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This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat*™, *SectionFormat*™ and *PageFormat*™. It has been numbered to meet the recommendation of the *MasterFormat 2004* classification system. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies anti-fracture membrane systems. These products are manufactured by National Applied Construction Products, Inc. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

SECTION 07 13 00 SHEET WATERPROOFING

Specifier Note: Environment: This MANU-SPEC specifies environmentally responsible material choices, including recycling and reuse options, and generally available disposal options.

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Anti-Fracture Membrane Systems, including:
 - a. Crack isolation membranes.
 - b. Waterproofing membranes.
 - c. Sound abatement membranes.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Section 01 42 19 - Reference Standards may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section. Retain only those reference standards to be used within the text of this Section. Add and delete as required for specific project.

1.02 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. ANSI A118.4 Specification for Latex Portland Cement Mortar.
 - 2. ANSI A118.10 Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimensional Stone Installations.
 - 3. ANSI A118.12 Crack Isolation Standard.



- B. ASTM International:
 1. ASTM C627 Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester.
 2. ASTM D583 Methods of Test for Water Resistance of Textile Fabrics (Withdrawn 1971).
 3. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 4. ASTM E492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine.
 5. ASTM E2179 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors.
- C. Military Specifications (MIL):
 1. MIL-D-3134J Deck Covering Materials.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Section 01 33 00 - Submittal Procedures.

1.03 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Section [01 33 00 - Submittal Procedures] [_____].
- B. Product Data: Submit manufacturer's complete product literature for specified system components, detailed installation diagrams and instructions, including:
 1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.
 4. Manufacturer's SPEC-DATA® product sheet.
- C. Quality Assurance:
 1. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
 2. Manufacturer's Instructions: Manufacturer's installation instructions.
- D. Closeout Submittals: Submit the following:
 1. Warranty: Manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

1.04 QUALITY ASSURANCE

- A. Qualifications:
 1. Installation: Company experienced in performing work of this section, specializing in installation of work similar to that required for this project.
- B. Preinstallation Meetings: Conduct preinstallation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with [Section 01 31 19 - Project Meetings] [_____].

1.05 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Section [01 61 00 - Common Product Requirements] [_____].
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery, Storage and Protection:
 1. Deliver, store and handle in accordance with Section [01 61 00 - Common Product Requirements] [_____].
 2. Deliver, store and handle materials in accordance with manufacturer's written instructions.
 3. Deliver in original packaging with labels and identification intact.

4. Inspect items upon delivery to ensure that specified products have been received.
5. Store items in secure dry location, protected from weather until ready for installation.

D. Waste Management and Disposal:

Specifier Note: Environment: The disposal of packaging waste into landfill site demonstrates an inefficient use of natural resources and consumes valuable landfill space.

1. Separate waste materials for [Reuse] [And] [Recycling] [_____] in accordance with Section [01 74 19 - Construction Waste Management and Disposal] [_____].
2. Remove from site and dispose of packaging materials at appropriate recycling facilities.
3. Collect and separate for disposal [Paper] [Plastic] [Polystyrene] [Corrugated cardboard] [_____] packaging material [In appropriate onsite bins] [_____] for recycling.

1.06 PROJECT CONDITIONS

1. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

Specifier Note: Coordinate article below with Conditions of the Contract and with Section 01 78 36 - Warranties.

1.07 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract and Section [01 78 36 - Warranties] [_____] for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 CRACK ISOLATION MEMBRANE SYSTEMS

- A. Manufacturer: National Applied Construction Products, Inc.
 1. Contact: 3200 S. Main St., Akron, OH 44319; Telephone: (800) 633-4622, (330) 644-3117; Fax: (330) 644-3557; E-mail: Ask@NACproducts.com; website: www.NACproducts.com.

2.02 MATERIALS

- A. Anti-Fracture Membrane: Heavy duty, self-adhering, pressure sensitive, elastomeric, crack bridging membrane.
 1. Thickness: 40 mil (\pm 5 mil) (0.04").
 2. Seams: Butt joint application.
 3. Roll Size and Weight: [1 foot x 50 feet at 17 lb (304.8 mm x 15 m at 7.7 kg)] [2 feet x 50 feet at 34 lb (610 mm x 15 m at 15.5 kg)] [3 feet x 50 feet at 50 lb (914 mm x 15 m at 23 kg)].
 4. Crack Bridging: 3/8 inch (9.5 mm).
 5. Acceptable Material: National Applied Construction Products, Inc., ECB Anti-Fracture Membrane.
- B. Waterproofing Membrane: Extra heavy duty, 2-component, elastomeric, self-bonding, self-healing, self-seaming applied membrane.
 1. Thickness: 40 mil (\pm 5 mil) (0.04").
 2. Seams: Double-stick lap joint, 2" (51 mm wide).
 3. Roll Size and Weight: 3 feet x 50 feet at 50 lb (914 mm x 15 m at 23 kg).
 4. Crack Bridging: 3/8 inch (9.5 mm).

