ECB® Green Anti-Fracture Membrane

Installation Instructions

National Applied Construction Products, Inc. • 800-633-4622 • Fax: 330-644-3557 • www.NACproducts.com

Important: Proper installation of this system requires use of the appropriate primers and companion products. Read and understand Product Data (PDS) and Material Safety Data Sheets (MSDS) for all products prior to installation.

Suitable Substrates

Concrete: Poured, pre-stressed and pre-cast concrete. Concrete backerboard, mud beds, gypsum, lightweight concrete and patching compounds.

- Some concrete boards are not suitable for the application of **ECB® Green,** check with manufacturer.

Wood: Exterior or exposure 1 plywood, APA-rated sheathing, Sturd-I-Floor, hardwood, tongue and groove and OSB with standard face. (Gap between sheeting as required.)

Other Substrates: Ceramic and porcelain tile, stone, terrazzo, VCT/VAT, metal, radiant-heated, painted and sealed floors and floors damaged by dry shrinkage and structural movement.

Surface Preparation

- Surfaces must be level, structurally sound and meet 1/360 for ceramic and porcelain tile or 1/720 for stone tile on live or dead loads. Maximum variation of 1/4" in 10' from the required plane. (**Refer to TCNA Handbook)**
- ***DO NOT*** install membrane under mortar beds or leveling and patching compounds.
- ***DO*** install membrane over cured mortar beds, leveling and patching compounds.
- Surfaces must be clean, dry and free of holes, projections, moisture or bond breakers such as waxes, petroleum based sealers, dirt, grease or oil.
- Grind bumps and level slab depressions with a quality latex underlayment in accordance with manufacturer's instructions. Scarify smooth surfaces.
- Ensure joist spacing consists of no more than 16" on center and a double sub-floor consists of at least 5/8" per sheet.
- Perform Black Mat MVT (Moisture Vapor Transmission) test to determine if moisture is present.
  - If no MVT is present, proceed to the next step of the installation process.
  - If MVT is present, conduct a Relative Humidity Test or F-1869-98 test for emissions. If MVT is in excess of 3#/1000SF/24HRS or has an R.H. greater than 85%, call NAC for instructions.
  - For absorptive substrates, up to three coats of Moisture Lock 101® may be applied according to manufacturer's instructions.

(see Moisture Lock 101® PDS for complete information)

- A cementitious parge coat must be applied to concrete and allowed to cure for 24 hours prior to applying primer.
- A successful overnight bond test is required. A bond test determines if the membrane system will successfully adhere to the substrate.
- Not recommended for vertical or overhead surfaces.
- Refer to current TCNA handbook for additional guidelines.

Installation

1. Measure and pre-cut membrane to 4"-6" longer than required size. Re-roll membrane to half the room's depth.
2. Apply Primer. ***(Use primer reference chart below to determine appropriate primer for application.)***

	INTERIOR APPLICATION			EXTERIOR APPLICATION		
	Below Grade	On Grade	Above Grade	Below Grade	On Grade	Above Grade
NAC TAC	✓	✓	✓	✓	✓	✓
NAC TAC II		✓	✓			
NS97				✓	✓	✓

Reference the PRIMER PDS SHEET for complete information of NAC Products, Inc. primers.

- **NAC TAC or NAC TAC II** should be applied with a short nap roller, flat trowel, brush applicator or sprayer. Substrate temperature should be a minium of 65°F.
  a. Shake, mix or stir primer thoroughly.
  b. Prime only an area that will covered by membrane within 1-4 hours. Apply a thin film of uniform thickness to substrate in single strokes. **Do not re-roll primer.**
  c. Allow primer to dry until tacky to touch, but non-transferable to finger. This may take as little as 10 minutes, but usually no more than 45 minutes, depending upon temperature, humidity, internal moisture level/porosity of substrate and application thickness. Air pockets may form if membrane is installed over wet primer.

(See NAC TAC or NAC TAC II label for additional information.)

- **NS97** is for ***Exterior Use ONLY*** and should be applied with a short nap roller, brush, or sprayer. Substrate temperature should be a minimum of 55°F.
  a. Mix or stir primer thoroughly.
  b. Prime only an area that will covered by membrane within 1-4 hours. Apply a thin film of uniform thickness to substrate in single strokes. Do not re-roll primer.
  c. Air pockets may form if membrane is installed over wet primer. Allow primer to dry until tacky to touch, but non-transferable to finger. This may take as little as 10 minutes, but usually no more than 45 minutes, depending upon temperature, humidity, internal moisture level/porosity of substrate and application thickness.

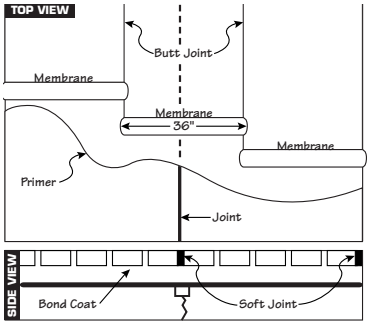
(See NS97 label for additional information.)

3. Slit release paper and allow membrane to roll out, adhesive-side down, across primed floor.
4. Press Membrane into place with flat side of trowel applying 50 lbs. of pressure/sq. inch or a 75-100# Roller.

© NAC Products, Inc. • All Rights Reserved

Products and specifications subject to change without notice. Refer to current TCNA Handbook for additional guidelines.

