

# SECTION 09305 ANTI-FRACTURE MEMBRANE

## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

- A. All of the Contract Documents, including General and Supplementary Conditions and Division I General Requirements apply to the work of this section.

### 1.02 SCOPE

- A. The work of this section includes, but is not limited to, the following:
  - 1. Installation of anti-fracture self-adhering sheet membrane where indicated in the drawings.
- B. Related Sections: Other specification sections which directly relate to the work of this section include, but are not limited to, the following:
  - 1. Section 03300 - Cast-In-Place Concrete

### 1.03 REFERENCE STANDARDS

- A. American Society for Testing and Materials (ASTM):
  - D412 Tests for Rubber Properties in Tension.
  - D1000 Test Method for Pressure-Sensitive - Coated Tapes Used for Electrical and Electronic Applications
  - D146 Test for Sampling and Testing Felted and Woven Fabrics Saturated with Bituminous
- B. American National Standards Institute (ANSI):
  - A118.12 High Performance Standard for Crack Isolation

### 1.04 SYSTEM DESCRIPTION

Product provided by this section is a composite membrane of fabric and rubberized asphalt of not less than 40 mils in thickness. This elastomeric, self adhesive membrane, is wound on cores with a disposable silicone coated release sheet.

### 1.05 SUBMITTALS

- A. General: Submit in accordance with Section 01300.

# Polyguard

This Information is based on our best knowledge, but  
POLYGUARD cannot guarantee the results to be obtained.

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- B. Product Data: Submit manufacturer's product literature and installation instructions.
- C. Samples: Submit representative samples of the following for approval:
  - 1. Sheet Membrane.
- D. Subcontractor's approval by Manufacturer: Submit document stating manufacturer's acceptance of subcontractor.
- E. Warranty: Submit a sample of manufacturer's warranty identifying the terms and conditions stated in 1.09

#### 1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Anti-fracture Sheet Membrane Systems must be manufactured by a company with a minimum of 10 years experience in the production and sales of self-adhesive membrane materials.
- B. Applicator Qualifications: A firm having at least 3 years experience in applying the specified materials.
- C. Materials: For each type of material required to complete the work of this section, provide primary materials which are the products of a single manufacturer.
- D. Pre-Application Conference: A pre-application conference shall be held to establish procedures and to review conditions, installation procedures and coordination with other related work. Meeting agenda shall include review of special details.

#### 1.07 DELIVERY, STORAGE, HANDLING

- A. Materials should be delivered to site in manufacturer's original, unopened containers with original labels attached and bearing the following information:
  - 1. Name of material.
  - 2. Manufacturer's batch codes including date of manufacture.
  - 3. Materials Safety Data Sheets.
- B. Membrane and accessories should be unloaded and stored carefully. Cartons and containers must be protected from weather, sparks, flames, excessive heat, cold and lack of ventilation. Do not stack membrane higher than 5 feet vertically, nor double stack cartons. Cartons should be stored on pallets and covered to protect from water damage. Any damaged material must be removed from the site and disposed of in accordance with applicable regulations.

#### 1.08 PROJECT CONDITIONS

- A. Work should be performed only when existing and forecasted weather conditions are within the limits established by the membrane manufacturer. Do not apply membrane if the temperature is below - 35°F or to a damp, frost covered or otherwise contaminated surface.
- B. Proceed with installation only when substrate is clean, smooth and dry. Concrete surface must resemble a troweled finish.

- C. If solvent based primer is being used (exterior projects only) warn personnel against breathing vapors and contact with skin and eyes; wear appropriate protective clothing and respiratory equipment.
- D. Keep flammable products away from spark or flame. Post "No Smoking" signs. Do not allow spark producing equipment to be used during application and until all vapors have dissipated.
- E. Maintain work area in a neat and workmanlike condition. Remove empty cartons and rubbish from the site daily.

1.09 WARRANTY

- A. Provide a written 5 year material warranty from the manufacturer upon completion and acceptance of the installation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Provide Polyguard Tileguard Membrane System as manufactured by Polyguard Products, Inc., Ennis, Texas 75120-0755, phone: 214.515.5000.

2.02 PRODUCTS

- A. Anti-fracture Self-adhesive Membrane: Shall be Polyguard Tileguard, a 40 mil rubberized asphalt membrane consisting of a fabric and rubberized asphalt meeting or exceeding the following requirements:

- |   |                        |                    |
|---|------------------------|--------------------|
| 1. Adhesion: Peel Adhesion (lb./in. width)                      | 10.0                   | ASTM D 1000        |
| 2. Pliability - 180° bend over 1" mandrel:                      | unaffected<br>@ -25° F | ASTM D 146         |
| 3. Elongation, ultimate failure of rubberized asphalt membrane: | 1200%                  | ASTM D 412 (Die C) |
| 4. High performance Standard for Crack Isolation                | exceeds                | ANSI A118.12       |

- B. Accessory Products

- 1. Surface Primer: Shall be Polyguard 650 LT Liquid Adhesive or Polyguard Shur-Tac Liquid Adhesive.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Before starting any tile project, the applicator shall thoroughly inspect all surfaces for any conditions detrimental to the proper completion of the work. Should any deficiencies exist, the General Contractor should be made aware of such in writing immediately. Do not proceed with application until all unsatisfactory conditions are corrected.

### 3.02 SURFACE PREPARATION:

- A. Refer to manufacturer's product literature for surface preparation requirements. Surfaces should be structurally sound, free of voids, spalls, loose aggregate and sharp ridges. Remove dust, dirt, debris or any other foreign materials such as wax, oil, grease or form release agents. Use repair materials that are acceptable to the sheet membrane manufacturer.
- B. Cast-In-Place Concrete
  - 1. Normal weight structural concrete must be allowed to cure a minimum of 14 days. All concrete surfaces must be dry to the touch before proceeding with the installation of the anti-fracture membrane system.
  - 2. Concrete must be sloped to provide proper drainage.
  - 3. Moisture in floor must not exceed 3 lbs./1,000 s.f.. Use Anhydrous Calcium test kit, per ASTM F 1869-98.
  - 4. If horizontal crack or joint exceeds 1/4" do not use..
  - 5. Do not use if cracks or joints are out of plane, or over (dynamic) expansion joints.
  - 6. Bi-level drains should be installed and have a minimum 3" flange. Drains should be installed with the flange flush and level with the surrounding concrete surface.
- C. Other Substrates:
  - 1. Include concrete cured 28 days, backer units per Tile Council of America recommendations (TCA), radiant heated floors (per TCA), plywood (per TCA), Group 1 exterior grade CC plugged or better.

### 3.03 INSTALLATION:

- A. If an exterior project has potential for high moisture content in the slab, and protection against water penetrating from the slab is required, the following additional steps must be taken.
  - 1. Prime concrete with 650 LT Liquid Adhesive (solvent base not waterbase).
  - 2. Rolls of membrane should be overlapped. Area of lap should be primed with 650 LT Liquid Adhesive before lap is installed. Optional application is to butt the two pieces of membrane together, apply a coat of 650 LT Liquid Adhesive in area that was butted together then tape with a strip of Polyguard JT-20 Tape. Roll all seams to insure adhesion.
  - 3. The use of Acrylic Latex modified thinset is recommended.
- B. Priming: Apply primer to a cleaned, dust free surface. Apply by roller or spray. Apply Polyguard 650 LT Liquid Adhesive (use for exterior only) at the rate of 250-300 sq. ft. per gallon. Apply Polyguard Shur-Tac Gold Liquid Adhesive at the rate of 350-400 per gallon. Allow to dry per manufacturer's directions.
- C. Membrane Installation - Horizontal Surfaces:
  - 1. If waterproofing is required then see instructions for installation in Section A.
  - 2. Clean and remove all dirt and dust. Old floors to be redone must be scarified.
  - 3. Fill any voids or depressions with cement based compound manufactured for that purpose. If necessary a self leveling cementitious compound may be used before

- starting sheet application.
4. Prime all areas to be covered with either Polyguard 650 LT Liquid Adhesive or Polyguard Shur-Tac Liquid Adhesive prior to application of membrane. (See directions on liquid adhesive label).
  5. Precut membrane before application. Remove approximately 6" of paper release from membrane. Place the rubberized asphalt to the liquid adhesive. Press membrane firmly onto the liquid adhesive to start the membrane placement
  6. Roll the roll of membrane away from the starting point and pull release away slowly as you unroll the roll. Use the paper backing to guide the sheet for alignment with either the wall or the previously applied sheet of membrane.
  7. Extra precaution should be taken not to cause wrinkles or bubbles in the membrane. If bubbles occur puncture it and press all the air out. If wrinkles occur then slit the wrinkle and press together flat. Carefully cut off any excess membrane.
  8. The entire membrane should be firmly rolled with a linoleum roller weighing approximately 50 pounds. This will insure excellent adhesion and minimize air pockets between the substrate and membrane.

### **END OF SECTION**

7/05/08

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