

RedGard® Crack Prevention and Waterproofing Membrane

1 Product Name

RedGard® Crack Prevention and Waterproofing Membrane

2 Manufacturer

Custom Building Products
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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 waterproofing 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 - 30% faster drying
- 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

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
- Obtained the Notice of Acceptance (NOA) for Miami-Dade County



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 over wet surfaces or surfaces subject to hydrostatic pressure.
- Do not use to bridge or cover over existing expansion, control, construction, cold or saw cut joints; use Crack Buster® Pro Membrane for control, cold or saw cut joints.
- Do not use as an adhesive.
- Do not use as a wear surface; 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



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Approvals

RedGard® has tested and complies with Uniform Plumbing Code and International Plumbing Code standards for use as a shower pan liner per IAPMO Research and Testing, Inc., File No. 4244. RedGard® has tested and complies with International Building Code (IBC), International Residential Code (IRC) and International Plumbing Code (IPC) standards for water resistance per ICC Evaluation Service, ESR-413. RedGard® complies with the Product Control Division of the Miami Dade County Building Code Compliance Office for waterproofing standards and has earned a Notice of Acceptance (NOA), File No. 07-1010.16. RedGard® conforms to "safing material" requirements established by the Wisconsin Administrative Code, Chapter Comm 84.30-6f.

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/cm ²)
Dimensional Stability	A118.10 Section 4.4	+/- 0.7%	0.05%
Waterproofness	A118.10 Section 4.5	No Water Penetration	Pass
Steam Shower Requirement	ASTM E-96 Method E	< 0.5 perms	0.35 perms
Shear Bond Strength to Cement Mortar			
Four Week Shear Strength	A118.10 Section 5.5	> 50 psi	267 psi (18.8 kg/cm ²)
Shear Strength After Water Immersion	A118.10 Section 5.4	> 50 psi	89 psi (6.3 kg/cm ²)
System Crack Resistance			
Standard Performance	A118.12 Section 5.4	> 1/16" and < 1/8"	Pass
High Performance	A118.12 Section 5.4	> 1/8"	Pass
Point Load	A118.12 Section 5.2	> 1000 lbs	> 1000 psi
Robinson Test	A118.12 Section 5.3	As Specified	14 Cycles; Extra Heavy

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. All surfaces must be structurally sound, clean, dry and free from contaminants that would prevent a good bond. Newly prepared concrete must be troweled smooth and textured to a fine broom finish and cured for 28 days. Existing surfaces must be scarified and leveled, and all defects must be repaired. 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. The primer can be brushed, rolled or sprayed to achieve an even coat. Apply the primer coat to the floor at a rate of 300 ft/gallon (7.5 M/L) of reduced material. When dry, apply at least one full coat of RedGard® to the primed area.

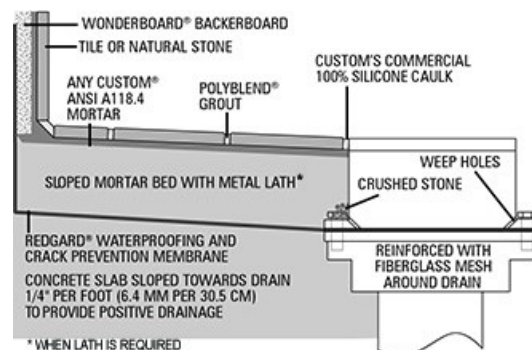
Vapor Barrier

When used as a vapor barrier, apply one full coat (20 to 25 mils wet) where vapor transmission is up to 8 lbs per 1000 sq. ft per day and two full coats (20 to 25 mils wet 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

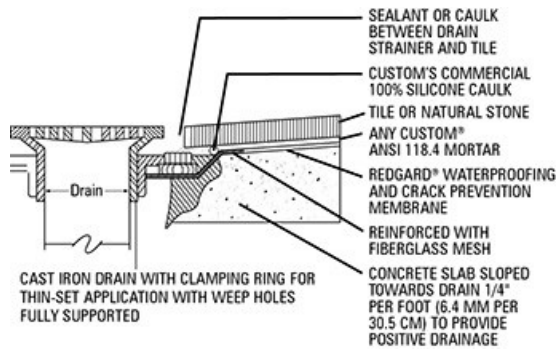
Do not bridge joints designed to experience movement. Carry these types of joints through the tile work. Clean the joint and install an open or closed cell-backer rod to the proper depth, as outlined in the Tile Council Handbook, EJ171. Next compress sealant into the joint, coating the sides and leaving 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



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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 pre-filled. For continuous crack isolation, cover the entire substrate with RedGard® applied to a minimum 30 mils wet-film thickness.

RedGard® as General Waterproof Membrane (ANSI 118.10)

Cracks to 1/8" (3 mm) should be pre-filled 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" (5-6 mm) V-notch trowel and heavily pre-coat the corners and the intersections where the floors and walls meet, extending 6" (15 cm) on either side.

RedGard® applied in the above manner meets requirements of ANSI A118.10 without fabric reinforcement. 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. 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. Periodically check the film thickness with a wet-film gauge. Combined dried coatings must be at least 30-35 mils thick. When wet, the combined coatings must be at least 60-70 mils and must not exceed 125 mils wet-film thickness.

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 application from heavy traffic damage. Protect from rain and inclement weather for 72 hours after application. If delays longer than 72 hours are expected, cover the area with felt paper. 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.

Cleaning of equipment

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

Health Precautions

Wear rubber gloves and eye protection while using this product. Avoid eye contact or prolonged contact with skin and wash thoroughly after handling. If eye contact occurs, flush with water for 15 minutes and consult a physician. Wash thoroughly after handling. Do not take internally. Keep out of the reach of children.

Conformance to Building Codes

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

6 Availability & Cost

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	CLLQWAF1	1 gallon (3.78 L)	Pink	Pail
Canada	CLLQWAF3	3.5 gallon (13.2 L)	Pink	Pail



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7 Product Warranty

Custom® Building Products warrants to the original consumer purchaser that its product shall be free from defects in material and workmanship under normal and proper usage for a period of one year following the date of original purchase. CUSTOM's sole liability under this warranty shall be limited to the replacement of the product. Some states, countries or territories do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty will not extend to any product which has been modified in any way or which has not been used in accordance with CUSTOM's printed instructions. CUSTOM makes no other warranties either expressed or implied. This warranty gives you specific legal rights, and you may have other rights that vary from state to state or from one country/territory to another. This warranty is not transferrable.

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

RedGard® Fabric Membrane



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Coverage

Size	Thickness	Min Coverage	Max Coverage
RedGard as Crack Prevention Membrane:			
1 Gallon (3.78 L)	30 mil thickness when wet	110 sq. ft. (10.2 M ²)	
3.5 Gallon (13.2 L)	30 mil thickness when wet	385 sq. ft. (35.8 M ²)	
RedGard as Waterproof Membrane (ANSI A118.10):			
1 Gallon (3.78 L)	60 mil thickness when wet; 30 mil thickness when dry	35 sq. ft. (3.3 M ²)	40 sq. ft. (3.7 M ²)
3.5 Gallon (13.2 L)	60 mil thickness when wet; 30 mil thickness when dry	123 sq. ft. (11.4 M ²)	140 sq. ft. (13 M ²)
RedGard as IAPMO Pan Liner:			
1 Gallon (3.78 L)	60 mils when wet; 30 mils when dry	35 sq. ft. (3.3 M ²)	40 sq. ft. (3.7 M ²)
3.5 Gallon (13.2 L)	60 mils when wet; 30 mils when dry	123 sq. ft. (11.4 M ²)	140 sq. ft. (13 M ²)



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