Full Floor Coverage Application



Butt joint 36" **ECB® Green** membrane or overlap and single cut through to remove excess. For end seams, continue with next roll and butt joint ends. Membrane is non-directional.

Placement of control joints may be ignored. Isolation joints, such as around weight bearing columns, and expansion joints placed for vertical movement need to be carried through to tile installation. Soft joints in tile patterns are required as per TCNA Handbook.

Exterior and Wet Area Applications

All joints and termination points of the Membrane must be sealed with 1/4" bead of NAC Approved Sealant. Smooth out sealant with flat side of trowel and let cure.

Interior Floors Using Radiant Heating

Install **ECB® Green**, full floor coverage, *OVER* in-floor, hydronic heating systems placed in poured gypsum/gypcrete or other lightweight products. Perform bond test to ensure primer and membrane will bond to new surface. If bond test fails, apply Moisture Lock 101® to seal pores and harden the surface then apply NAC Primer and install **ECB® Green** as directed.

Tile Warming Systems

Use **ECB® Green** membrane, full floor coverage, over substrates where low-voltage tile warming systems are to be installed. Follow **ECB® Green** PDS and Install guidelines.

Secure tile warming system to membrane as directed by warming system manufacturer. **DO NOT** puncture or staple the floor warming system to the membrane. Use appropriate tile setting materials as noted below.

Tile Setting Materials

A thin-bed, latex-modified mortar meeting a minimum material specification of ANSI A118.4 is required when installing porcelain, ceramic or decorative stone tile or related products.

Apply membrane over level coats of cured mortar and mud beds. Key setting material into membrane with flat side of trowel. Re-apply mortar with notch side of trowel using minimum trowel size of 1/4" x 3/8".

Contact product manufacturer for trowel size when using organic adhesives and epoxy mortars suitable for ceramic tile applications.

Wood & VCT Installations

When installing wood or VCT over membrane, a solvent free or urethane glue/adhesive must be used. Follow general membrane installation instructions.

Cautions

- Not recommended for use on concrete floors with excessive hydrostatic head pressure or excessive moisture vapor transmission. Use NAC TAC or NS97 for MVT protection up to 10#/1000SF/24HRS or NAC TAC II for protection up to 7#/1000SF/24HRS.
- Protect floors from traffic until new floor is fully cured. Large format tile installations may require extended cure times.
- Membrane and companion products must be protected from the elements and UV rays until tile is installed, grouted and cured.
- **DO NOT** install membrane under mortar beds or leveling and patching compounds.
- **DO** install membrane over cured mortar beds, leveling and patching compounds.
- Do not use petroleum-based cleaners or sealers for tile, marble, stone or grout.
- Impervious tile (less than 0.5% absorption) requires a 48 hour cure time prior to grouting.
- Protect floors from heavy construction equipment during installation to prevent damage.
- Not recommended for vertical applications. Use SubSeal Liquid Waterproof Membrane in place of sheet membrane.
- Movement joints must be installed in finished tile system per TCNA method EJ171:
  Interior: 20' to 25' in each direction. If exposed to direct sunlight or moisture then 8' to 12' in each direction.
  Exterior: 8' to 12' in each direction.

Application Notes for NAC TAC/NAC TAC II Primer

Coverage: 375-425 square feet per gallon depending upon applicator type and porosity of substrate.

Clean-Up: Remove wet NAC TAC/NAC TAC II with a damp cloth and plain water. Use mineral spirits for dried primer.

- NAC TAC and NAC TAC II are not freeze/thaw stable. Do not store below 35°F. If primer separates, shake to remix. If product will not remix, do not use.
- Due to increased adjustability of primer bond to membrane, a bond test, if needed, should be delayed 24 hours. A permanent bond is established in 48 hours.

Application Notes for NS 97 Primer

Coverage: 300-400 square feet per gallon depending upon applicator type and porosity of substrate.

Clean-Up: Tools, equipment and spillage may be cleaned up with Mineral Spirits.

Spill or Leak Procedures: Contain spill if possible. Wipe up or absorb with suitable material and shovel up. Prevent entry into sewers and waterways.

- Do not use in direct contact copper shower pan liners. Application equipment must be compatible with chlorinated solvents. Avoid contact with aluminum, copper, copper alloys or polystyrene foam. May damage painted surfaces, vinyl and plastics. Test a small area for damage before use.
- Make sure the area is well-ventilated. Prevent vapor buildup by providing fresh air to maintain levels below exposure limits. Open windows and doors or use other means to ensure continuous movement of fresh air and cross ventilation during application and drying. Vapor is heavier than air and will collect in low areas. Do not use in basements or other poorly ventilated areas. Wear a NIOSH approved self-contained breathing apparatus or other approved respiratory protection device if use conditions generate vapors at a level in excess of recommended exposure limits.
- Avoid skin contact. Wear gloves. Wear eye protection and side shields. Contact with flame or hot surfaces may produce toxic gases. Do not smoke.

See NAC TAC, NAC TAC II and NS97 primer labels and MSDS for additional instructions on use, storage and disposal. Visit www.NACproducts.com or contact NAC Products at 800-633-4622 with any questions and for additional information.

Products and specifications subject to change without notice. Refer to current TCNA Handbook for additional guidelines.