

**MERKRETE**

# Hydro Guard 1

## Elastomeric Waterproof and Crack Isolation Membrane

### 2. Manufacturer

Parex USA, Inc.  
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### 3. Product Description

**BASIC USE:** Merkrete Hydro Guard 1 is a thin, load bearing membrane composed of a modified elastomeric copolymer. With excellent elongation properties and high strength, Hydro Guard 1 provides a 100% waterproof membrane coating while limiting the transfer of substrate cracks to the finished overlay. The membrane is installed in a liquid state and can be applied to practically any form or irregular shape (i.e. base flashings, parapets, walls, etc.).

**Uses:** Hydro Guard 1 is for use in commercial buildings, residential housing and other areas requiring positive waterproofing like pools, fountains, spas, hot tubs, kitchens, countertops, balconies, tub surrounds, shower stalls and pans, under terrazzo, quarry, ceramic and stone tile. This membrane can be installed over any sound substrate, vertically or horizontally, interior and exterior.

#### Advantages

- Low VOC
- Interior or exterior
- Crack isolation up to 1/8"
- Adheres to all common surfaces
- Built-in antimicrobial for mold and mildew resistance at the substrate
- Installs quickly, cures in 2 – 4 hours (70° F, 50% R.H.)
- Fast-drying, foot traffic in 4 – 6 hours
- Thin section that does not interfere with elevations
- Exceeds ANSI A118.10 and A118.12 membrane requirements
- Easy to use; can be applied by trowel, airless sprayer, paint brush or roller
- May be turned up for base flashing and applied to walls for wainscot or shower wall application

#### Suitable Substrates

- Brick masonry
- Cement backer board for interiors only<sup>1</sup>
- Cement mortar beds
- Cement terrazzo
- Ceramic and stone
- Concrete
- Exterior grade plywood<sup>2</sup>
- Gypsum drywall<sup>2</sup>
- Gypsum mortar bed<sup>3</sup>
- Oriented strand board<sup>2</sup>

<sup>1</sup> Consult the cement backer board manufacturer for installation recommendations and to verify acceptability for exterior use

<sup>2</sup> Interior use only

<sup>3</sup> Requires the use of 101 Overspray primer

### 4. Technical Data

*Applicable Standards:* Merkrete Hydro Guard 1 meets or exceeds tile industry requirements: ANSI A118.10 load bearing bonded waterproof membrane for thin set ceramic tile and dimension stone installation, also ANSI A118.12 crack isolation membrane for thin set ceramic tile and dimension stone installation. Follow ANSI 108.13 and ANSI A108.17 for installation, in addition to these directions.

#### Approvals

ICC Evaluation Report ESR-2619  
IAPMO / UPCC File #4073  
City of Los Angeles, Department of Building and Safety, Research Report #RR-4321

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## Physical & Test Data

Adhesion	> 250 psi
Elongation	> 800%
Porosity	No transmission (115 psi for one hour)
Range of temperature for use	+ 40° F to 110° F (at installation) 35° F to 150° F (after installation)
Water Absorption	0% (Total immersion for 24 hours)
Drying Time (to touch – per layer)*	48 hours at 70° F and 50% R.H.

## LEED 2.2 NC VOC

VOC

## EQ Credit 4.1

< 65 g/l VOC

## Hydro Guard 1 Results

20 g/l VOC

\* When cured at 70° F or higher at 50% R.H. Lower temperature at higher R.H. will require longer cure times

## Packaging:

- **1 Gallon Unit:** 1 gal. pail (3.78 l) of Hydro Guard 1 liquid, 60 pails per pallet
- **3-1/2 Gallon Unit:** 3-1/2 gal. pail (13.245 l), 48 pails per pallet

**Shelf Life:** Reference Parex USA Expiration Date of Products Technical Bulletin.

## 5. Installation

**Surface Preparation:** All surfaces must be between 40° F (4° C) to 95° F (35° C) and structurally sound (deflection not to exceed 1/360 of the span), dry, clean and free from oil, grease, wax, paint, old adhesives, sealers and curing compounds. Any contaminates which inhibit proper bond must be removed. Substrate preparation should be completed following ANSI A108.01 "General Requirements: Subsurfaces and Preparation by Other Trades." All substrates should be plumb and true, surface deviation should not exceed 1/4" in 10'. Patching, leveling or properly sloping of wet or exterior areas requiring a mortar bed should be prepared using Merkrete's underlayments. If product has separated or thicken hard, product should be mixed with a slow mixing drill, not incorporating air. Some separation may occur upon standing, which has no reflection upon the quality of the product.

## Reinforcement

Hydro Guard 1 has been formulated to perform as a waterproof membrane with reinforcing fabric. As a crack isolation membrane, fabric is typically not recommended. As a waterproof membrane, manufacturer recommends the use of supplied 8" reinforcing fabric to ensure maximum protection at joints, cracks, protrusions, dissimilar materials, and drains.

