1. PRODUCT NAME
TEC® HydraFlex™ Waterproofing Crack Isolation Membrane (316)

2. MANUFACTURER
H.B. Fuller Construction Products Inc.
1105 South Frontenac Street
Aurora, IL 60504-6451 U.S.A.
800.552.6225 Office
800.832.9023 Technical Support
800.952.2368 Fax
 tecspecialty.com

3. DESCRIPTION
Ready-to-use, flexible, mold and mildew resistant waterproofing crack isolation membrane for interior and exterior applications. Forms a smooth, monolithic, watertight surface over walls, floors and ceilings. HydraFlex Membrane stops in-plane cracks up to 1/4" (3 mm) or up to 1/16" (6 mm) wide at the subfloor from telegraphing through to ceramic and stone tile. For residential to extra heavy commercial applications.

*Based on application

Key Features and Benefits
• Exceeds ANSI A118.10 Specifications for Waterproof Membranes
• Exceeds ANSI A118.12 Specifications for Crack Isolation Membranes
• Use for Positive Hydrostatic Pressure Applications
• Fast Drying – ready for tile installation in 1 to 3 hours
• Easy roller, trowel or spray application
• No mesh required (optional for waterproofing applications)
• Apply over new (green) concrete as little as 3 days old
• Isolates cracks up to 1/4" (3 mm) or up to 1/16" (6 mm) based on application
• Membrane resistant to growth of mold and mildew
• IAPMO approved
• Approved over control joints – no need to locate tile or stone field movement joints directly over control joints
• Contributes to LEED® project points
• Low VOC

Packaging
One U.S. gallon plastic pails (3.78 L) Product #15035484
3.5 U.S. gallon plastic pails (13.24 L) Product #15035482
5 U.S. gallon plastic pails (18.93 L) Product #15035483
TEC® Waterproofing Mesh available in:
6 in. x 50 ft. rolls (150 mm x 15.24 m) Product #3317599011

Coverage

<table>
<thead>
<tr>
<th>Application</th>
<th>Required Coats</th>
<th>Wet Film Thickness (mils)</th>
<th>Approximate Coverage per Gallon</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; (3 mm)</td>
<td>1</td>
<td>25 mils (.025&quot; (.6 mm))</td>
<td>100 sq. ft. (0.29 m²)</td>
</tr>
<tr>
<td>1/16&quot; (6 mm)</td>
<td>1</td>
<td>50 mils (.05&quot; (.13 mm))</td>
<td>50 sq. ft. (1.46 m²)</td>
</tr>
<tr>
<td>Waterproofing</td>
<td>2</td>
<td>1st Coat - 25 mils (.025&quot; (.6 mm))</td>
<td>50 sq. ft. (1.46 m²)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2nd Coat - 25 mils (.025&quot; (.6 mm))</td>
<td></td>
</tr>
</tbody>
</table>

Suitable Substrates
When properly prepared, suitable substrates include:
• Concrete (minimum 3 days old), cured mortar beds and masonry (interior or exterior)
• Gypsum wallboard (interior), cementitious backer units (CBU or cement board. Interior or exterior)
• APA Grade Trademarked Exposure 1 Plywood [CDX or better; two layers, 1/2" (28 mm) total minimum thickness, interior floors only]
• APA Grade Trademarked Exposure 1 Plywood (backer) (interior)
• APA Grade Trademarked Exposure 1 Plywood (backer) (interior)
• Gypsum underlayment (minimum compressive strength 2000 psi)
• Existing ceramic tile, VCT or non-cushioned sheetgoods provided they are single layer only and well bonded to a substrate approved for tile (interior)

HydraFlex Waterproofing Crack Isolation Membrane (316)

<table>
<thead>
<tr>
<th>Description</th>
<th>ANSI A118.10 Requirement</th>
<th>Typical Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shear Strength</td>
<td>7-Day</td>
<td>50 psi (0.34 MPa)</td>
</tr>
<tr>
<td></td>
<td>7-Day, Water Immersion</td>
<td>50 psi (0.34 MPa)</td>
</tr>
<tr>
<td></td>
<td>4-Week</td>
<td>50 psi (0.34 MPa)</td>
</tr>
<tr>
<td></td>
<td>12-Week</td>
<td>50 psi (0.34 MPa)</td>
</tr>
<tr>
<td></td>
<td>100-Day, Water Immersion</td>
<td>50 psi (0.34 MPa)</td>
</tr>
<tr>
<td>Fungus Resistance</td>
<td>Shall not support mold growth</td>
<td>Passes</td>
</tr>
</tbody>
</table>

