


**MERKRETE**

# Fracture Guard 5000

## Elastomeric Crack Isolation Membrane

### 2. Manufacturer

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

**BASIC USE:** Merkrete Fracture Guard 5000 is a single component mold resistant crack isolation membrane composed of modified latex that provides a monolithic surface with excellent elongation. Its thin section (approx. 20 mil.) and excellent elongation will inhibit the transfer of cracks from the substrate to the finished ceramic, porcelain or stone tile finish. The membrane is installed in a semi-fluid state and can easily conform to any form or irregular shape.

**Uses:** Fracture Guard 5000 may be installed over any sound substrate normally acceptable to receive ceramic, quarry, porcelain and stone tiles and is ideal for residential and commercial applications. When installed in accordance with manufacturer's specifications, Fracture Guard 5000 will inhibit transferring of shrinkage and non structural cracks caused by horizontal movement, when tile and stone finishes are used.

#### Advantages

- Low VOC
- Interior or exterior
- Crack isolation up to 1/8"
- Adheres to all common surfaces
- Installs quickly. Cures in 4-6 hours at 70° F, 50% R.H.
- Excellent adhesion to most common substrates
- Thin section – does not interfere with elevations
- Apply with brush, roller or trowel
- Built in antimicrobial for mold and mildew resistance at the substrate

#### Suitable Substrates

- |                                    |                                       |                                      |
|------------------------------------|---------------------------------------|--------------------------------------|
| • Brick masonry                    | • Ceramic and stone                   | • Gypsum mortar bed <sup>3</sup>     |
| • Cement backer board <sup>1</sup> | • Concrete                            | • Oriented strand board <sup>2</sup> |
| • Cement mortar beds               | • Exterior grade plywood <sup>2</sup> |                                      |
| • Cement terrazzo                  | • Gypsum drywall <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 – wood substrates; shall be skim coated with Merkrete latex modified thinset mortar

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

### 4. Technical Data

*Applicable Standards:* Merkrete Fracture Guard 5000 meets or exceeds tile industry requirements: ANSI A118.12 crack isolation membrane for thin set ceramic tile and dimension stone installation. Follow TCNA method F125 and F125A, ANSI A08.17 for installation, in addition to the container's directions.



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<b>Physical &amp; Test Data</b>	<b>Fracture Guard 5000</b>	
Adhesion	> 250 psi	
Elongation	> 800%	
Range of temperature for use	40° F to 110° F (at installation) 35° F to 150° F (after installation)	
Drying Time (to touch – per layer)*	4-6 hours at 70° F and 50% R.H.	
<b>LEED 2.2 NC VOC</b>	<b>EQ Credit 4.1</b>	<b>Fracture Guard 5000 Results</b>
VOC	< 65 g/l VOC	< 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.), 60 pails per pallet
- **3-1/2 Gallon Unit:** 3-1/2 gal. pail (13.245 l.), 40 pails per pallet

**Shelf Life:** One year from manufacturing in sealed original container, when properly stored at room temperature, off the ground in a controlled, dry, heated area.

**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 AN-2 "General Requirements for Sub-surfaces." All substrates should be plumb and true, surface deviation should not exceed 1/4" in 10'. Patching, leveling or areas requiring a mortar bed should be prepared using Merkrete underlayments. Movement (expansion) joints should be provided to comply with TCNA method EJ 171. If product has separated or thickened 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.

**Preparation**

*Joints and Cracks:* Pre fill all substrate cracks, cold and control joints with Merkrete thin sets, PUC caulking, approved urethane or 100% solids silicone sealant.

*Cement Substrates:* All concrete substrates should be cured a minimum of 14 days. Steel trowel floors to a fine broom finish. Keep Fracture Guard 5000 a minimum of 6 – 8 inches from the wall and all penetrations through the concrete surface. This will allow venting of any retained moisture.

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

*Gypsum Mortar Bed:* Merkrete has partnered with Maxxon Corporation and is providing the tile industry's most comprehensive warranty over Maxxon Gypcrete or gypsum mortar bed substrates. All gypsum mortar beds must be primed with Maxxon 101 Overspray. Then install Fracture Guard 5000 membrane following the "Membrane Application" directions included in this data sheet using TCNA method #F125A for full coverage.

*Plywood and OSB Substrates:* All plywood installations should be interior areas only and protected from exposure to moisture. Skim coat plywood surfaces with Merkrete latex modified thin set before membrane application. Cement backer boards may not be required when the wood substrate meets or exceeds the deflection requirements as specified by TCNA and the Marble Institute of America. Merkrete will provide our standard warranty on tile applications over Fracture Guard 5000 using OSB or plywood substrates meeting the above requirements

**Membrane Application:** Allow any recently prepared areas to dry. When installing Fracture Guard 5000 using TCNA method #F125A Full Coverage: apply a liberal coat of Merkrete Fracture Guard 5000 Membrane. When installing Fracture Guard 5000 using TCNA method #F125 Partial Coverage: apply a liberal coat of

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Fracture Guard 5000, the diagonal dimension of the tile, each side of the crack. Periodically, check the film thickness with a wet film thickness gauge, wet coat should be applied approximately 30 mil. wet thickness, at a rate of 80 s/f per gallon. Total Fracture Guard 5000 membrane thickness after drying should be 20 mil.

*Movement (expansion) joints:* Designed to experience movement, should be provided to comply with TCA method EJ 171.

**Ceramic or Stone Application:** Ceramic or stone tile can be installed immediately after the Fracture Guard 5000 membrane has dried to the touch. Residual tack (stickiness) is common. To help lessen tack, lightly “dust” the surface with dry thin set. Merkrete recommends 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:** Provide adequate protection for Fracture Guard 5000 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% R.H. Under normal drying conditions, may be walked on after 6 hours.

**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

1 gallon unit	80 sf
3-1/2 gallon unit	280 sf

**Limitations:** Do not use Fracture Guard 5000 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 Fracture Guard 5000 membrane. Do not leave Fracture Guard 5000 membrane unprotected or exposed to weather for more than 30 to 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 Fracture Guard 5000 membrane is available at leading tile houses and construction distributors. Contact Merkrete 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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