

# **SAM® 3 Sound Abatement/Anti-Fracture/Crack Suppression/Waterproofing Membrane Architectural Specifications**

## **SECTION 09305**

### **TILE SETTING MATERIALS & ACCESSORIES**

#### **PART 1 GENERAL**

##### **1.01 SUMMARY**

A. Section Includes: Tile setting materials and accessories, including sound control, waterproofing and anti-fracture/crack suppression membrane systems

B. Related Sections: Section(s) related to this section include:

1. Concrete floor finishing: Division 3 Concrete sections.
2. Expansion or control joints and components: Division 5 Metal sections and Division 9 Flooring sections.
3. Joint Sealers: Division 7 Joint Sealers sections.
4. Tile or stone materials: Division 9 Tile and Stone Flooring sections.
5. Plumbing Specialties, floor drains and fixtures: Division 15 Mechanical sections.
6. Pan receptors and piping: Division 15 Mechanical sections.

##### **1.02 REFERENCES**

A. American National Standards Associations (ANSI) Installation Specifications

1. A 108.1C - 2010 Ceramic tile installed in a mortar bed
2. A 108.5 - 2010 Ceramic tile installed with dry set Portland cement mortar or latex Portland cement mortar
3. A 108.9 – 2010 Ceramic tile installed with modified epoxy emulsion mortar/grout.

B. American National Standards Associations (ANSI) Material Specifications

1. A 118.3 - 2009 Chemical resistant, water cleanable, tile setting and grouting epoxy.
2. A 118.4 - 2010 Latex Portland cement mortar.

C. American Society for Testing of Material (ASTM) Specifications

1. C-627-93 Evaluating ceramic floor tile installation systems
2. E - 336-97 Measurement of airborne sound insulation in buildings
3. E - 413-87 (1994) Determination of sound transmission class, classification
4. D-583 Water vapor transmission test
5. D-146 Tensile MD and Tensile CD
6. D-36 Penetration
7. C-482 Shear/Bond

A. Tile Council of North America (TCNA):

1. TCNA Handbook for Ceramic Tile Installation, latest edition and using ANSI 118.4 Latex Portland cement mortar.

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide sound reduction, waterproofing and anti-fracture/crack suppression membrane, which has been manufactured to withstand 3/8" horizontal structural movement of the substrate when covering the floor.

1.04 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.

B. Product Data: Submit product data including manufacturer's product sheet, for specified products

C. Samples: Submit selection and verification samples.

D. Quality Assurance Submittals: Submit the following:

1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
2. Certificates: Product certificates signed by the manufacturer certifying materials comply with specified performance characteristics and physical requirements.
3. Manufacturer's Instructions: Manufacturer's installation instructions.
4. Manufacturer's Field Reports: Manufacturer's field reports.

E. Closeout Submittals: Submit the following:

1. Warranty: Warranty documents specified herein.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: A professional tile or flooring contractor should perform the work of this section.

B. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination, Project Meetings Section.

1.06 DELIVERY, STORAGE, AND HANDLING

A. General: Comply with Division 1 Product Requirements Sections.

B. Ordering: Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.

C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

D. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature between (35 °-95° F) as recommended by manufacturer.

1. Traffic: The membrane must be protected with minimum 1/4" plywood or heavy sheeting.

## 1.07 PROJECT/SITE CONDITIONS

A. Substrate must be dry and temperature above 55°F when applying primer and membrane.

B. Concrete sub-floors must be structurally sound, clean, level, free of holes, projections, free of moisture, sealers, or any material that would interfere with a good bond.

C. Wood sub-floors must consist of joist spacing no more than 16" on-center, and a double sub-floor consisting of a minimum of 5/8" thick for each. A gap is required between the edges of the wood sheets.

D. Existing floors made up of ceramic, terrazzo, marble, vinyl and painted floors must be structurally sound, stripped of waxes and sealers, before application of membrane.

E. Deflection of substrate must not exceed 1/360" on live or dead loads with a maximum variation of 1/4" in 10'.

## 1.08 WARRANTY

A. National Applied Construction Products, Inc. offers a wide range of Performance and Materials Warranties. Please contact Customer Service for details at 800.633.4622 or visit [www.NACproducts.com](http://www.NACproducts.com) for more information on warranties.

## 1.09 MAINTENANCE

A. Tile must be protected after installation from heavy construction equipment: i.e.... loaded fork lifts, dry wall carts and lifts with hard rubber or steel wheels. A non-tiled path is recommended for heavy equipment.

# PART 2 PRODUCTS

## 2.01 TILE SETTING MATERIALS AND ACCESSORIES

A. Manufacturer: National Applied Construction Products, Inc.

1. Contact: 3200 S. Main St. Akron, OH 44319; Telephone: (800) 633-4622 or (330) 644-3117; Fax: (330) 644-3557

**B. Proprietary Product(s): SAM® 3 "Sound Reduction, Waterproofing and Anti-Fracture" Membrane**

1. Membrane: 90 ± 5 mil thick load bearing membrane, capable of withstanding 3/8" horizontal structural crack or joint movement
2. Waterproofing, self-adhering, pressure sensitive formulation
3. Sound Abatement Ratings of STC 67 and IIC 70\*
4. Full Floor Coverage with butt joint application utilizing seam tape. For waterproofing, seal all joints and termination points with an NAC approved urethane sealant, SubSeal® Liquid, or other acoustic sealant.

\*Sound testing conducted on 8" concrete slab with a sound rated ceiling assembly

## **2.02 EXISTING MATERIALS**

A. Compatible with most latex modified thin-set mortars, epoxies and adhesives

B. Adhesive residue from carpet, vinyl tile, linoleum and elastomeric membrane systems must be ground and shot blasted leaving minimal residue. A bond test must be conducted on a location to location and job by job basis.

## **2.03 EQUIPMENT**

A. Damp mop, industrial vacuum, chalk line, 75-100# roller or flat trowel, short nap paint roller or flat trowel, paint roller applicator or brush, hook or razor knife.

## **2.04 ACCESSORIES**

A. NAC TAC Primer for interior or exterior applications or NAC TAC II Primer for interior applications or NS97 for exterior/wet area applications

B. Seam/Corner Tape is to be applied underneath where membrane is butt-joined and in corners

C. Preformed Inside and Outside Corners are also available

D. MOISTURE LOCK 101® on absorptive substrates

E. NAC approved urethane sealant or other acoustic sealant required at the perimeter of the tile installation.

F. May be used with or without a sound rated ceiling assembly

G. Ceramic Tile meeting ANSI A137.1 with 250# minimum breaking strength

H. Tile Bond Coat meeting ANSI A118.4

## **2.05 SOURCE OF QUALITY CONTROL**

A. Vapor Test: Substrates where moisture is present, a vapor test is required.

B. Water Test: A water test 48 hours prior to installation of tile is recommended for shower bases and other areas subject to prolonged water exposure.

## **PART 3 EXECUTION**

### **3.01 ACCEPTABLE INSTALLERS**

A. Installer Qualifications: A professional tile or flooring contractor should perform the work of this section.

### **3.02 EXAMINATION**

A. Site Verifications of Conditions: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.

1. Verify substrate for conditions of the project.
2. Verify surfaces are ready to receive work and comply to TCA Handbook, Installation Methods.
3. Confirm location of expansion or control joints required and details provided on the drawings.

### **3.03 PREPARATION**

#### **A. Protection**

1. Keep area well ventilated when applying the NAC TAC II Primer for interior applications or NAC TAC for interior or exterior application or NS97 for exterior/wet area applications
2. Wear safety glasses, protective gloves and other protective clothing when handling the primers and accessory products.
3. Refer to the material safety data sheet for further details.

#### **B. Surfaces Preparation**

1. Substrate must be dry and temperature above 55°F when applying primer and membrane.
2. Concrete sub-floors must be structurally sound, clean, level, free of holes and projections, free of moisture, sealers, or any material that would interfere with a good bond.
3. Wood sub-floors must consist of joist spacing no more than 16" on-center, and a double sub-floor consisting of a minimum of 5/8" thick for each. A gap is required between the edges of the wood sheets.
4. Existing floors made up of ceramic, terrazzo, marble, vinyl and painted floors must be structurally sound, stripped of waxes and sealers, before application of membrane.
5. Deflection of substrate must not exceed 1/360" on live or dead loads with a maximum variation of 1/4" in 10'.

### **3.04 FIELD QUALITY CONTROL**

A. Field Evaluations are performed upon request.

### **3.05 CLEANING**

A. Membrane can be swept with a broom or vacuum, if needed.

**END OF SECTION**