



USG DUROCK™ BRAND LIQUID WATERPROOFING AND CRACK ISOLATION MEMBRANE

A liquid-applied waterproofing and crack isolation membrane and vapor retarder for use over approved substrates in wet areas.

- Anti-fracture protection up to 1/8 in. (3mm) over shrinkage and other non-structural cracks
- Can be rolled, brushed, troweled, and sprayed
- Fast drying time allows for quick turnaround time
- Low Permeance Rating (0.38 perms at 20 mils dry thickness) per ASTM E96 Procedure E
- Can be used in steam room/shower without additional vapor retarder
- Bonds directly to stainless steel, PVC, and ABS drains
- One coat on vertical surfaces for smooth substrates such as USG Fiberock® Tile Backerboard
- Two coats on rough substrates such as USG Durock® Brand Cement Board, and for all horizontal applications
- Suitable for waterproofing floors, walls and countertops

PRODUCT DESCRIPTION

The USG Durock™ Brand Liquid Waterproofing and Crack Isolation Membrane is an acrylic polymer based product for both commercial and residential tile and stone applications. Suitable substrates include concrete, masonry, cement backerboard, gypsum-fiber panel and gypsum-based cement topping. It can also be used as shower pan liner in accordance with Section 417.5.2.5 of the IPC and Section 408.7 of the UPC. The product changes color when cured.

The USG Durock™ Liquid Waterproofing and Crack Isolation Membrane has the lowest permeance rating (0.38 perms at 20 mils dry thickness) of any liquid waterproofing membrane when tested to ASTM E96 Procedure E. It is ideal not only for showers and other wet areas, but for continuous-use residential and commercial steam showers without additional vapor retarder.

The USG Durock™ Liquid Waterproofing and Crack Isolation Membrane meets the permeance rating requirement of 0.5 perms or less and can be used in steam showers/rooms in accordance with Tile Council of North America (TCNA) *2016 Handbook for Ceramic, Glass, and Stone Tile Installation* (SR 613-16 and SR614-16).

The USG Durock™ Liquid Waterproofing and Crack Isolation Membrane achieves "high performance" in system crack resistance test at 30 mils dry thickness when tested in accordance with ANSI A118.12. It can be used for anti-fracture protection up to 1/8 in. (3 mm) over shrinkage and other non-structural cracks.

PRODUCT DATA

Sizes and Packaging:

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

Product conforms to ANSI A118.10 Load Bearing, Bonded, Waterproof Membranes for Thin-set Ceramic Tile and Dimension Stone Installation and ANSI A118.12 Crack Isolation Membranes for Thin-set Ceramic Tile and Dimension Stone Installation.

COMPOSITION AND MATERIALS

USG Durock™ Liquid Waterproofing and Crack Isolation Membrane is an acrylic polymer based elastomeric membrane for residential and commercial tile and stone application.

WARRANTY AND MATERIALS

Products and systems provided by United States Gypsum Company are warranted to be free from defects in material and workmanship. Contact a United States Gypsum Company sales office for complete warranty details.

INSTALLATION

Walls (including steam shower walls) and floors:

- A. Select code-approved wall and floor substrate suitable for wet areas. All surfaces must be dry, clean, and free of contaminants that would prevent a good bond. Spalling, pitting, or chipping in concrete surfaces should be patched or skim coated before application of Durock Liquid Waterproofing Membrane.
- B. **Pre-treat construction joints:** Fill all substrate cracks, cold joints, control joints with suitable materials.
- C. **Pre-treat backerboard joints:** Apply 2 in. (51 mm) wide USG Durock™ Brand Tile Backer Tape at all wall-to-wall, floor-to-floor and wall-to-floor joints and finish the joints with tile-setting mortar.
- D. **Pre-treat drains:** Fill space between drain pipe and substrate with foam backer rod and sealant. Apply two liberal coats of USG Durock™ Liquid Waterproofing and Crack Isolation Membrane over and around drain flange.
- E. For rough substrates such as USG Durock® Cement Board, apply 1st coat at wet film thickness of 15-20 mils using 1/2 in. nap roller or 3/16 in. x 3/16 in. (5 mm x 5 mm) V-notch trowel. After the first coat dries, inspect the coating and fill any voids or pinholes. Apply a second coat at right angle to the first coat with a wet film thickness of 15-20 mils.
- F. For smooth substrates such as USG Fiberock® Tile Backerboard, one coat at wet film thickness of 15-20 mils may be used on vertical surface. Check coverage to fill any voids or pinholes. For all horizontal surfaces, use two coats of 15-20 mils wet film thickness for each layer.
- G. For water resistant substrates such as USG Durock™ Brand Glass-Mat Tile Backerboard, first treat the joints as described in C above; then use two liberal coats of USG Durock™ Liquid Waterproofing and Crack Isolation Membrane to treat the joints and fastener heads.
- H. Overlap all adjoining sections of the membrane by a minimum of 2 in. (51 mm). Inside corner applications on all substrates should be done using a brush to achieve proper coverage.
- I. For steam shower walls, use two coats of 15-20 mils wet film thickness for each layer; no additional vapor retarder is needed.
- J. An airless sprayer may be used for the waterproofing application. Use professional equipment that meets or exceeds the following rating when spraying through 50 ft. of 1/4 in. I.D. high-pressure hose: output at least 1 gal. per minute; pump pressure rated at 2,700-3,000 psi; and accommodates a 0.031 in. spray tip at 2,000 psi (Graco® MARK V™ or equivalent). Use a 30-mesh filter located in the high-pressure manifold. Use a spray-tip orifice between 0.023 in. to 0.031 in.
- K. Use tile-setting mortar (as specified in ANSI A118.1, A118.4, A118.11 or A118.15) to set tiles.

