E-TUFF® JOINT FILL
100 % Solids, Semi Rigid Epoxy Joint Filler V.O.C. Compliant

1.01 DESCRIPTION
E-Tuff® Joint Fill is a Load Bearing Joint Filler Designed to Protect Concrete Commercial and Industrial Floors Subjected to Hard Wheeled Traffic.

1.02 USES
- Repair Spalled & Damaged Joints
- Distribution Facilities
- Manufacturing Plants
- Distribution Facilities
- Crack Repair

1.03 FEATURES
- Allows Moderate Joint Movement
- Cost Effective Joint Sealing System
- Cures Down to 40°F (4°C)
- Does Not Embrittle with Age
- Easy to Place and Shave
- Excellent Impact Resistant
- Excellent Strength Properties
- Excellent Working Time
- Fast Cure Rate
- High Load Bearing Strength
- Moisture-Insensitive Formula
- Nearly No Odor
- No VOC’s – 100% Solids
- Non-Shrinking
- Pourable Consistency

1.04 WHERE TO USE
On Dry or Damp Concrete Saw Cut or Control Joints for Foot, Vehicular Pneumatic Tire and Hard Plastic Wheel Traffic.

1.05 PACKAGING
22 oz (600 ml) Cartridges
2 gallon (7.56 liters) unit
10 gallon (37.9 liters) unit

1.06 COLOR
Mixed (Light Grey)
Other colors available upon request.

1.07 COVERAGE
Product coverage is depended upon the width, depth and length of the joint to be filled. Refer to Estimating Guide Chart for approximate coverages.

1.08 JOINT PREPARATION
All inner joint surfaces must be free of dust, coatings, grease, sealants, waxes and all other contaminants and have all deteriorated concrete removed to a sound and clean surface. Typical removal methods include dust-free abrasive blasting or enlarging joint width by saw cutting. Protect joints from contamination after cleaning and prior to product placement. Joint Width inches (mm) Joint Depth inches (mm)

1.09 JOINT DESIGN
Follow ACI’s Standard Joint Specification for sizing and filling the joint depth to 25% of the concrete thickness. If the crack at the bottom of the joint is open, materials such as backer rod may be used to prevent epoxy from seeping out of joint void to be filled.

In accordance with ACI 302, semi-rigid epoxy fillers should be installed full depth in saw cut joints and at least 1 in. (2.5 cm) deep in formed joints. E-Tuff® Joint Fill can be installed with a caulking gun or poured into the joint from a suitable container. Two passes may be required, as pourable leveling materials will settle in the joint. The second pass must be made within 12 hours at 75°F (24°C). Ultimately, the filled joint should be flush with the floor surface. Another installation technique is to overfill the joint, then once tack free, cut flush with a razor knife. A heat gun can facilitate cutting, if it has hardened. Avoid overheating the cured E-Tuff® Joint Fill. Per ACI 302, It is advisable to defer joint filling and sealing as long as possible to minimize the effects of shrinkage-related joint opening on the filler or sealant. If concrete shrinkage-related openings do occur, E-Tuff® Joint Fill can be reapplied.

1.10 PRECONDITIONING POLYMER
When temperatures drop polymers typically thicken and becomes harder to place product. When the temperatures are warmer, product typically become thinner. To improve the flowability before mixing product precondition product temperature at 20°C (68°F) or higher. When the substrate temperatures are 15°C (60°F) or lower preheat each epoxy component to 90°C before mixing. Caution – when preheating epoxy to be applied by pouring method the pot life will be reduced by about 50%. When packaged in cartridges the epoxy is mixed through a static mixing tube and there is no pot life issue to be concerned about.

1.11 MIXING FOR POURING METHOD
Pre-mix Side “A”, (when pigmented) then pour Side “B” into “A” and mix for 60 seconds (until one even colors develops) with a low speed paddle attached to a drill (400-600 rpm). The mixed product is ready for immediate placement.
2.01 APPLICATION
The product has a convenience mix ratio of 1 to 1 by volume and may be troweled or pumped into the joint void. For additional equipment information, contact PolyTuff Systems International.

2.02 SHELF LIFE
1.5 years in original unopened containers

2.03 LIMITATIONS
- Substrate Temperature Must be 4°C (40°F) or above.
- Minimum Application Temperature is 4°C (40°F).
- DO NOT APPLY on WET Substrate.
- DO NOT THIN – Solvents will prevent proper cure.
- Do Not Add Aggregate to Product or Place Aggregate in Joint before Filling Joint.
- Pre-condition Polymer as Needed.

2.04 CAUTION
Side “A” - Irritant
Contains epoxy resins. Prolonged contact with skin may cause irritation. Avoid contact with eyes.

Side “B” - Corrosive
Contains amines. Contact with skin may cause severe burns. Avoid eye contact. Product is a strong sensitizer.

2.05 IMPORTANT INFORMATION
Use of safety goggles, chemical-resistant gloves, adequate ventilation and NIOSH/OSHA approved respirator is recommended.

2.06 CLEAN UP
In case of spills wear suitable protective equipment, contain spill, and collect with absorbent material, place in suitable container. Ventilate area. Avoid contact. Dispose according to applicable local, state, and federal regulations.

