

CRACK ISOLATION WATERPROOFING SOUND ABATEMENT MOISTURE/VAPOR CONTROL

# Celebrating 25 Years of Fracture-Free Performance

THIN-BED MEMBRANE  
SYSTEMS FOR TILE,  
STONE AND  
WOOD SURFACES

- ✓ #1 CONTRACTOR/OWNER PREFERRED
- ✓ #1 ARCHITECTURALLY SPECIFIED
- ✓ #1 LAB & FIELD TESTED
- ✓ PROVEN TO PERFORM
- ✓ GUARANTEED TO LAST



NATIONAL APPLIED CONSTRUCTION PRODUCTS, INC.



## Leadership Through Innovation

**NAC REVOLUTIONIZED** the way decorative floors are installed with its invention of the first self-adhering Elastomeric Crack Bridging membrane ever available. Engineered to protect finished surfaces from cracking and delamination caused by lateral substrate movement, this innovative product was easy to install and finally provided the means to assure lasting beauty for finished floors.

Fracture-free since 1983 with millions of square feet installed, original ECB is now the #1 architecturally-specified and #1 contractor/owner preferred membrane in America. Since joined by ECB 75, Strataflex for Waterproofing and SAM<sup>3</sup>/Super SAM for Sound Abatement, NAC offers a full line of sheet-applied solutions backed by time-tested performance. These membranes are proven to reduce installation times, cut labor costs and expedite project completion and are supported by free tech support and the best warranties available in the industry.

As NAC moves into its next quarter century of service, the company is firmly committed to providing easy to use, cost-effective solutions to protect floors from the ground up. Ask for testimonials from well-known architects and contractors or ask for a copy of our Major Project List to learn more about our proud history of time-tested success!

## Durable Protection

The chemical composition of NAC's Membranes allows for continuous absorption of substrate movement. A wood subfloor shrinks or expands as it acclimates itself to the surrounding temperature and humidity. This is an ongoing process throughout the life of the structure. Crack isolation products of lesser quality cannot handle this 360° movement. The pliability of elastomeric membranes controls shrinkage and expansion of the subfloor. NAC Membranes are designed for both interior and exterior use, even at low temperatures.

Concrete substrates shrink as they cure. Control joints are sometimes placed at intervals to control the movement. ECB is used for joint relocation and to minimize

the number of joints carried through the tile pattern. Once concrete joints have opened or cracks have formed, the concrete continues to move laterally along these fissures and movement of up to 1/4" (6.4 mm) can be expected. ECB, Strataflex, SAM<sup>3</sup> and Super SAM will absorb up to

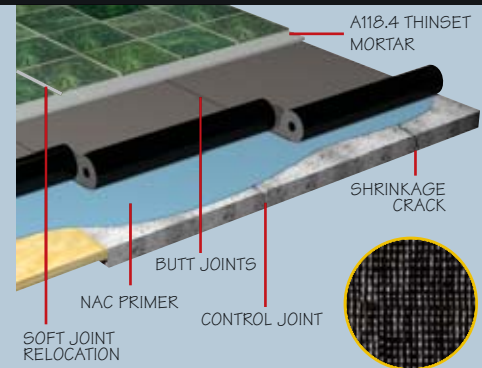
3/8" (9.6 mm) lateral movement, while ECB 75 will handle 1/4" (6.4 mm). Each will remain flexible in low temperatures and work for the life of finished floor.

### ECB - Anti-Fracture/Crack Isolation

ECB's elastomeric capability handles up to 3/8" (9.6 mm) lateral movement in the substrate and is approved for interior/exterior use. An effective moisture/vapor barrier, ECB can also be used for waterproofing with the appropriate companion products. 50' (15.24 mtr) rolls are available in the following widths:

