

# NA 1660



**North American**  
**ADHESIVES®**

## Waterproofing for Floors/Walls Behind Tile



GOOD

BETTER

BEST

### PRODUCT DESCRIPTION

Acts as a membrane barrier to prevent water that sometimes penetrates through tile or grout from migrating into adjacent walls, floors or rooms. *NA 1660* waterproofing is premixed, ready-to-use and flexible. Once installed, it will prevent certain floor cracks from traveling into and damaging expensive tile or grout installations. *NA 1660* can be applied by trowel, roller, or brush. *NA 1660* is IAPMO-listed for use as a waterproofing shower pan liner, when used with *NA 1680* waterproofing mesh.

### USES

- For residential, commercial, indoor and outdoor walls/floors
- For crack isolation over existing in plane cracks up to 1/8" (3 mm) with in-plane movement up to 1/8" (3 mm)

### SUBSTRATE REQUIREMENTS

All supporting surfaces must be structurally sound. The surface area that will receive *NA 1660* must be dry, clean and free of dust, oil, grease, tar, asphalt, paint, wax, curing agents, primers, silicates, sealers, release agents, existing adhesives and any other substance that can weaken the *NA 1660*'s bond to the substrate. If the surface contains these substances, they must be mechanically removed (without use of chemicals).

#### Concrete substrates

1. Mechanically prepare cracks to be treated with a diamond crack-chasing/concrete-cutting blade. Use a dustless collection system to completely remove the dust and contaminants.
2. Mechanically clean and prepare the concrete substrate by diamond-cup grinding or other engineer-approved methods to obtain an ICRI (International Concrete Repair Institute) CSP (Concrete Surface Profile) #2, removing all bond-inhibiting materials.
3. Concrete substrate and ambient room temperatures must be between 50°F and 95°F (10°C and 35°C). Temperatures must be maintained within this range for at least 24 hours prior to installation.

### SUITABLE SUBSTRATES (properly prepared)

- Fully cured concrete (at least 28 days old)
- Masonry block and brick
- Cement mortars and leveling coats
- Cement terrazzo
- Gypsum wallboard (primed)
- Radiant-heated cement-based substrates
- Cement backer units (see manufacturer for recommendations)
- Ceramic tiles, glass and glass mosaics (indoor, dry conditions for crack isolation)
- Exterior-grade plywood for indoor residential floors and countertops in dry areas only. Plywood must be Group 1, CC-type, conforming to APA classification and U.S. Product Standard PS 1-95 or COFI exterior plywood "Select" or "Select Tight Face" conforming to CSA-0121 standard for Douglas fir. (See TCNA Handbook for additional information and following statement regarding deflection).

### TECHNICAL QUICK REFERENCE

Meets ANSI A118.10 standards for use as a shower-pan liner. *NA 1660* is IAPMO-listed.

**Product characteristics** at 73°F (23°C) and 50% relative humidity

Drying time between coats	4 to 6 hours
Curing time before tile, stone, mortar beds	16 to 24 hours
Curing time before flood testing	72 hours
Curing time before water immersion and freeze/thaw exposure	7 days minimum or as indicated for the tile-setting mortar
Working temperature	
Minimum	50°F (10°C)
Maximum	95°F (35°C)
Percent elongation (ASTM D412)	153%
Viscosity (about)	250,000 cps
Open time before covering with other materials (concern is surface contamination)	
Minimum	3 to 4 hours
Maximum	14 days
Direct tensile bond strength – ASTM D4541 (as recommended by ACI, the American Concrete Institute)	> 175 psi (1,21 MPa)
Shelf life	2 years when stored in original, unopened containers. Store in cool, dry place. Protect from freezing.
Packaging	Bucket: 1 U.S. gal. (3,79 L) Pail: 5 U.S. gals. (18,9 L)

### APPROXIMATE COVERAGES

(depending on concrete profile and porosity)

#### 1 coat at 40 mils (1 mm)

40 sq. ft. per 1 U.S. gal. (0,98 m<sup>2</sup> per L)  
200 sq. ft. per 5 U.S. gals. (4,9 m<sup>2</sup> per L)

#### 2nd coat at 10 mils (0,25 mm)

160 sq. ft. per 1 U.S. gal. (3,92 m<sup>2</sup> per L)  
800 sq. ft. per 5 U.S. gals. (19,6 m<sup>2</sup> per L)

### HEALTH AND SAFETY

Consult the Material Safety Data Sheet (MSDS) for safe-handling instructions.

Consult the Technical Services Department for installation recommendations regarding substrates and conditions not listed.

### Tile Council of North America (TCNA)

#### Statement on Deflection Criteria

Floor systems, including the framing system and subfloor panels, over which tile will be installed should be in conformance with the IRC [International Residential Code] for residential applications, the IBC [International Building Code] for commercial applications, or applicable building codes.

