psi (34 kg/cm²)</td>
</tr>
<tr>
<td>Dimensional Stability</td>
<td>A118.10 Section 4.4</td>
<td>+/- 0.7%</td>
<td>0.05%</td>
</tr>
<tr>
<td>Waterproofness</td>
<td>A118.10 Section 4.5</td>
<td>No Water Penetration</td>
<td>Pass at 25 mils dry</td>
</tr>
<tr>
<td>Steam Shower Requirement</td>
<td>ASTM E-96 Method E</td>
<td>&lt; 0.5 perms</td>
<td>0.35 perms at 30 mls dry</td>
</tr>
</tbody>
</table>

Shear Bond Strength to Cement Mortar

| Four Week Shear Strength         | A118.10 Section 5.5 | > 50 psi | 267 psi (18.8 kg/cm²) |
| Shear Strength After Water Immersion | A118.10 Section 5.4 | > 50 psi | 89 psi (6.3 kg/cm²) |

System Crack Resistance

| Standard Performance             | A118.12 Section 5.4 | > 1/16" and < 1/8" | Pass at 30 mls dry |
| High Performance                 | A118.12 Section 5.4 | > 1/8" | Pass at 30 mls dry |
| Point Load                       | A118.12 Section 5.2 | > 1000 lbs | > 1000 psi |
| Robinson Test ASTM C627          | A118.12 Section 5.3 | As Specified | 14 Cycles; Extra Heavy |

VOC Content

| EPA Method 24                    | SQAQMD Rule 113/SCM 2019 (<100 g/L) | <5 g/L (0% CARB VOC) |

VOC Emissions

| Complies with CA Section 01350 & CDPH V1.2-2017 | Compliant (TVOC= 0.5 mg/m3 or less |

Environmental Consideration

Custom® Building Products is committed to environmental responsibility in both products produced and in manufacturing practices. Use of this product may contribute to LEED® certification.

5 Instructions

General Surface Prep

USE CHEMICAL-RESISTANT GLOVES, such as nitrile, when handling product.

Exterior and wet areas must have proper sloping to drains without divots that would affect drainage. All surfaces must be structurally sound, clean, dry and free from contaminants that would prevent a proper bond. Newly applied concrete must be troweled smooth but not burnished (highly polished) so as not to absorb water and cured for 28 days. Most existing surfaces are to be scarified and flattened, and all defects must be repaired. Dormant cracks exceeding 1/8” (3 mm) should be treated in accordance with TCNA F125 or TCNA F125A.

Bonding to Lightweight Cement and Gypsum Surfaces

Lightweight or gypsum-based materials must obtain a minimum of 2000 psi (13.8 MPa) compressive strength at the recommended cure time. The underlayment must be sufficiently dry and properly cured to the manufacturer’s specifications for permanent, non-moisture permeable coverings. Surfaces to be covered must be clean, structurally sound and subject to deflection not to exceed the current ANSI standards. Expansion joints must be installed in accordance with local building codes and ANSI/TCNA guidelines. Prime all surfaces to receive RedGard® with properly applied manufacturer’s sealer or with a primer coat of RedGard®, consisting of 1 part RedGard®, diluted with 4 parts clean, cool water. In a clean pail, mix at low speed to obtain a lump-free solution. For substrates exhibiting high absorption rates - apply the diluted mixture of water and RedGard® (4-1) using a clean, fine head broom to scrub in the primer solution. Keep the surface of the substrate wet for at least 15 minutes during application to ensure adequate and even distribution of primer coat. Apply the diluted RedGard® primer coat to the floor at a rate of 300 ft/gallon (7.5 M/L). Allow 1st coat/application time to dry before floor patch or other flooring material applications begin. For tile installations bonding directly to the substrate; strongly recommended to apply at least one full coat of "undiluted" RedGard® to the "dry" primed area and allow to dry completely before tile installation work is to begin.