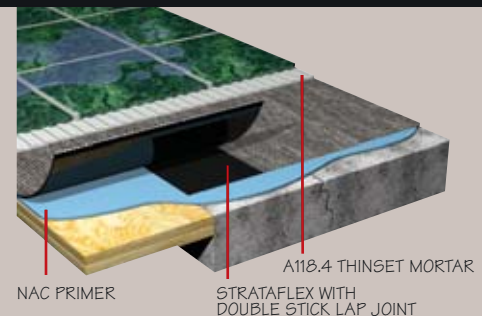
- 3' (915 mm) for full floor coverage and control joint relocation
- 2' (610 mm) for large tile installations and movement up to 3/16" (4.8 mm)
- 1' (305 mm) for hairline cracks with movement up to 1/8" (3.2 mm)

### ECB Full Floor Coverage



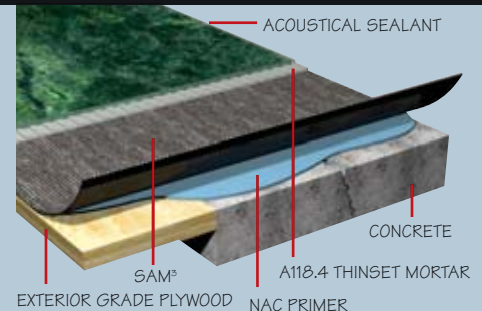
### Strataflex - Waterproofing/Crack Isolation

Strataflex provides watertight protection to assure long-term substrate integrity. A double-stick lap joint creates a watertight seal without the need for heat or toxic chemicals. Seam Tape and NAC approved sealant may be required for end seams, wall to floor corner treatment and perimeter edge seals. Strataflex bridges up to 3/8" (9.6 mm) lateral movement and is a moisture/vapor barrier. Strataflex can be used as shower pan membrane, interior and exterior, walls and floors. Strataflex is available in 3' x 50' (915 mm x 15.24 mtr) rolls.



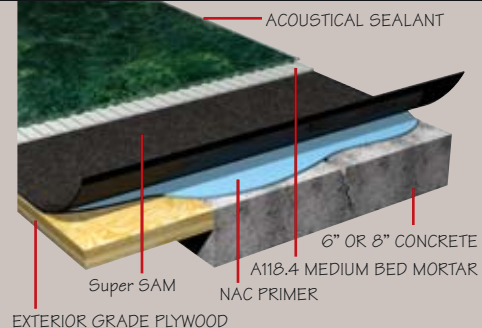
### SAM<sup>3</sup> - Sound Abatement/Crack Isolation: With Sound-Rated Ceiling Assembly (SRCA)

SAM<sup>3</sup> provides impact and audible sound reduction for an Impact Insulation Class (IIC) and Sound Transmission Class (STC) ratings of not less than 50, as determined by ASTM Standards, E90, E413 and E492. SAM<sup>3</sup> bridges up to 3/8" (9.6 mm) lateral movement. SAM<sup>3</sup> is also a moisture/vapor barrier to protect tile and can be used for waterproofing. Available in 3' x 50' (915 mm x 15.24 mtr) rolls.



### Super SAM - Sound Abatement/Crack Isolation: No SRCA Required

Super SAM provides impact and audible sound reduction for multi-level structures without an SRCA. This includes 6" (152.4 mm) or thicker concrete slab and loft type construction. Super SAM is designed for floors requiring an Impact Insulation Class (IIC) and Sound Transmission Class (STC) ratings of not less than 50, as determined by ASTM Standards, E90, E413 and E492. Super SAM bridges up to 3/8" (9.6 mm) lateral movement and is a moisture/vapor barrier which can be used for waterproofing with appropriate accessories. and is available in 3' x 50' (915 mm x 15.24 mtr) rolls.



## Applied Concepts

NAC Membranes are engineered to protect many surfaces including ceramic and porcelain tile, stone, hardwood, commercial-grade vinyl, pavers, and agglomerate marble applied over these subfloors:

**Concrete:** Concrete backer board, poured, prestressed or precast.

**Other:** Gypsum®, lightweight or radiant heated panels.

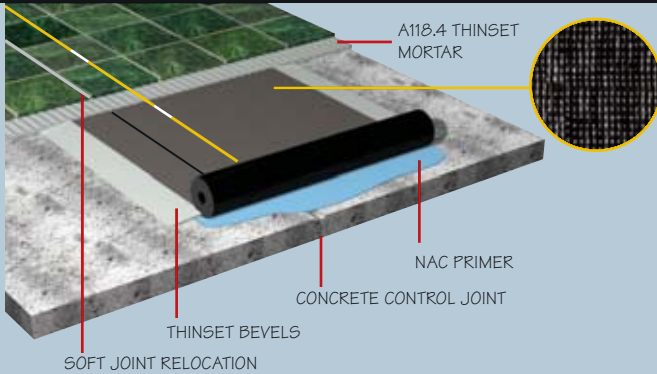
**Wood:** Exterior or exposure 1 plywood, APA-rated sheathing or Sturd-I-Floor and OSB with standard face.

**Existing Floors:** Stone, ceramic and porcelain tile, terrazzo, hardwood, VCT/VAT, vinyl, painted and sealed floors damaged

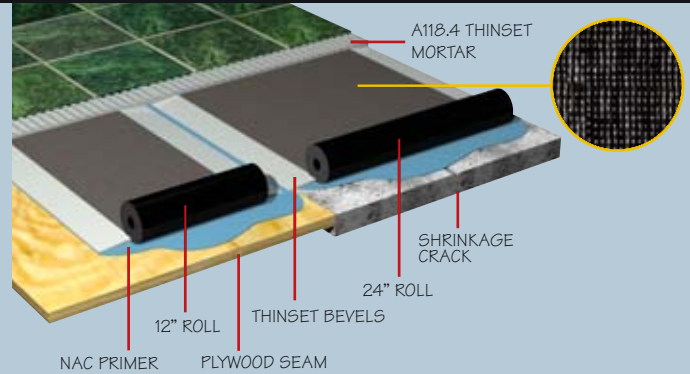
by dry shrinkage and structural movement. Subfloors must meet current TCNA Guidelines for tile installation.

NAC Membranes may sometimes be used as a substitute for mud beds, backer units or plywood if they meet TCNA guidelines. NAC Membrane Systems are generally thinner, lighter and more cost-effective.

### ECB Joint Relocation



### ECB Strip Application - Structural & Non-Structural



### 6" Seam Tape

6" (152.4 mm) wide self-adhering tape used to seal out water and vapors from corners and end seams.

### 101 Floor Prep

Reduces absorption of porous floors and strengthens new or old concrete, light weight concrete and gypsum® underlayments. Two to three applications can be used as a vapor retardant.

### NAC-Approved Sealant

A gun grade urethane sealant for expansion, soft joints, inside and outside corners and to seal the membrane's perimeter edges.

### NAC TAC Interior Primer

Designed for all substrates. Required for maximum shear/bond strength to meet A118.10-1993. Adjustable water-based primer with low VOC's.

### NS97 Exterior Primer

A non-flammable solvent based primer designed for exterior applications. Required for maximum shear/bond strength to meet A118.10-1993. Use with adequate ventilation.

### SubSeal™ Liquid Waterproofing Membrane

Can be used as a stand alone waterproofing membrane or as a sealant for sheet-applied waterproofing installations. Available in two formulas.

## Performance

The shear/bond strength for NAC Membrane Systems exceed the industry standard for thin-bed membrane systems of 50 psi. 3' (915 mm) wide membranes are capable of 3/8" (9.6 mm) lateral expansion and contraction have been tested for shear/bond strength of 70 to 110 psi, tensile force of 86-116 psi.

**ECB, ECB 75 and Strataflex** Membrane Systems are rated high performance for ANSI A118.10 and A118.12.

ASTM C-627 Test Method: 12" x 12" (305 mm x 305 mm) natural marble tiles were set over ECB Membrane with rapid-set mortar. All fourteen (14) cycles were completed without failure of tile or grout joints under a seven (7) day cure.

## Limitations

Not recommended for use on concrete floors to accommodate vertical shear, applications where live and dead loads exceed L/360, or horizontal floor movement is greater than 3/8" (9.6 mm). Not recommended for hard surface flooring subject to warpage or cupping. Contact NAC for special instructions for applications in which Moisture Vapor Transmission may exceed 10#/1000SF/24 Hours.

