



North American
ADHESIVES®

NA 840 Floor Repair Mix

Rapid-Setting Floor and Shower Base Mix



PRODUCT DESCRIPTION

NA 840 Floor Repair Mix is a fast-setting, premixed cement-based mortar for concrete repairs and subfloor preparation work; it repairs concrete from 1/4" to 4" (6 mm to 10 cm) thick. It is great for fast conversions of multiple tubs to showers in hotel remodel projects or when building new showers in multifamily new construction. Mixed exclusively with water, NA 840 provides an easy-to-use, high-compressive-strength mortar that sets completely within 24 hours without shrinkage cracks.

FEATURES AND BENEFITS

- Repairs concrete from 1/4" to 4" (6 mm to 10 cm) thick
- Allows tile setting after 3 to 4 hours
- Allows floor covering and liquid-applied waterproofing membranes after 16 to 18 hours

USES

- For fast-track concrete repairs and interior/exterior concrete subfloor preparation
- For building slopes and access ramps from at least 1/4" to 4" (6 mm to 10 cm) thick
- For building shower bases and curbs up to 4" (10 cm) thick
- For filling trenches, holes and cuts in existing concrete up to 4" (10 cm) deep
- For new and old concrete subfloor repairs and leveling from 1/4" to 4" (6 mm to 10 cm) thick

SUBSTRATE REQUIREMENTS

Substrates must be structurally sound, solid, clean and free of dust, oil, grease, paint, tar, wax, curing agents, primers, sealers, laitance, loose particles, debris and any other substance that may reduce or prevent adhesion. Existing concrete must be completely cured, and the contact surface must have a sufficiently textured profile of a minimum +/-1/8" (3 mm) to provide a good mechanical bond. Reference International Concrete Repair Institute (ICRI) concrete repair profiles (CSP) #7 to #9 for an acceptable profile.

Mechanically remove all loose particles, old patching compounds, weak toppings, paint, primers and curing-agent residues. Roughen smooth, dense concrete surfaces by using sandblasting, waterblasting or shotblasting; scarifying; or rough grinding as required. Over well-supported, structurally solid wood, plywood, oriented strand board (OSB), steel and dimensionally unstable substrates, install polyethylene sheeting (greater than 30 mils thick) or an appropriate cleavage membrane over the entire substrate; next, apply a NA 840 wire-mesh-reinforced floating screed at least 1-3/8" (3,5 cm) thick. This type of work is restricted to interior installations only.

See the document titled "Surface Preparation Requirements – Tile & Stone" that is located in the "Customer Tools" section of the North American Adhesives (NAA) Website at www.na-adhesives.com.

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.

Contact Technical Services for installation recommendations regarding substrates and conditions not listed.

SUITABLE SUBSTRATES

- Clean, rough-textured and completely cured concrete with a profile of at least 1/8" (3 mm)

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LIMITATIONS

- Not recommended for:
 - Vertical surfaces.
 - Areas where hydrostatic or moisture problems exist.
 - Use as a wear surface.
 - Environments subject to freeze/thaw conditions.
- Exterior areas must be waterproofed with an appropriate NAA waterproofing membrane.
- Do not exceed 2" (5 cm) in thickness when leveling or repairing concrete subfloor areas larger than 16 sq. ft. (1,49 m²).
- Use only when the substrate temperature is between 50°F and 100°F (10°C and 38°C).

MIXING

Consult the Safety Data Sheet for safe-handling instructions. Always use clean mixing containers and tools. Use a low-speed mortar mixer or hand mixer (at no more than 375 rpm).

Slurry bond coat

1. Mix equal parts (by volume) of *NA 840* with water while slowly and continuously mixing. (A slurry bond coat can also be made from *NA 3240 Multi Flex™ Rapid* mixed with water.)

Mortar mix

1. Into a clean container, pour 80 to 85 U.S. oz. (2,37 to 2,51 L) of clean, potable water. Gradually add 50 lbs. (22,7 kg) of *NA 840* while slowly and continuously mixing. Do not add any Portland cement or other ingredients. Note: Give special attention to gauging the exact amount of water required in the mix so that *NA 840* mortar is properly packed in place, screeded or troweled without surface laitance. Excess water will retard drying and curing. Do not mix *NA 840* with less than the recommended water quantity, as this may cause only partial hydration and weak mechanical strength.
2. Mix for 1 to 2 minutes until a homogenous initial mix is achieved. Hand-scrape the container's sides and bottom as well as the mixer paddles to blend in unmixed powdery material. Resume mixing and mix thoroughly until all of the material is mixed to a homogenous, plastic, paste-like consistency.

APPLICATION

1. Apply, pack, screed and level each mortar batch in the shortest possible time and, in all cases, within 20 minutes at 73°F (23°C). Do not allow

mortar to remain in the container or mixer for longer than 20 to 30 minutes. Higher temperatures will shorten the pot life; therefore, adjust the batch size and working pattern accordingly.

