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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3. Product Description

The #1 trusted and reliable liquid-applied waterproofing membrane for your go-to commercial and residential tile and stone applications. It creates a waterproof membrane barrier and reduces crack transmission for use on both interior and exterior substrates. It bonds directly to clean metal drains, PVC, stainless steel, and ABS drain assemblies. It can be used as a slab-on-grade moisture vapor barrier under all types of floor coverings.

Key Features

- Ready to use to roll on; Quick dry formula
- Listed with IAPMO for use as a shower pan liner
- Extra heavy-duty rated for steam shower use

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

Limitations to the Product

- Do not apply to surfaces that may drop below 40°F (4°C) within 72 hours of application.
- Do not apply on existing concrete slabs on-ground with relative humidity levels over 85%. Contact Technical Services for other conditions for additional information.
- Do not apply over wet surfaces or surfaces subject to hydrostatic pressure.
- Do not use to relocate tile joints over saw cuts/control joints in concrete slabs instead use Crack Buster® Pro Membrane. Contact Technical Services for detailed instructions to waterproof
- Do not use as an adhesive.
- Do not use as a wear surfaceí¾ the membrane must be covered with tile or other permanent flooring.
- Do not use solvents in conjunction with the membrane

Packaging

- 1 gallon (3.78 L) pail
- 3.5 gallon (13.2 L) pail

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

Technical Chart

Property	Test Method	Requirement	Typical Results
Fungus Resistance	A118.10 Section 4.1	No Growth	Pass
Seam Strength	A118.10 Section 4.2	> 8 lbs/" width	16 lbs/2" (7.3 kg/5 cm) width
Breaking Strength	A118.10 Section 4.3	> 170 psi	484 psi (34 kg/cm²)
Dimensional Stability	A118.10 Section 4.4	+/- 0.7%	0.05%
Waterproofness	A118.10 Section 4.5	No Water Penetration	Pass at 25 mils dry
Steam Shower Requirement	ASTM E-96 Method E	< 0.5 perms	0.35 perms at 30 mils dry
Shear Bond Strength to Cement Mortar			

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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 mils dry
High Performance	A118.12 Section 5.4	> 1/8"	Pass at 30 mils 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/CARB 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

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 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 substratel¾ 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.

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 €œTile€ as the installation type and select the appropriate illustrated TCNA detail by number (example: B414).

RedGard at Drains

Drains should have a clamping ring with open weep holes for thin-set application. Apply the membrane to the bottom of the flange. The drain should be fully supported, without movement, and should be even with the plane of the substrate. Apply the RedGard membrane around drain. Embed a 12" x 12" (30 x 30 cm) fiberglass mesh into the membrane, making sure it does not obstruct the drainage weep holes. Then apply an additional coat of the membrane and smooth. After curing, clamp the upper flange onto the membrane and tighten. Use a silicone caulk around the flange where the membrane and the upper flange make contact. A toilet flange can be handled in much the same manner.

RedGard® as Crack Prevention Membrane

Force RedGard® into cracks with the flat side of the trowel, roller or brush. Using a 3/16"-1/4" (5-6 mm) V-notch trowel or 3/8" (9.5 mm) rough textured roller. Use the flat side of the trowel and flatten the ridges to form a continuous, even coat of material. The membrane should extend a minimum of the diagonal measurement of the tile beyond both sides of the crack. Gaps between plywood sheets and where floors meet walls must also be prefilled. For continuous crack isolation, cover the entire substrate with RedGard® applied at a rate of 100 sq. ft. per gallon. To meet the requirements of ANSI A118.12, apply two coats of RedGard at a rate of 50 sq. ft. per gallon each coat.

RedGard® as General Waterproof Membrane (ANSI 118.10)

Cracks to 1/8" (3 mm) should be prefilled before beginning the waterproofing application. Lightly dampen all porous surfaces. Use a 3/4" (19 mm) roughtextured synthetic roller or a 3/16"-1/4" (56 mm) Vnotch 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

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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 hoursÍ¾ 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

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.

6. Size & Availability

Location	Item Code	Size	Color	Package
USA	LQWAF1	1 gallon (3.78 L)	Pink	Pail
USA	LQWAF3	3.5 gallon (13.2 L)	Pink	Pail
Canada	CLQWAF1	1 gallon (3.78 L)	Pink	Pail
Canada	CLQWAF3	3.5 gallon (13.2 L)	Pink	Pail

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. © 2021 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® Building Products.

10. Filing System

Additional product information is available from the manufacturer upon request.

Related Products

RedGard® SpeedCoat® Waterproofing Membrane

RedGard® Fabric Membrane

RedGard® Waterproofing and Crack Prevention Membrane

Coverage Chart

Size	Coverage
RedGard as Crack Prevention Membrane:	
1 Gallon (3.78 L)	100 sq. ft (9.3 M^2)
3.5 Gallon (13.2 L)	350 sq. ft. (32.5 M^2)
RedGard as Crack Prevention Membrane meeting ANSI A118.12	
1 Gallon (3.78 L)	25 sq. ft. (2.3 M^2)
3.5 Gallon (13.2 L)	88 sq. ft. (8.2 M M^2)
RedGard as Waterproof Membrane:	
1 Gallon (3.78 L)	55 sq. ft. (5.1 M^2)
3.5 Gallon (13.2 L)	192 sq. ft. (17.8 M^2)
RedGard as IAPMO Pan Liner meeting ANSI A118.10:	
1 Gallon (3.78 L)	40 sq. ft. (3.7 M^2)
3.5 Gallon (13.2 L)	140 sq. ft. (13 M^2)

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

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