Vapor Barrier

When used as a vapor barrier, apply one full coat (70 sq. ft. per gallon) where vapor transmission is up to 8 lbs. per 1000 sq. ft. per day and two full coats (70 sq. ft. per gallon each coat) where vapor transmission is up to 12 lbs. per 1000 sq. ft. per day. Refer to ASTM F1869 for more information on Vapor Transmission Testing.
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Movement Joint Placement

Do not bridge joints designed to experience movement. Carry these types of joints through the tile work. Clean the joint and install an open or closed cell-backer rod to the proper depth, as outlined in the Tile Council Handbook, EJ171. Next compress sealant into the joint, coating the sides and leaving the sealant flush with the surface. When the sealant is dry, place bond-breaker tape over the joint. Apply a minimum 3/64" (1.2 mm) of RedGard® over the joint and the substrate, following the instructions provided previously. Install the tile work onto the membrane, but do not bridge the joint. After the tile work is properly set, follow the architect’s and manufacturer’s instructions to fill the joint with a specified color sealant.

Application of Product

SHOWER RECEPTORS INSTALLATION

Mortar Bed over Framed Structures – B414
Cement Backerboard Walls – B415
Surface Bonded Waterproofing – B421

Download the illustrated installation details by clicking on the link above or go to CustomBuildingProducts.com/TSD, select “Tile” as the installation type and select the appropriate illustrated TCNA detail by number (example: B414).

RedGard® as Crack Prevention Membrane

Cracks to 1/8" (3 mm) should be profiled before beginning the waterproofing application. Lightly dampen all porous surfaces. Use a 3/4" (19 mm) rough textured synthetic roller or a 3/16"-1/4" (5.5 mm) V-notch trowel and heavily precoat the corners and the intersections where the floors and walls meet, extending 6" (15 cm) on either side. For extra protection, embed a 6" (15 cm) wide fiberglass mesh into the membrane for changes of plane and for gaps 1/8" (3 mm) or greater. Apply RedGard at a rate or 110 sq. ft per gallon each coat. If using a trowel, spread the material with the trowel held at a 45° angle, and then flattens the ridges. If using a roller, apply a continuous, even film with overlapping strokes. An airless sprayer may be used for the waterproofing application. The sprayer must produce between 1900 - 2300 psi, with a flow rate of 1.0 - 1.5 GPM and must have a tip orifice size of 0.025 – 0.029. Apply a continuous film with overlapping spray. The membrane appearance is pink when wet and dries to a dark red color. It typically takes 1-1.5 hours to turn completely red. After the first coat turns red, inspect the film for integrity and fill any voids or pinholes with additional material. Apply a second coat at right angles to the first coat. To meet the requirements of IAMPO, Two coats should be applied at a rate of 80 sq. ft. per gallon each coat. In all cases the wetfilm thickness should not exceed 125 mils.

Curing of Product

RedGard® is dry when it turns solid red, with no visible pink color. Typically, drying time is 1-1.5 hours; depending on ambient conditions, drying time can be as much as 12 hours. After the second coat is applied and both coats are fully cured, the application area can be flood tested.

Protection

If tile or stone will not be set immediately after curing, protect the membrane from rain, inclement weather and potential construction traffic damage. If delays longer than 72 hours are expected, cover and protect the membrane from extended direct sunlight (UV exposure). Care should be taken to prevent the application from becoming soiled or punctured during and after application.

Tile and Stone Installation

Install tile or stone with a Custom® Building Products polymer-modified mortar that meets ANSI A118.4 or A118.15 standards based on application requirements.

Cleaning of equipment

Clean tools and hands with water before the material dries. Clean all spray equipment immediately after use.

Health Precautions

IMPORTANT: Read carefully before using. WEAR IMPERVIOUS GLOVES, such as nitrile, and eye protection.
WARNING: EYE & SKIN IRRITANT. May be harmful if swallowed. Do not mix with other chemical products. Avoid contact with eyes and prolonged contact with skin. Do not breathe in vapors. Do not take internally. Immediately wash contaminated body and clothing thoroughly. Use in well-ventilated areas. Wear a NIOSH compliant vapor respirator, especially in poorly ventilated areas. If eye or skin contact occurs: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove person to fresh air and keep comfortable for breathing. If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately seek medical advice or attention if symptoms are significant or persist. In Emergency: 1-800-535-5053. Contains: Styrene-butadiene polymer, limestone, and ammonium hydroxide. Before handling read Safety Data Sheet at www.custombuildingproducts.com.

KEEP OUT OF REACH OF CHILDREN.

WARNING: This product can expose you to chemicals including crystalline silica, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Conformance to Building Codes
Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6 Availability & Cost

<table>
<thead>
<tr>
<th>Location</th>
<th>Item Code</th>
<th>Size</th>
<th>Color</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>LQWAF1</td>
<td>1 gallon (3.78 L)</td>
<td>Pink</td>
<td>Pail</td>
</tr>
<tr>
<td>USA</td>
<td>LQWAF3</td>
<td>3.5 gallon (13.2 L)</td>
<td>Pink</td>
<td>Pail</td>
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<tr>
<td>Canada</td>
<td>CLLQWAF1</td>
<td>1 gallon (3.78 L)</td>
<td>Pink</td>
<td>Pail</td>
</tr>
<tr>
<td>Canada</td>
<td>CLLQWAF3</td>
<td>3.5 gallon (13.2 L)</td>
<td>Pink</td>
<td>Pail</td>
</tr>
</tbody>
</table>

7 Product Warranty
Obtain the applicable LIMITED PRODUCT WARRANTY at www.custombuildingproducts.com/product-warranty or send a written request to Custom Building Products, Inc., Five Concourse Parkway, Atlanta, GA 30328, USA. Manufactured under the authority of Custom Building Products, Inc. © 2017 Quikrete International, Inc.

When RedGard® Waterproofing and Crack Prevention Membrane is used as a part of a qualifying full installation system of CUSTOM products, the installation can qualify for up to a lifetime system warranty. CUSTOM will repair and/or replace, at its discretion, the affected area of the system. For more information, find details and limitations to this warranty at custombuildingproducts.com.

8 Product Maintenance
Properly installed product requires no special maintenance. Do not use as a wear surface.

9 Technical Services Information
For technical assistance, contact Custom technical services at 800-272-8786 or visit custombuildingproducts.com.

10 Filing System
Additional product information is available from the manufacturer upon request.

Related Products
Waterproofing and Anti-Fracture Membrane Mesh
## Coverage

<table>
<thead>
<tr>
<th>Size</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RedGard as Crack Prevention Membrane:</strong></td>
<td></td>
</tr>
<tr>
<td>1 Gallon (3.78 L)</td>
<td>100 sq. ft (9.3 M²)</td>
</tr>
<tr>
<td>3.5 Gallon (13.2 L)</td>
<td>350 sq. ft (32.5 M²)</td>
</tr>
<tr>
<td><strong>RedGard as Crack Prevention Membrane meeting ANSI A118.12</strong></td>
<td></td>
</tr>
<tr>
<td>1 Gallon (3.78 L)</td>
<td>25 sq. ft (2.3 M²)</td>
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<tr>
<td>3.5 Gallon (13.2 L)</td>
<td>88 sq. ft (8.2 M²)</td>
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<tr>
<td><strong>RedGard as Waterproof Membrane:</strong></td>
<td></td>
</tr>
<tr>
<td>1 Gallon (3.78 L)</td>
<td>55 sq. ft (5.1 M²)</td>
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<tr>
<td>3.5 Gallon (13.2 L)</td>
<td>192 sq. ft (17.8 M²)</td>
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<tr>
<td><strong>RedGard as IAPMO Pan Liner meeting ANSI A118.10:</strong></td>
<td></td>
</tr>
<tr>
<td>1 Gallon (3.78 L)</td>
<td>40 sq. ft (3.7 M²)</td>
</tr>
<tr>
<td>3.5 Gallon (13.2 L)</td>
<td>140 sq. ft (13 M²)</td>
</tr>
</tbody>
</table>

Chart for estimating purposes. Coverage may vary based on installation practices and jobsite conditions.