Joint openings larger than 3/16" (4.8 mm) must be pre-treated with the proper materials. See specifications for more information. Do not use petroleum-based cleaners or sealers for tile, marble, stone or grout. Width of membrane must exceed width of tile in strip applications.

Impervious tile (less than 0.5% absorption) requires additional cure time

prior to grouting or the use of a rapid set mortar. The wicking action of the Membrane's stress fabric will aid in mortar cure. Specify 118.4 or better latex-modified thinset. Epoxy mortars and approved tile adhesives are also acceptable setting materials. Call for a complete list. Protect finished floor from heavy construction or maintenance equipment during and after construction to prevent tile damage. Pneumatic or wide rubber tires are recommended for hard surface installations.



### Customer Support

Experienced technical representatives and a far reaching distributor network enable NAC to provide solutions for the most demanding tile installations. Call for technical assistance.

## Short Form Specifications

### Anti-Fracture/Crack Isolation Membrane Waterproofing/Crack Isolation Membrane

**1. Material:** Provide **ECB Anti-Fracture** or **Strataflex Waterproofing** elastomeric membrane as manufactured by NAC Products, Inc., 3200 South Main Street, Akron, OH 44319, (800) 633-4622 or architect-approved equal.

- I. 40 mil (1.0 mm) thick load bearing membrane, capable of 3/8" (9.6 mm) crack suppression
- II. Waterproofing, self bonding, pressure sensitive sheet.
- III. Compatible with most latex modified thinset mortars, epoxies and adhesives.

Provide NAC TAC Primer for interiors or NS97 Primer for exteriors. Install ECB full floor coverage in a 3' (915 mm) wide strip application over control/saw cut joints as recommended by manufacturer and in 1' (305 mm) or 2' (610 mm) wide strip applications over cracks. Install Strataflex full floor coverage with 2" (50.8 mm) double-stick lap joint and seam tape application.

**2. Equipment:** Damp mop, industrial vacuum, chalk line, 75-100# (50 kg) roller or flat trowel, paint roller applicator or brush, hook or razor knife.

**3. Warranty:** NAC Products, Inc. "Lifetime Fracture Free" Warranty in writing for full floor coverage projects or Limited Lifetime Warranty for strip applications.

### Sound Abatement/Crack Isolation Membrane For Use with a Sound Rated Ceiling Assembly

**1. Material:** Provide **SAM<sup>3</sup>** membrane as manufactured by NAC Products, Inc., 3200 South Main Street, Akron, OH 44319, (800) 633-4622 or architect-approved equal.

- I. 70 mil (1.8 mm) thick load bearing membrane, capable of 3/8" (9.6 mm) crack suppression
- II. Sound Abatement with an SRCA, waterproofing, self-bonding, pressure sensitive sheet.
- III. Compatible with most latex modified thinset mortars, epoxies and adhesives.

Provide NAC TAC Primer for interiors

or NS97 Primer for exteriors. Full floor butt joint coverage in 3' (915 mm) width. Provide acoustic sealant at tile perimeter.

### Sound Abatement/Crack Isolation Membrane No Sound Rated Ceiling Assembly Required

**1. Material:** Provide **Super SAM** membrane as manufactured by NAC Products, Inc., 3200 South Main Street, Akron, OH 44319, (800) 633-4622 or architect-approved equal.

- I. 110 mil (2.8mm) thick load bearing membrane, capable of 3/8" (9.6 mm) crack suppression
- II. Sound Abatement without an SRCA, waterproofing, self bonding, pressure sensitive sheet.
- III. Compatible with most latex modified medium bed mortars, epoxies and adhesives.

Provide NAC TAC Primer for interiors or NS97 Primer for exteriors. Full floor butt joint coverage in 3' (915 mm) width. Provide acoustic sealant at tile perimeter.

**Note:** Refer to appropriate membrane specification for equipment and warranty.

## Warranties

### LIFETIME LIMITED WARRANTY:

NAC Products, Inc., will replace any of our material proven defective for life. Satisfactory results depend not only on quality products, but also upon factors beyond our control. Therefore, liability, if any, is limited to replacement of our products. Any claim regarding product defect must be received in writing. No claim will be considered without such a written notice.