4. TECHNICAL DATA
Applicable Standard
Exceeds ANSI A118.10 Specifications for Waterproof Membranes
Exceeds ANSI A118.12 Specifications for Crack Isolation Membranes

Storage
Store in cool, dry location. Do not store open containers, nor leave containers exposed to sunlight. Product must be kept at temperatures of 40°-90°F (4°-32°C). Keep from freezing.

Shelf Life
Maximum of 1 year from date of manufacture in unopened package.

Limitations
• Not for use as a wear surface.
• Do not apply over wet areas.
• Do not use over dimensionally unstable substrates such as particle board, pressboard, lauan plywood, waferboard, tempered hardboard (e.g. Masonite) or fiberglass.
• Do not use in areas subject to hydrostatic pressure from beneath the membrane.
• For exterior wall applications, refer to local building codes for moisture vapor transmission requirements.

Cautions
Read complete cautionary information printed on product container prior to use. For medical emergency information, call 1-888-853-1758.
This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered TEC brand product(s) under normal environmental and working conditions. Because each project is different, H.B. Fuller Construction Products Inc. cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.

Expiration
This Product Data Sheet has been prepared in good faith on the basis of information available at the time of publication. It is intended to provide users with information about and guidelines for the proper use and application of the covered TEC brand product(s) under normal environmental and working conditions. Because each project is different, H.B. Fuller Construction Products Inc. cannot be responsible for the consequences of variations in such conditions, or for unforeseen conditions.
**TEC® HydraFlex™ Waterproofing Crack Isolation Membrane**

**Product Data**

**Description**  
**ANSI A118.10 Requirement**  
**Typical Results**

<table>
<thead>
<tr>
<th>Description</th>
<th>ANSI A118.10 Requirement</th>
<th>Typical Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seam Strength</td>
<td>8 lb./inch width</td>
<td>&gt; 20 lb./inch width (5.6-11.8 kg/cm)</td>
</tr>
<tr>
<td>Breaking Strength</td>
<td>Minimum 170 psi (1.17 MPa)</td>
<td>250 psi (1.72 MPa)</td>
</tr>
<tr>
<td>Dimensional Stability</td>
<td>Maximum 0.7% length change</td>
<td>&lt; 0.7% length change</td>
</tr>
<tr>
<td>Waterproofness</td>
<td>Tested in accordance with American Standards for Load Bearing, Bonded, Waterproof Membranes for Thin Set Ceramic Tile and Dimension Stone Installations — ANSI A118.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No visible water penetration after 48 hours</td>
<td>Passes</td>
</tr>
</tbody>
</table>

**Physical Properties**

<table>
<thead>
<tr>
<th>Description</th>
<th>Physical State</th>
<th>Color</th>
<th>Odor</th>
<th>Tile Installation Time</th>
<th>Foot Traffic Rating</th>
<th>Service Temperature Rating</th>
<th>VOC (less water)</th>
<th>Storage</th>
<th>Shelf Life</th>
<th>Freeze/thaw Stability of Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Liquid: Acrylic Emulsion Modified with a Polyurethane Dispersion</td>
<td>Cured: Purple</td>
<td>Cured: None Uncured: Mild Ammonia</td>
<td>1-3 hours after membrane application</td>
<td>Residential to Extra Heavy Commercial (depending on substrate)</td>
<td>-20°F (-29°C) to 320°F (160°C)</td>
<td>12 g/L</td>
<td>Store in cool, dry location. Do not store open containers, nor leave containers exposed to sunlight. Keep from freezing.</td>
<td>Maximum 1 year from date of manufacture in properly stored, unopened package.</td>
<td>None. KEEP FROM FREEZING.</td>
</tr>
</tbody>
</table>

**5. INSTALLATION INSTRUCTIONS**

**INSTALLATION INSTRUCTIONS AS WATERPROOFING MEMBRANE**

**Application—Waterproofing Membrane**

To achieve waterproofing properties, a continuous membrane (no voids) of at least 46-50 mils [1.14-1.27 mm] wet film thickness is required over the entire surface. Pre-fill all concrete cracks and plywood gaps up to 1/4” (3 mm) wide with membrane prior to application. Treat cracks greater than 1/4” (6 mm) wide as expansion joints (see following section).