## Preparation

**Joints, Cracks and Protrusions:** pre-fill all substrate cracks, cold and control joints with Merkrete latex modified thin set or PUC caulking. Fill all voids with Merkrete latex modified thin set to within a minimum of 1/8". Apply a liberal coat of Hydro Guard 1 liquid around joints, cracks and protrusions. Embed Merkrete 8" reinforcing fabric into the wet Hydro Guard 1, cover with a second coat of Hydro Guard 1, "sandwiching" the reinforcing fabric. Apply an additional application to prevent pinholes.

**Drains:** must be of the clamping ring-type with weep holes for thin set application. Drain should be even, level, plumb and fully supported, without movement. Fill all voids with Merkrete latex modified thin set to within a minimum of 1/8" from the drain. Apply a liberal coat of Hydro Guard 1 liquid around and over the bottom drain clamping ring. Embed Merkrete 8" reinforcing fabric into the wet Hydro Guard 1, cover with a second coat of Hydro Guard 1, "sandwiching" the reinforcing fabric. Apply an additional application to prevent pinholes. After drying, set the upper clamping ring onto the Hydro Guard 1 membrane with a continuous bead of Merkrete PUC caulking or similar material. A toilet flange can be treated in the same manner.

**Cement Substrates:** All concrete substrates should be cured a minimum of 28 days. Smooth steel troweled floors to a fine broom finish.

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*Cement Backer Board:* Follow cement board manufacturer's instructions. Tape and fill joints per manufacturer's directions and "Preparation" section of this data sheet.

*Plywood and OSB Substrates:* All plywood installations should be interior areas only and protected from exposure to moisture.

**Membrane Application:** Allow any recently prepared areas to dry. Apply a liberal coat of Merkrete Hydro Guard 1 Membrane at a rate of 50 s/f per gallon. Periodically, check the film thickness with a wet film thickness gauge, first wet coat should be applied 30 mils wet thickness. Apply Merkrete 8" reinforcing fabric into the wet Hydro Guard 1. After the Hydro Guard 1 turns black, cover with a second coat of Hydro Guard 1 at 30 mils wet thickness, "sandwiching" the reinforcing fabric. Total Hydro Guard 1 membrane thickness after drying should be 40 mils.

*Movement (expansion) joints:* designed to experience movement, should be provided to comply with TCA method EJ 171. For waterproofing of movement (expansion) joints, the membrane must not be applied unsupported to bridge across expansion joints. The joint must be cleaned to remove any loose debris and an opened or closed – cell backer rod is installed to the joint to the proper depth as specified by designer. Merkrete PUC sealant or Merkrete approved equal is pressed into the joint, coating the sides and leaving the joint flush with the surface. After the sealant is dry, the Hydro Guard 1 membrane is applied following the "Membrane application" instructions above. Then ceramic or stone tiles are installed over the membrane, leaving a gap over the joint as specified by the designer. After the tile is set, the joint must be filled as specified by the designer.

**Ceramic or Stone Application:** Ceramic or stone tile can be installed immediately after the Hydro Guard 1 membrane has dried to the touch. Merkrete recommends a quality latex portland cement thin set like Merkrete Systems: 705, 710, 7D10, 720, 750, 801 and 820 mortars. Follow the directions on thin set container for proper application.

**Curing:** Water testing can usually be done after a minimum of 48 hours at 70° F (21° C) and 50% R.H. Provide adequate protection for Hydro Guard 1 membrane, even if covered with a ceramic or stone tile application, against exposure to rain, or inclement weather for a minimum of 24 hours at 70° F (21° C) and 50% RH.

**Cleaning:** Clean tools, hands and equipment with warm soapy water before the material has dried. Material that has dried is difficult to remove, remove while fresh.

**Coverage:** (Approximate)

1 gallon unit	50 sf
3 1/2 gallon unit	175sf

**Limitations:** Do not use Hydro Guard 1 membrane below 40° F (4° C); do not allow membrane or substrate to be below 40° F (4° C) for the first 72 hours after application. Cool and wet weather may delay the set times of the Hydro Guard 1 membrane. Do not apply over surfaces subject to hydrostatic pressure. Do not use as a primary roofing membrane. Do not leave Hydro Guard 1 membrane unprotected or exposed to weather for more than 72 hours. Do not use membrane as an adhesive or wearing surface, membrane must be covered with ceramic or stone tile. Maximum amount of moisture in the concrete substrate using a calcium chloride test should not exceed 5 lbs/1,000 ft<sup>2</sup>.

## 6. Availability

Merkrete Hydro Guard 1 membrane is available at leading tile houses and construction distributors. Contact Merkrete or visit our web site for the name of the nearest dealer at [www.merkrete.com](http://www.merkrete.com).

## 7. Warranty

5 year, 10 year and Limited Lifetime warranties are available. Contact Merkrete Technical Services for specific warranty information. Merkrete Systems warrants that this product meets applicable ANSI standards in force at the time of manufacture.

## 8. Maintenance

None required, but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

## 9. Technical Services

Merkrete Systems maintains technical field representatives available throughout the country. Call Technical Services at 800-226-2424 for the nearest representative.

## 10. Filing Systems

Merkrete architectural product information available either in catalog form, or electronically on our website at [www.merkrete.com](http://www.merkrete.com).

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