### LIFETIME FRACTURE-FREE FLOOR WARRANTY:

In addition to the limited warranty, each job where a membrane from NAC Products, Inc. is installed over the entire floor where the tile is intended is considered for validation of warranty at the time of purchase. If

the tile should fail while still under warranty, we will replace or repair the floor at reasonable cost under the terms and conditions of the warranty. Please call for details.

ALL OTHER WARRANTIES WHETHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS OF PURPOSE ARE EXPRESSLY DISCLAIMED. THE SUITABILITY OF THE PRODUCT FOR AN INTENDED USE SHALL BE SOLELY UP TO THE USER.

### CUSTOM SPECIFICATIONS

NAC will provide custom specifications on request.

**NAC PRODUCTS, INC.**  
**NATIONAL APPLIED CONSTRUCTION PRODUCTS, INC.**  
 800.633.4NAC (4622) • www.NACproducts.com  
 3200 South Main St., Akron, Ohio 44319  
 Tel: 330-644-3117 • Fax: 330-644-3557



### ECB, STRATAFLEX and SAM Systems:

SBS Modified bitumen, self-adhering formula, reinforced with stress flex fiber sheet or containing sound reduction materials.

#### Thickness:

ECB & Strataflex: 40 mil, ± 5 mil (1 mm, ± .027 mm)  
 SAM<sup>3</sup>: 70 mil, ± 5 mil (1.8 mm, ± .027 mm)  
 Super SAM: 110 mil ± 5 mil (2.8 mm, ± .027 mm)

#### Seams:

ECB & SAM<sup>3</sup>: Butt joint application  
 Super SAM: Butt joint application  
 Strataflex: Double stick lap joint

#### Roll Sizes & Weights:

ECB: 1' (305 mm) x 50' (15.24 mtr) @ 16 lb (7.26 kg)  
 2' (610 mm) x 50' (15.24 mtr) @ 32 lb (14.52 kg)  
 3' (915 mm) x 50' (15.24 mtr) @ 50 lb (22.68 kg)

Strataflex: 3' (915 mm) x 50' (15.24 mtr) @ 50 lb (22.68 kg)  
 SAM<sup>3</sup>: 3' (915 mm) x 50' (15.24 mtr) @ 70 lb (31.75 kg)  
 Super SAM: 3' (915 mm) x 50' (15.24 mtr) @ 90 lb (40.82 kg)

Shelf Life: 1 year  
 Freeze Thaw: Stable

### Property

Property	Test Value	Test Method
FHA 4900.1	Pass, 3' Head (914 mm)	ASTM D-583
Crack Resistance	3/8" (9.6 mm)	NAC Model
System Crack Resistance	Rated High Performance	ANSI A118.12 (5.4)
ANSI Specifications for Crack Isolation Membranes for Thin-Set Ceramic Tile & Dimensional Stone Installation	Meets & Exceeds ANSI Specifications	ANSI A118.12
ANSI Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile & Dimensional Stone Installations	Meets & Exceeds ANSI Specifications	ANSI A118.10
ASTM Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the the Robinson-Type Floor Tester	<b>ECB &amp; Strataflex:</b> Extra Heavy Duty <b>SAM Systems:</b> Light Commercial/Residential	ASTM C-627
Strataflex External Waterproofing Membrane	Appraisal Certificate No. 518 (2006)	BRANZ
Strataflex Wet Area Waterproofing Membrane	Appraisal Certificate No. 519 (2006)	BRANZ

### SAM<sup>3</sup> and Super SAM:

Specific test results related to building construction methods available.  
 SAM<sup>3</sup> meets and exceeds IIC rating and STC rating not less than 50 as determined by ASTM Standards E90, E413 and E492 with a Sound Rated Ceiling Assembly.  
 Super SAM meets and exceeds IIC rating and STC rating not less than 50 as determined by ASTM Standards E90, E413 and E492 with or without a Sound Rated Ceiling Assembly.

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