Apply membrane to entire surface using a 1/4” (6-12 mm) nap roller, 3/8” (4.7 mm) v-notch trowel, or airless sprayer. For waterproofing installations, membrane must be applied in two coats. Apply first coat, measuring membrane periodically with a wet film thickness gage to ensure a minimum thickness of 25 mils wet. Allow first coat to dry approximately 1 hour, until membrane changes to a semi-transparent color. Then apply second coat at right angles to the first coat. An additional 25 mils wet film thickness shall be applied to achieve a combined total thickness of 50 mils wet, curing to a dry film thickness of 30 mils.

For optional mesh application, spread to 4” (100 mm) on either side, embedding the waterproofing mesh. Install the membrane over the entire surface ensuring a continuous 50 mil wet film thickness. Generic movement joints in the tile should be placed as shown in TCNA EJ171F Movement Joint Guidelines. Place at a frequency of 20’ to 25’ in each direction for interior installations and 8’ to 12’ for exterior installations or interior installations with direct sunlight or moisture exposure. Perimeter joints should be placed as shown in EJ171. When HydraFlex is applied over the entire substrate, it is not necessary to locate tile or stone field movement joints directly over control joints or cracks as shown in EJ171B. For treatment of cracks or control joints where HydraFlex Waterproofing Crack Isolation Membrane is not applied over the entire substrate, see Technical Bulletin “Treatment of INDIVIDUAL Concrete Cracks with TEC Products” on tecspecialty.com.

**Application—Mesh (Flashing)**

Flashing with TEC Waterproof Mesh for common problem areas like: inside corners, outside corners, anywhere vertical surfaces meet horizontal surfaces; or anywhere dissimilar materials meet is optional.

To accomplish flashing, first pre-coat the substrate intersections 4” (100 mm) on each side. Then fully embed the 6” (150 mm) wide flashing mesh in both directions into the pre-coated areas with a 3” (76 mm) overlap on each side. Allow to dry (approximately 30 to 45 minutes) before full application of membrane.

**Application—Joint Details**

**Cracks or Control Joints [typically 1/4” (6 mm) or smaller]:** Ensure crack or joint is clean and free of all debris. Then fill the crack or joint with membrane.

For optional mesh application, spread to 4” (100 mm) on either side, embedding the waterproofing mesh. Install the membrane over the entire surface ensuring a continuous 50 mil wet film thickness. Generic movement joints in the tile should be placed as shown in TCNA EJ171F Movement Joint Guidelines. Place at a frequency of 20’ to 25’ in each direction for interior installations and 8’ to 12’ for exterior installations or interior installations with direct sunlight or moisture exposure. Perimeter joints should be placed as shown in EJ171. When HydraFlex is applied over the entire substrate, it is not necessary to locate tile or stone field movement joints directly over control joints or cracks as shown in EJ171B. For treatment of cracks or control joints where HydraFlex Waterproofing Crack Isolation Membrane is not applied over the entire substrate, see Technical Bulletin “Treatment of INDIVIDUAL Concrete Cracks with TEC Products” on tecspecialty.com.

**Application—Drain Details**

HydraFlex must extend to the bottom of the drain flange, with sufficient coverage to channel all water flow to and down the drain. DO NOT cover weep holes with membrane.
TEC® HydraFlex™ Waterproofing Crack Isolation Membrane

The following diagram depicts a typical drain configuration:

**Fig. 2: Drain Configuration**

![Diagram of Drain Configuration](image)

- **Note:** This diagram is provided to show a typical drain detail and is not intended to make specific design recommendations.
- Install a continuous membrane to cover the substrate and up to the drain opening, as shown in the diagram. Once the membrane has dripped thoroughly, the flange should then clamp down on the membrane, with the weep holes unobstructed. (See TCA Installation Methods for shower receptors).

**Clean-up**

Clean tools, hands and excess material immediately (while still fresh) with water. Material that is cured is difficult or impossible to remove.

**Curing/protection**

HydraFlex membrane is typically ready for tile application in 1-3 hours. Cure times based on 70°F (21°C) and 50% RH. Colder temperatures, higher humidity or green concrete (not fully cured) will extend cure times. Continue to cure throughout the installation.

**Flood Testing**

Inspect cured film to make sure there are no voids, bubbles or breaks in the membrane. Apply additional membrane to fill all voids.

**Curing**

HydraFlex is ready for flood testing when the 2nd coat turns dark purple, with no visible light purple. Drying time after application of the second coat can range from 2 hours under ideal conditions to 12 hours, depending on temperature, relative humidity, substrate porosity and air flow. Corners will generally take longer to dry than flat surfaces. Plug all drains and dam the floor area to be tested. Flood the area to a meaningful test level and check the area carefully, looking for any signs of leakage (air bubbles rising from the leak source). After 24 hours, check water level against mark(s) made at initial height. If significant loss has occurred, further investigation will be necessary to identify leaks.

**INSTALLATION INSTRUCTIONS AS CRACK ISOLATION MEMBRANE**

Pre-fill all concrete cracks, control joints and plywood gaps up to ¼” (3 mm) wide with membrane prior to application. For expansion, isolation and construction joints continue joints through the tile installation in accordance with Installation Method EJ171 in the Tile Council of America handbook. Treat dynamic cracks (subject to movement) greater than ¼” (6 mm) wide for 50 mil wet film thickness, or ¼” (3 mm) wide for 25 mil wet film thickness as expansion joints. Generic movement joints in the tile should be placed as shown in TCNA EJ171F Movement Joint Guidelines. Place at a frequency of 20” to 25” in each direction for interior installations and 8” to 12” for exterior installations or interior installations with direct sunlight or moisture exposure. Perimeter joints should be placed as shown in EJ171. When HydraFlex™ is applied over the entire substrate, it is not necessary to locate tile or stone field movement joints directly over control joints or cracks as shown in EJ171F. For treatment of cracks or control joints where HydraFlex Waterproofing Crack Isolation Membrane is not applied over the entire substrate, see Technical Bulletin “Treatment of INDIVIDUAL Concrete Cracks with TEC® Products” on tecspecialty.com.

**1/4” Crack Isolation Applications:**

Apply membrane to entire surface using a ¼” to ½” (6-12 mm) synthetic nap roller, ⅛" (4.7 mm) V-notch trowel, or airless sprayer*. Membrane may be applied in one coat. Measure membrane periodically with a wet film thickness gage† to ensure a minimum thickness of 25 mils [.025" (.6 mm)] wet, curing to a dry film thickness of 15 mils [.015" (.4 mm)].

**1/4” Crack Isolation Applications:**

Membrane may be applied in one coat to entire surface. Measure membrane periodically with a wet film thickness gage† to ensure a minimum thickness of 50 mils wet, curing to a dry film thickness of 30 mils.

**Clean-up**

Clean tools, hands and excess material immediately (while still fresh) with water. Material that is cured is difficult or impossible to remove.

**6. AVAILABILITY**

TEC® Premium Tile and Stone Installation Products are available nationwide. To locate TEC® products in your area, please contact:

Phone: 800-832-9002
Website: tecspecialty.com

**7. LIMITED WARRANTY**

The product(s) covered by this Product Data Sheet are sold subject to a Limited Warranty and related terms. H.B. Fuller Construction Products disclaims the implied warranties of merchantability and fitness for a particular purpose and all incidental and consequential damages arising out of the sale, purchase or use of this product. For Limited Warranty details visit tecspecialty.com. To obtain a hard copy of the Limited Warranty call H.B. Fuller Construction Products at 800-832-9023 or mail a written request to the address in Section 2 of this Product Data Sheet.

**8. MAINTENANCE**

Not applicable

**9. TECHNICAL SERVICES**

Technical and safety literature
To acquire technical and safety literature, please visit our website at tecspecialty.com.

**10. FILING SYSTEM**

Division 9