2. Discard unused, partially set or dry mortar. Do not add water for remixing or apply any mortar that has already started setting.
3. Pre-wet the existing concrete surface with water, to provide a saturated surface-dry (SSD) contact surface. Remove all excess water from the surface.
4. Apply the *NA 840* slurry bond coat mixture with a stiff brush or broom immediately before applying *NA 840* mortar. Apply the slurry bond coat as you go (in a limited area), so that the slurry bond coat is still fresh when the *NA 840* mortar is applied. Agitate (stir) the slurry bond coat frequently to keep the mix homogenous. Do not allow the slurry bond coat to dry partially or completely before the *NA 840* mortar is pressure-applied into the slurry bond coat. If a rapid-setting, polymer-modified slurry bond coat is used, contact Technical Services.
5. Using a flat-edge trowel, pressure-apply *NA 840* mortar into the wet slurry bond coat to achieve a good penetration and a good bond to the concrete surface.
6. Apply, firmly pack and screed the mortar mix to the required thickness. Firmly established wood, metal or *NA 840* mortar screed guides can be used to ensure the proper thickness.
7. Do not wet the surface of the freshly applied mortar. *NA 840* mortar must be dry-cured.
8. Let the *NA 840* mortar dry-cure and harden undisturbed for about 20 to 50 minutes, depending on temperature and humidity conditions.
9. Finish the surface to the required plane and texture using a steel trowel, a wood float, or a steel trowel and broom.

EXPANSION AND CONTROL JOINTS

- Provide expansion and control joints at the perimeter edge of the floor, around columns, curbs and other areas where a change of plane occurs and at the intersection between areas of different substrates.
- Install control joints lengthwise and crosswise at regular spacing intervals according to needs and/or specifications. When *NA 840* mortar is to be covered by ceramic tile or natural-stone flooring, follow TCNA Detail EJ-171 (or TTMAC Detail MJ301) recommendations for building and spacing expansion and control joints.
- Leave a width of at least 3/8" (10 mm) for joint space. Temporarily fill in this joint width with cardboard, polystyrene or cork until the joint is ready to be filled permanently with a recommended expansion joint material.



CLEANUP

- Wash hands and tools with water immediately after mixing and before the mortar dries or hardens. If allowed to set and harden, it can only be removed through mechanical abrasion.

PROTECTION

- Depending on temperature and humidity conditions, restrict foot traffic for at least 2 to 3 hours after installation.
- For installations of wood and resilient flooring, wait at least 16 to 18 hours or until the moisture content of the mortar is sufficiently low.
- For installations of ceramic tile and natural stone, *NA 840* mortar should be sufficiently dry after 3 to 4 hours.
- Liquid-applied waterproofing membranes such as *NA 1740* Waterproof Coating may be applied 16 to 18 hours after installation.
- Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Industry Standards and Approvals	
LEED v3 Points Contribution	LEED Points
MR Credit 5, Regional Materials*	Up to 2 points

* Using this product may help contribute to LEED certification of projects in the category shown above. Points are awarded based on contributions of all project materials.

Product Characteristics

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

Pot life	20 to 30 minutes
Packaging Bag: 50 lbs. (22,7 kg)	Product code #084040000
Shelf life	1 year when stored in sealed, unopened packaging in dry, heated well-ventilated conditions. Protect from moisture and excessive heat.
Ready for foot traffic**	2 to 3 hours
Ready for cement-based toppings**	4 hours
Ready for ceramic tile and natural stone**	3 to 4 hours
Ready for floor covering (vinyl, wood, rubber, linoleum and carpet)**	16 to 18 hours (subject to moisture emission test)
Ready for liquid-applied waterproofing such as <i>NA 1740</i> Waterproof Coating	16 to 18 hours
Resistance to moisture	Excellent
Compressive strength when mixed with water – ASTM C109 (CAN/CSA-A5)	
24 hours	> 2,000 psi (13,8 MPa)
7 days	> 3,000 psi (20,7 MPa)
28 days	> 4,000 psi (27,6 MPa)
Color	Natural gray

** Ready times may vary based on temperature, humidity, substrate porosity, thickness of application and jobsite conditions. Allow *NA 840* to dry completely before installing moisture-sensitive floor coverings or membranes.

Approximate Coverage*** per 50 lbs. (22,7 kg)

Thickness	Coverage
1/4" (6 mm)	8.1 sq. ft. (1,68 m ²)
1" (2,5 cm)	4.5 sq. ft. (0,42 m ²)
2" (5 cm)	2.3 sq. ft. (0,21 m ²)
4" (10 cm)	1.1 sq. ft. (0,10 m ²)

*** Coverage shown is for estimating purposes only. Actual coverage may vary depending on substrate condition, type of equipment used, actual thickness applied, handling and application procedures.

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For the most current product data and warranty information, visit www.na-adhesives.com.



Statement of Responsibility

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.**