2.07 FIRST AID
In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact Physician Immediately. Wash clothing before re-use.

READ SDS PRIOR TO USING PRODUCT. FOR PROFESSIONAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. MADE IN THE USA.

<table>
<thead>
<tr>
<th>PHYSICALS</th>
<th>(Material and Curing Conditions at 73°F unless noted, 50% R.H.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity</td>
<td>900 - 1,000 cps</td>
</tr>
<tr>
<td>Pot life</td>
<td>10 - 14 minutes</td>
</tr>
<tr>
<td>Consistency</td>
<td>Flowable</td>
</tr>
<tr>
<td>Hardness, ASTM D-2240 Shore D 7 Days</td>
<td>35 - 45</td>
</tr>
<tr>
<td>Tack-free Time, ASTM C-679</td>
<td>40 - 50 minutes</td>
</tr>
<tr>
<td>Tack-Free Time Substrate Temperature</td>
<td>40°F * 73°F 90°F 8 - 10 hrs 16 - 8 hrs 4 - 6 hrs</td>
</tr>
<tr>
<td>Tensile Properties, ASTM D638, 7 Days</td>
<td>Tensile Strength</td>
</tr>
<tr>
<td></td>
<td>Elongation Break</td>
</tr>
<tr>
<td>Compressive Strength, ASTM D695 1 Day</td>
<td>40°F</td>
</tr>
<tr>
<td></td>
<td>7 Days</td>
</tr>
<tr>
<td></td>
<td>2,100 psi</td>
</tr>
<tr>
<td>Pull Off Strength · Adhesion to Concrete ASTM D4541, 7 Days</td>
<td>40°F</td>
</tr>
<tr>
<td></td>
<td>245 psi</td>
</tr>
<tr>
<td>Water Absorption, ASTM D570 7 Days</td>
<td>0.60%</td>
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</table>

*Pre-conditioned epoxy to 90°F before mixing.
Please read all information in the General & Safety Guidelines, Technical Data Sheets, Guide Specifications and Safety Data Sheets (SDS) before applying material. PSI Products are for “Professional Use Only” and preferably applied by professionals who have prior experience with PSI Products or have undergone training in application of PSI Products. Published technical data and instructions are subject to change without notice. Contact your local PSI representative or visit our website for current technical data, instructions, and project specific recommendations.

**LIMITED WARRANTY**
PSI warrants its products to be free of manufacturing defects and that they will meet PSI current published physical and chemical properties. Seller’s sole responsibility shall be to replace that portion of the product which proves to be defective. There are no other warranties by PSI of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. PSI shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. PSI shall not be responsible for use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. PSI reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

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### ESTIMATING GUIDE
**Lineal Feet / Gallon of Mixed E-TUFF® Joint Fill**

<table>
<thead>
<tr>
<th>Width Inches (cm)</th>
<th>1/8 (.3 cm)</th>
<th>1/4 (.6 cm)</th>
<th>3/8 (1 cm)</th>
<th>1/2 (1.3 cm)</th>
<th>5/8 (1.6 cm)</th>
<th>3/4 (1.9 cm)</th>
<th>1 (2.5 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 (1.3 cm)</td>
<td>308.0</td>
<td>154.0</td>
<td>102.7</td>
<td>77.0</td>
<td>61.6</td>
<td>51.3</td>
<td>38.5</td>
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<tr>
<td>3/4 (1.9 cm)</td>
<td>205.3</td>
<td>102.7</td>
<td>68.4</td>
<td>51.3</td>
<td>41.1</td>
<td>34.2</td>
<td>25.7</td>
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<tr>
<td>1 (2.5 cm)</td>
<td>154.0</td>
<td>77.0</td>
<td>51.3</td>
<td>38.5</td>
<td>30.8</td>
<td>25.7</td>
<td>19.3</td>
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<tr>
<td>1-1/4 (3.2 cm)</td>
<td>123.2</td>
<td>61.6</td>
<td>41.1</td>
<td>30.8</td>
<td>24.6</td>
<td>20.5</td>
<td>15.4</td>
</tr>
<tr>
<td>1-1/2 (3.8 cm)</td>
<td>102.7</td>
<td>51.3</td>
<td>34.2</td>
<td>25.7</td>
<td>20.5</td>
<td>17.1</td>
<td>12.8</td>
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<tr>
<td>1-3/4 (4.4 cm)</td>
<td>88.0</td>
<td>44.0</td>
<td>29.3</td>
<td>22.0</td>
<td>17.6</td>
<td>14.7</td>
<td>11.0</td>
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<tr>
<td>2 (5.1 cm)</td>
<td>77.0</td>
<td>38.5</td>
<td>25.7</td>
<td>19.3</td>
<td>15.4</td>
<td>12.8</td>
<td>9.6</td>
</tr>
<tr>
<td>2-1/2 (6.3 cm)</td>
<td>61.6</td>
<td>30.8</td>
<td>20.5</td>
<td>14.7</td>
<td>12.3</td>
<td>10.3</td>
<td>7.7</td>
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<tr>
<td>3 (7.6 cm)</td>
<td>51.3</td>
<td>25.7</td>
<td>17.6</td>
<td>12.8</td>
<td>10.3</td>
<td>8.6</td>
<td>6.4</td>
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