5. Acceptable Material: National Applied Construction Products, Inc., Strataflex Membrane.
- C. Sound Abatement Membrane: Light commercial and residential, 2-component, self-adhering, sound abatement sheet material; composed of modified resins, sound deadening fibers and reinforced woven fibers.
 1. Thickness: 70 mil (\pm 5 mil) (0.07").
 2. Seams: Butt joint application.
 3. Roll Size and Weight: 3 feet x 50 feet at 70 lb (914 mm x 15 m at 32 kg).
 4. Crack Bridging: 3/8 inch (9.5 mm).
 5. Impact Insulation Class (IIC) and Sound Transmission Class (STC) Ratings: Minimum 50 in accordance with ASTM E90 and ASTM E492.
 6. Acceptable Material: National Applied Construction Products, Inc., SAM³ Sound Abatement Membrane.
- D. Enhanced Sound Abatement Membrane: Light commercial and residential, self-adhering, sound reduction, crack suppression, waterproofing membrane; composed of modified elastomers, sound deadening fibers and reinforced woven fibers.
 1. Thickness: 125 mil (\pm 5 mil) (3.2 mm).
 2. Seams: Butt joint application.
 3. Roll Size and Weight: 3 feet x 50 feet at 90 lb (914 mm x 15 m at 41 kg).
 4. Crack Bridging: 3/8 inch (9.5 mm).
 5. Impact Insulation Class (IIC) and Sound Transmission Class (STC) Ratings: Minimum 50 in accordance with ASTM E90 and ASTM E492.
 6. Acceptable Material: National Applied Construction Products, Inc., Super SAM 125 Sound Abatement Membrane.
- E. Primer: In accordance with manufacturer's recommendation for applicable substrate.
 1. Interior Use: Acceptable Material: National Applied Construction Products, Inc., NAC THC Primer.
 2. Exterior Use: Acceptable Material: National Applied Construction Products, Inc., NS97.
- F. Seam Tape: Double-stick elastomeric seam tape, 6 inches (152 mm) wide x 50 feet (15 m) long.
 1. Acceptable Material: National Applied Construction Products, Inc., NAC Seam Tape.

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Section 01 25 13 - Product Substitution Procedures.

2.03 PRODUCT SUBSTITUTIONS

- A. Substitutions: [In accordance with Section 01 25 13 - Product Substitution Procedures] [_____]] [No substitutions permitted.].

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise article below to suit project requirements and specifier's practice.

- A. Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions and National Applied Construction Products SPEC-DATA for Anti-Fracture Membrane Systems.

3.02 EXAMINATION

- A. Site Verification of Conditions:
 1. Verify surfaces are level, structurally sound and meet deflection requirements for applicable stone and tile. Verify maximum variation of 1/4 inch in 10 feet (6.4 mm in 3.1 m) from required plane.
 2. Level slab depressions using quality latex underlayment in accordance with manufacturer's instructions.
 3. Grind down bumps and raised surface abrasions.

4. Ensure surfaces are free of holes, projections, moisture, dirt, waxes, curing compounds or bond breakers.
5. Consult manufacturer's product literature for additional preparatory instructions.
6. Comply with manufacturer's recommendations for substrate preparation and with Tile Council of North America (TCNA) Handbook for Ceramic Tile Installation requirements.

3.03 INSTALLATION

Specifier Note: Select NAC TAC primer for interior use or NS97 for exterior use. For damp or wet area installations, apply a latex modified thinset meeting ANSI A118.4 to the substrate in lieu of NAC TAC or NS97.

A. Primer Application:

1. Mix primer thoroughly and apply to area where membrane will be installed within 4 hours.

Specifier Note: Choose following sentence if using NAC TAC primer.

2. Apply one thin, uniform coat to substrate in accordance with manufacturer's instructions. Ensure minimum substrate temperature of 65 degrees F (18 degrees C). Do not reapply over wet primer coat.

Specifier Note: Choose following sentence if using NS97 Exterior/Wet Area Primer.

3. Apply one thin, uniform coat to substrate in accordance with manufacturer's instructions. Ensure minimum substrate temperature of 55 degrees F (13 degrees C). Do not apply more than one coat of primer.

Specifier Note: Choose following sentence if using a latex modified thinset.

4. Apply mortar with 1/8 inch (3.2 mm) v-notch trowel.
5. Allow primer to dry until tacky but will not transfer to finger. This usually takes 10 - 45 minutes, depending on temperature, humidity, internal moisture level and porosity of substrate and application thickness. See primer label for additional information.

B. Membrane Installation:

1. Remove release sheet from underside of membrane and place onto substrate adhesive-side down. Apply seam tape to end and side seams and where recommended by and in accordance with manufacturer's instructions to form a complete sound and waterproof installation. Press membrane into place with flat side of trowel or 75 - 100 lb (34 - 45 kg) roller.

3.04 PROTECTION

- A. Protect membrane from rain and environmental damage until tile is installed and grouted.

3.05 CLEANUP

- A. Proceed in accordance with Section [01 74 11 - Cleaning] [_____].
- B. Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION