

NA 840



North American
ADHESIVES®

Fast-Setting Repair Mix



GOOD

BETTER

BEST

PRODUCT DESCRIPTION

A fast-setting, premixed cement-based mortar for concrete repairs and subfloor preparation work. Mixed exclusively with water, NA 840 provides an easy-to-use, high-compressive-strength, fast-setting mortar that sets completely within 24 hours without shrinkage cracks. When properly used, even in harsh conditions, its moisture emission is less than 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m²) per 24 hours as measured with the calcium chloride test kit.

USES

- Concrete repairs and indoor concrete subfloor preparation work with minimal delay. Allows floor covering (vinyl, wood, rubber, linoleum, carpet, etc.) to be installed after 24 hours. Ceramic tile and natural-stone flooring can be installed after only 3 to 4 hours.
- For filling trenches, holes and cuts in existing concrete up to 4" (10 cm) deep
- For new and old concrete subfloor leveling and topping in thicknesses from 1/4" to 4" (6 mm to 10 cm). (See "Technical Notes.")
- For building shower bases and curbs up to 4" (10 cm) thick

SUBSTRATE REQUIREMENTS

The supporting substrate must be structurally sound, solid, clean and free of dust, oil, grease, paint, tar, wax, curing agents, primer, sealer, laitance, loose particles, debris and any other substance that may reduce or prevent adhesion. Mechanically remove all loose particles, old patching compounds, weak topping, paint, primer and curing agent residues. Roughen smooth, dense concrete surfaces by using sand-, water- or shotblasting – scarifying or rough-grinding as required.

SUITABLE SUBSTRATES (properly prepared)

- Clean, rough textured concrete completely cured with the contact surface sufficiently textured (profile of at least 1/8" [3 mm]) to provide a good mechanical bond

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

LIMITATIONS

- NA 840 is ready to use. Only mix with water. Do not add any Portland cement or other ingredients.
- Do not use on vertical surfaces.
- Do not use for outdoor areas or areas close to exterior doors where de-icing and snow-melting chemicals are used or carried indoors by incoming traffic.
- Use only in thicknesses between 1/4" and 4" (6 mm to 10 cm).
- When leveling or repairing concrete subfloor areas larger than 16 sq. ft. (1,49 m²), the maximum thickness must not exceed 2" (5 cm).
- Do not use in areas where hydrostatic or moisture problems exist.
- Over well-supported, structurally solid wood, plywood, oriented strand board (OSB), steel and dimensionally unstable substrates, install a polyethylene sheeting (> 30 mils [0,75 mm] thick) or an appropriate cleavage membrane over the entire substrate and apply a wire-mesh reinforced floating screed at least 1-3/8" (3,5 cm) thick or thicker. This type of work is restricted to indoor

TECHNICAL QUICK REFERENCE

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

Mixing ratio (by weight)	2 U.S. qts. (1,89 L) of water per 40-lb. (18,1-kg) bag
Recommended mechanical mixing time	3 to 4 minutes
Pot life	20 to 30 minutes
Surface finishing	20 to 50 minutes
Surface grinding	After 1 hour
Ready for foot traffic	2 to 3 hours
Ready for ceramic tile and natural-stone installation	After 3 to 4 hours
Ready for soft floor-covering installation (carpet, wood, linoleum, vinyl and rubber)	After 16 hours (subject to moisture emission test)
Resistance to moisture	Excellent
Compressive strength (ASTM C109)	
24 hours	2,190 psi (15,1 MPa)
7 days	3,350 psi (23,1 MPa)
28 days	4,176 psi (28,8 MPa)
Color	Natural gray
Shelf life	1 year when stored in sealed unopened packaging in dry conditions at 73°F (23°C). Protect from moisture and excessive heat.
Packaging	Bag: 40 lbs. (18,1 kg)

THICKNESSES AND APPROXIMATE COVERAGES*

per 40-lb. (18,1-kg) bag

1/4" (6 mm)	1" (2,5 cm)	2" (5 cm)	4" (10 cm)
14.5 sq. ft. (1,35 m ²)	3.6 sq. ft. (0,33 m ²)	1.8 sq. ft. (0,17 m ²)	0.9 sq. ft. (0,08 m ²)

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

HEALTH AND SAFETY

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

installations only.

- Use only when substrate temperature is between 50°F and 100°F (10°C and 38°C).
- Do not use as a wear surface.

MIXING

Always use clean mixing containers and tools. Use a low-speed mortar mixer or hand mixer (at no more than 400 rpm).

Slurry bond coat

1. Mix equal parts (by volume) of NA 840 and water while slowly and continuously mixing.

Mortar mix

1. Into a clean container, pour 2 U.S. qts. (1,89 L) of clean, potable water. Gradually add 40 lbs. (18,1 kg) of NA 840 while slowly and continuously mixing. Do not add any Portland cement or other ingredients.

Note: Special attention must be given in gauging the exact amount of water required in the mix to allow the NA 840 to be 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

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quantity, as this may cause only partial hydration and weak mechanical strengths.

2. Mix 1 to 2 minutes until a homogenous initial mix is reached. Hand-scrape the container's sides and bottom as well as mixer paddles to blend in unmixed powdered material. Continue mixing thoroughly for another 1 to 2 minutes until all the material is mixed to a homogenous consistency.
3. 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 any long period of time. Higher temperatures will shorten the pot life; therefore, adjust the batch size and working pattern accordingly.
4. Discard unused, partially set or dry mortar. Do not add water to remix or apply any mortar that has already started setting.
5. Wash hands and tools with water immediately after mixing and before mortar dries or hardens.

APPLICATION

1. Pre-wet the existing concrete surface with water, to provide a saturated surface-dry (SSD) contact surface. Remove all excess water from the surface.
2. Apply the NA 840 slurry bond coat mixture (see "Mixing") with a stiff brush or broom immediately before applying NA 840. 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 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 is pressure-applied into the slurry bond coat.
3. 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.
4. Apply, firmly pack and screed the mortar mix to the required thickness. Firmly established wood, metal or NA 840 screed guides can be used to ensure the proper thickness.
5. Do not wet the surface of the freshly applied mortar. Let the NA 840 dry-cure and harden undisturbed for about 20 to 50 minutes, depending on temperature and humidity conditions.
6. 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

1. Provide expansion and control joints at the perimeter edge of the floor, around columns and curbs, and at the intersection between areas of different substrates.
2. Install control joints lengthwise and crosswise at regular spacing intervals according to needs and/or specifications.
3. When NA 840 is to be covered by ceramic tile or natural-stone flooring, follow TCA Detail EJ-171 recommendations for building and spacing expansion and control joints.
4. Leave at least a 3/8" (10 mm) in width for joint space and fill in temporarily with cardboard, polystyrene or cork until the joint can be filled permanently with a recommended jointing material.

CLEANING

When fresh, NA 840 is easily removed from hands, tools and equipment with water. If allowed to set and harden, it can only be removed through mechanical abrasion.

PROTECTION

Material protection

Provide for dry, heated storage on site and deliver materials at least 24 hours before work begins.

Topping protection

1. Do not wet-cure the freshly applied topping.
2. Depending on temperature and humidity conditions, restrict traffic for at least 2 to 3 hours after installation.
3. When surface grinding is required, this may be done more easily when the topping has cured sufficiently to support the weight of the equipment but before it has reached a final cure. Generally, the final polishing and grinding may be done about 1 hour after installation.

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.



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