For Crack Isolation

For crack isolation applications, first treat the joints as described in C above; then use two liberal coats of USG Durock™ Liquid Waterproofing and Crack Isolation Membrane to cover the whole surface, each coat at 25-30 wet mils thickness.

The combined wet film thickness shall not exceed 100 mils.

LIMITATIONS

1. The product must not be installed in temperatures below 50 °F (10 °C). The product should remain above 50 °F (10 °C) for entire cure time.
2. The membrane must be covered by tile or stone.
3. The product is not intended for extended exterior exposure over a month before covering is applied.
4. Do not use on surfaces exposed to positive or negative hydraulic pressure.
5. Do not use as adhesive between two impervious layers.
6. Maximum moisture content in the concrete/mortar bed substrate should not exceed 5 lbs/1000 ft² / 24 hrs per ASTM F-1869 or 75% relative humidity as measured by moisture probes.
7. The membrane must be fully cured (approximately 12-24 hours depending on environmental conditions, number of coats and mil thickness of coats) before performing flood testing.
8. Maximum installed weight of the finished system should not exceed 15 psf.
9. Product shelf-life is 12-months from manufacturing date.
10. The membrane is a component within a waterproof shower system. Review all the components within the waterproof shower system to make sure it complies with the requirements of the job.

TECHNICAL DATA

Property	ANSI/ASTM Test	USG Durock™ Brand Liquid Waterproofing Membrane
Drying time (70°F/50%RH)	N/A	0.5-1.5 hr
Fungus and Microorganism resistance	ANSI A 118.10	No mold growth
Seam strength	ANSI A118.10/ASTM D751	>8 lb./in.
Breaking strength	ANSI A118.10/ASTM D751	>170 psi
Dimensional stability	ANSI A118.10/ASTM D1204	<0.7%
Waterproofness	ANSI A118.10/ASTM D4068	Pass
Shear strength to ceramic tile and cement mortar	ANSI A118.10/ANSI A118.12/ASTM C482	>50 psi
Water vapor permeance (20 mils dry film thickness)	ASTM E96 (Procedure E 100°F, 90%RH)	0.38
Floor installation service rating	ASTM C627	Extra heavy
System crack resistance	ANSI A118.12	High performance at 30 mils dry
Point load	ANSI A118.12	>1000 lbs. mils

COVERAGE

Waterproofing

For smooth substrates, 80-100 ft²/gallon with one coat, 40-50 ft²/gallon with two coats, each coat at 15-20 mils wet film thickness. Coverage will be lower for porous or rough substrates.

Crack isolation

For smooth substrates, 25-30 ft²/gallon with two coats, each coat at 25-30 mils wet thickness. Coverage will be lower for porous or rough substrates.

CLEANING

Clean tools with water when wet.

STORAGE

Protect USG Durock™ Liquid Waterproofing and Crack Isolation Membrane from freezing. Store inside at 50-90 °F (10-32 °C).

PRODUCT INFORMATION

See usg.com for the most up-to-date product information.

DANGER!

Do not handle until all safety precautions have been read and understood. Use only in a well-ventilated area, wear a NIOSH/MSHA-approved respirator. Wear protective gloves/protective clothing/eye protection. If swallowed, inhaled or skin irritation occurs, get medical attention. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses and continue rinsing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Dispose of in accordance with local, state and federal. Product Safety: 800 507-8899 or see the SDS at usg.com
KEEP OUT OF REACH OF CHILDREN.

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NOTICE

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SAFETY FIRST!

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read SDS and literature before specification and installation.

SUBMITTAL APPROVALS

Job Name	
Contractor	Date

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CB817-USA-ENG/rev. 12-23
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