Note: The owner should communicate in writing to the project design professional and general contractor the "intended use" of the tile installation, in order to enable the project design professional and general contractor to make necessary allowances for the expected live load, concentrated loads, impact loads, and dead loads including the weight of the tile and setting bed. The tile installer shall not be responsible for any floor framing or subfloor installation not compliant with applicable building codes, unless the tile installer or tile contractor designs and installs the floor framing or subfloor.

# NA 1660

## LIMITATIONS

- Do not use where excessive substrate moisture and /or where negative hydrostatic pressure exists. The maximum amount of acceptable moisture in a concrete substrate for NA 1660 is 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m<sup>2</sup>) per 24 hours as determined by a calcium chloride test kit. When moisture vapor emissions are in excess of 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m<sup>2</sup>) per 24 hours, call Technical Services for recommendations.
- Do not apply over wood planking, presswood, particleboard, chipboard, oriented strand board (OSB), pressure-treated or oil-treated plywood, Masonite, Lauan, gypsum floor-patching, gypsum leveling compounds, laminate surfaces, fiberglass surfaces, poured epoxy floors, vinyl composition tile (VCT), vinyl asbestos tile (VAT), cut back adhesive residue, non-cushioned sheet vinyl, metal or similar dimensionally unstable substrates.
- Do not use NA 1660 under VCT or sheet vinyl installations.

## MIXING

No mixing is required. NA 1660 is ready-to-use.

## APPLICATION

- Make sure concrete substrate and ambient room temperatures are between 50°F and 95°F (10°C and 35°C) before application.

### Step 1: Pre-Treatment of In-Plane Cracks and/or Wall/Floor and Corner Transitions (Before Waterproofing)

#### **Pre-treat floor or wall cracks:**

- 1A. Using 1/8" (3 mm) V-notched trowel, or short-nap 3/8" (10 mm) roller or brush, apply NA 1660 about 3/64" (1 mm) thick, and about 9" (23 cm) in width centered over any cracks.
- 1B. Embed a strip of 6" (15 cm) wide NA 1680 waterproofing mesh into the wet NA 1660 liquid and top-coat with more liquid to create a uniform, void-free surface. Lap all mesh ends by 2" (5 cm).

#### **Pre-treat inside/outside floor or wall corners:**

- 1C. Apply 6" (15 cm) wide band of NA 1660 liquid to each side of any horizontal or vertical corners to be waterproofed.
- 1D. Immediately embed 6" (15 cm) wide strip of NA 1680 waterproofing mesh to the wet NA 1660 liquid (3" [7,5 cm] on either side of inside or outside corners).
- 1E. Top-coat with more liquid to create a uniform, void-free surface. Lap all mesh ends by 2" (5 cm).

### Step 2: For Waterproofing to Meet ANSI A118.10 and IAPMO Listed Required Installations

- 2A. Ensure Step #1 is complete and thoroughly dry (about 4 to 6 hours).
- 2B. With a trowel, roller or brush, apply NA 1660 to floor or wall area.
- 2C. Embed NA 1680 waterproofing mesh into the wet NA 1660 liquid.
- 2D. Immediately apply a top coat of NA 1660 to create a uniform, void-free surface. Lap all mesh ends by 2" (5 cm).

### Step 3: For Waterproofing and 1/8" (3 mm) In-Plane Crack Isolation and 1/8" (3 mm) Additional Crack Movement

- 3A. Ensure Steps #1 and #2 are complete to a thickness of 40 mils (1mm)
- 3B. Wait 4 to 6 hours.
- 3C. Apply second coat of liquid only to a thickness of 10 mils (0,25mm)

### Step 4: For General Waterproofing Under Floor Tile or Behind Wall Tile

- 4A. Ensure Step #1 is complete and thoroughly dry (about 4 to 6 hours).
- 4B. Follow Step #2B, but NA 1680 waterproofing mesh is only required for coves/corners.

### Step 5: Installing Ceramic Tile or Stone

- Wait 16 to 24 hours after last coat of NA 1660 before installing tile, stone or mortar beds.
- NA 1660 has excellent compatibility with NAA latex-fortified mortars or polymer-modified mortars. Call Technical Services for recommendations.

## CLEANING

- Fresh/wet material can be cleaned with mild, soapy, warm water.
- Cured material must be mechanically removed.

## EXPANSION AND CONTROL JOINTS

- Provide for expansion and control joints where specified. Refer to the most current TCNA handbook for ceramic tile installation, Detail EJ-171.
- Do not cover any substrate expansion joint or control joints with mortar or tiles.
- When necessary, cut tiles along both edges of the expansion joints. Do not allow tile and mortar to overlap the joints.
- Protect tilework with metal strips (edge metal) along both edges of structural building expansion joints.
- Install the specified compressible bead and sealant into all expansion and control joints.

## IMPORTANT NOTICE

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

For the most current product data, visit [www.na-adhesives.com](http://www.na-adhesives.com).



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PR 5365 1660D\_A08vp  
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