

NA 3700



North American
ADHESIVES®

Lightweight, Polymer Thin-Set



GOOD

BETTER

BEST

PRODUCT DESCRIPTION

A lightweight, multipurpose thin-set mortar that also can be used for medium-bed and nonsag applications. It is formulated for easy application and therefore can be used instead of mastic for most installations. NA 3700 provides twice the coverage of a standard thin-set mortar. The neutral color makes it a good choice for use with natural stone and light-colored grouts.

USES

- Indoor residential and commercial installations of floor, wall and countertop tile in dry and wet areas
- Outdoor residential and commercial installations of floor, wall and countertop tile in dry and wet areas (see wall specifications under "Limitations")
- Installations of ceramic, porcelain, mosaic, quarry, paver and Saltillo tiles, and most types of marble, granite and natural stone
- Replacement for mastic when installing tile in showers, bathrooms, backsplashes and areas where mastics are commonly used
- Neutral color is approved for installations of light-colored natural stone and translucent marble. It is also approved for installations where a white or light-colored grout has been selected.
- Installations of cement boards in accordance with the manufacturer's instructions

SUBSTRATE REQUIREMENTS

All supporting surfaces must be structurally sound. The surface area that will receive tile must be dry, clean and free of dust, oil, grease, tar, paint, wax, curing agents, primers, sealers, release agents, existing adhesives and any other substance that can weaken the product's bond to the substrate. If the surface contains these substances, they must be mechanically removed.

SUITABLE SUBSTRATES (properly prepared)

- Fully cured concrete (at least 28 days)
- Masonry block and brick walls
- Cement mortar beds and leveling coats
- Cement backer units (see manufacturer's installation guidelines)
- Gypsum wallboard (primed)
- Well-bonded unglazed ceramics, porcelain, quarry and paver tiles, cement terrazzo, VCT, VAT and cutback residue (indoor installations)
- NAA waterproofing and crack-isolation membranes over recommended substrates for those membranes
- 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 the following statement regarding deflection.)

TECHNICAL QUICK REFERENCE

Product characteristics at 73°F (23°C) and 50% relative humidity
Meets or exceeds ANSI A118.4 and ANSI A118.11 industry standards.

Application temperature range	50°F to 100°F (10°C to 38°C)
Pot life	3 to 4 hours
Open time [†]	25 to 35 minutes
Consistency	Paste
pH	About 13
Dry solid content	100%
Rating	Extra heavy-duty
Colors	Neutral
Cleanup	With water while fresh
Shelf life	1 year in a dry place in original, unopened container
Packaging	Bag: 25 lbs. (11,3 kg)

[†] Open times vary based on temperature, humidity, substrate, trowel size and jobsite conditions.

HEALTH AND SAFETY

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

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.

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

LIMITATIONS

- Do not apply over wood planking, presswood, particleboard, chipboard, oriented strand board (OSB), pressure-treated or oil-treated plywood, Masonite, Luan, gypsum floor-patching, gypsum leveling compounds, laminate surfaces, fiberglass surfaces, poured epoxy floors, self-stick tile, noncushioned sheet vinyl, metal, natural stone or similar dimensionally unstable substrates.
- Installations of large-format tile over nonporous surfaces, such as waterproofing membranes and existing tile, may require extended setting times.

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- When highly absorptive tile such as Saltillo tile is installed, the back of each tile should be thoroughly saturated with a wet sponge before being set into the mortar.
- Use of NA 3700 on outdoor commercial building facades – such as shopping malls, office buildings and high-rise residential units – is limited to two-story applications. For other outdoor-wall applications, consult Technical Services.
- Do not use as a thick-bed mortar, concrete repair mortar, concrete patching material or skim-coating compound, or to level subfloors.
- The Uniform Building Code requires mechanical fasteners for individual tiles larger than 720 sq. in. (0,46 m²) or weighing more than 15 lbs. (6,80 kg) per square foot (0,09 m²).
- Do not use for setting moisture-sensitive tile, natural stone or their agglomerates. Instead, contact Technical Services for recommendations regarding setting material.
Note: Marble, granite and slate are products of nature made from a vast combination of minerals and chemicals that may cause the material to behave or react in a manner beyond our control. Likewise, we do not have control over any of the materials and processes used in the manufacturing of agglomerates. Therefore, determine the suitability of all the materials before proceeding with the installation.
- Do not use to install glass tile or resin-backed tile.
- Do not use for installations subject to submerged conditions, such as pools, spas, fountains or gang showers.
- For areas subject to extreme climate variations, contact Technical Services.

MIXING

To achieve the stated coverage and nonsag performance for NA 3700, use the recommended water/mix ratios (see “Mixing Ratios and Approximate Coverages” chart).

1. For thin-set applications
 - Into a clean mixing container, pour about 6.75 U.S. qts. (6,39 L) of cool, clean potable water. Gradually add one 25-lb. (11,3-kg) bag of NA 3700 powder while slowly mixing.
 - Use a low-speed mixing drill (at about 300 to 400 rpm), with an angled cross blade mixer or double box mixer. Mix thoroughly until mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
 - Let mixture stand (“slake”) for 5 minutes.
 - If mixture becomes heavy or stiff, remix without adding more liquid or powder.
2. For medium-bed and wall installations
 - Into a clean mixing container, pour about 6 U.S. qts. (5,68 L) of cool, clean potable water. Gradually add one 25-lb. (11,3-kg) bag of NA 3700 powder while slowly mixing.
 - Use a low-speed mixing drill (at about 300 to 400 rpm), with an angled cross blade mixer or double box mixer. Mix thoroughly until mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
 - Let mixture stand (“slake”) for 5 minutes.
 - If the mixture becomes heavy or stiff, remix without adding more liquid or powder.

APPLICATION

1. Apply at temperatures between 50°F and 100°F (10°C and 38°C).
2. Select a typical notched trowel (see “Technical Quick Reference” section) with enough depth for a continuous mortar thickness of 1/8" to 3/4" (3 to 19 mm) between the tile and the substrate. Mortar contact should be at least 85% for all indoor residential applications, 95% for commercial and outdoor applications, and 100% for natural-stone applications.
3. Using the trowel's flat or straight edge, spread a thin pressure-applied coat on the substrate. Then using the trowel's notched side, follow immediately with additional material, combing in a single direction to achieve an even-setting bed. Do not spread more material than can be covered with tiles before material begins to skin over.

4. In hot or dry conditions, take precautions to ensure that the mortar does not flash-set. Cooling a concrete slab with water before the installation may be beneficial. Remove all excess water before applying the mortar. Also, using cold water will aid in the installation.
5. Do not spread more adhesive than can be covered before the adhesive begins to skin over (“set up”). To test for skinning, simply place a finger into the ridges of the applied adhesive. If there is no transfer of adhesive to the finger, skinning has occurred; scrape off and replace with fresh adhesive.
6. Set tiles firmly into the fresh mortar with a slight push/pull motion across the direction of the mortar ridges to achieve good tile-to-mortar contact. Ensure proper contact between mortar, tile and substrate by periodically lifting a few tiles to check for acceptable coverage.
7. Follow immediately with proper and thorough beat-in of the tile to flatten ridges or notches into a continuous bed, allowing at least 25% of the thickness of each tile to be embedded in the mortar.
8. Make all alignments and adjustments immediately following beat-in.
9. Remove excess mortar from the joint areas so that at least 2/3 of the tile depth is available for grouting. Wipe smudges from the tile face with a damp sponge or towel before material hardens.
10. Wait at least 24 to 48 hours after installation to grout.
11. Wash hands and tools with water while material is still fresh.

EXPANSION AND CONTROL JOINTS

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

GROUTING

Allow tiles to reach a firm set (at least 24 to 48 hours) and grout with the appropriate NAA grout.







PROTECTION

1. Provide for dry, heated storage on site and deliver materials at least 24 hours before tilework begins.
2. Protect tilework from rain for 72 hours and freezing for at least 5 to 7 days after installation.
3. Floors: Protect from light foot traffic for at least 24 to 48 hours and from heavy traffic for at least 7 days.
4. Walls: Protect from impact, vibrations and heavy hammering on adjacent and opposite walls for at least 14 days after installation.

Note: Because temperature and humidity (during and after the installation of tile) affect the final curing time, allow for extended periods of cure and protection when temperatures drop below 60°F (16°C) and/or when the relative humidity is higher than 70%.

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MIXING RATIOS AND APPROXIMATE COVERAGES* per 25-lb. (11,3-kg) bag

INSTALLATION	WATER TO ADD	TILE SIZE	TROWEL	COVERAGE	
Wall (nonsag)	6 U.S. qts. (5,68 L)	Ceramic mosaics, wall tile and modular tile – 8" x 8" (20 x 20 cm) up to 16" x 16" (41 x 41 cm)	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm)		80 to 95 sq. ft. (7,43 to 8,83 m ²)
			1/4" x 3/8" x 1/4" (6 x 10 x 6 mm)		60 to 70 sq. ft. (5,57 to 6,50 m ²)
Thin-set	6.75 U.S. qts. (6,39 L)	1" x 1" (2,5 x 2,5 cm) up to 8" x 8" (20 x 20 cm) Large modular tiles – 8" x 8" (20 x 20 cm) up to 16" x 16" (41 x 41 cm)	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm)		100 to 110 sq. ft. (9,29 to 10,2 m ²)
			1/4" x 3/8" x 1/4" (6 x 10 x 6 mm)		65 to 75 sq. ft. (6,04 to 6,97 m ²)
Medium-bed	6 U.S. qts. (5,68 L)	Large modular tiles – 12" x 12" (30 x 30 cm) up to 24" x 24" (61 x 61 cm)	1/2" x 1/2" x 1/2" (12 x 12 x 12 mm)		42 to 47 sq. ft. (3,90 to 4,37 m ²)
			3/4" x 9/16" x 3/8" (19 x 14 x 10 mm)		35 to 40 sq. ft. (3,25 to 3,72 m ²)

* Trowel dimensions are width/depth/space. Coverages shown are for estimating purposes only. Actual jobsite coverages may vary according to substrate conditions, type of equipment used, thickness applied, handling and application procedures. To obtain stated coverage and nonsag performance, use recommended water/mix ratios.

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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.



North American
ADHESIVES®

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