

NA 3100 Floor Set



North American
ADHESIVES®

Thin-Set Mortar for Floors

formerly NA 3030/3031



GOOD

BETTER

BEST

PRODUCT DESCRIPTION

A Portland-cement thin-set mortar that comes in gray and white for installing floor tile

USES

When mixed with water:

- Use for setting ceramic tile, quarry tile and pavers over indoor residential concrete floors.

When mixed with NA 3000 latex mortar additive:

- Use for setting porcelain, marble, slate and granite floor tiles. Use white NA 3100 Floor Set for light-colored or translucent natural stone. (See "Limitations.")
- Use for increased performance, outdoor residential floor tile installations, freeze/thaw conditions and indoor/outdoor light commercial floor tile installations.

SUBSTRATE REQUIREMENTS

The substrate must be in accordance with ANSI A108.5 current standards and recommendations.

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 deleterious 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)

When mixed with water, NA 3100 Floor Set can be used over:

- Fully cured concrete (at least 28 days old; wood-floated or light broom-finished).
- Cement mortars and cement leveling coats.

When mixed with NA 3000 (no water), NA 3100 Floor Set can be used over:

- Fully cured concrete (at least 28 days old)
- Cement mortars/leveling coats
- Cement terrazzo
- Cement backer units (see manufacturer for recommendations)
- Exterior-grade plywood for indoor residential floors 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

Meets or exceeds ANSI A118.1 when mixed with water. Meets ANSI A118.4 and ANSI A118.11 when mixed with NA 3000 mortar additive

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

Pot life	About 4 hours
Open time	15 to 30 minutes
Initial set (before grouting)	24 to 48 hours
Final set (before general traffic)	72 hours after installation
Final cure	28 days
Shear strength per ANSI A118.1 test at 7 days	
Impervious mosaics	195 psi (1,34 MPa)
Quarry tile	203 psi (1,4 MPa)
Shear strength per ANSI A118.1 test at 28 days	
Impervious mosaics	209 psi (1,44 MPa)
Quarry tile	235 psi (1,62 MPa)
Shear strength per CSA 0121 plywood when mixed with undiluted NA 4000	
7 days	179 psi (1,23 MPa)
pH	About 12
Colors	Gray; white
Cleanup	With clean water while fresh
Shelf life	1 year when stored in original sealed container at room temperature in a dry, heated area. Protect from moisture, freezing and excessive heat.
Packaging	Bag: 50 lbs. (22,7 kg)

TYPICAL TROWELS AND APPROXIMATE COVERAGES*

based on a 50-lb. (22,7-kg) bag

1/4" x 1/4" x 1/4"75 to 90 sq. ft.
(6 x 6 x 6 mm)(6,97 to 8,36 m²)

1/4" x 3/8" x 1/4"55 to 65 sq. ft.
(6 x 10 x 6 mm) (5,11 to 6,04 m²)



* Trowel dimensions are width/depth/space. Coverages are for estimating purposes only. Actual coverages may vary according to substrate conditions, trowel used and setting practices. To ensure appropriate contact, proper trowel selection is mandatory (see "Application").

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.

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LIMITATIONS

- Do not apply over presswood, particleboard, chipboard, oriented strand board (OSB), Masonite, Luan, gypsum floor-patching, gypsum leveling compounds, vinyl composition tile (VCT), vinyl asbestos tile (VAT), cutback adhesive residue, noncushioned sheet vinyl, metal or similar dimensionally unstable substrates.
- Do not use for installations subject to submerged conditions, such as pools, spas, fountains or gang showers.
- Do not use on walls or other vertical surfaces.
- Do not use to set moisture-sensitive tile, natural stone or their agglomerates.

Note: Marble, granite and slate are products of nature made from a vast combination of minerals and chemicals that can cause the material to behave or react in a manner beyond our control. Likewise, we do not have control over any of the materials or processes used in the manufacturing of agglomerates. Therefore, determine the suitability of all the materials before proceeding with the installation.

MIXING

1. Into a clean mixing container, pour about 1.5 U.S. gal. (5,68 L) of clean cold water or 2 U.S. gals. (7,57 L) of NA 3000. Gradually add 50 lbs. (22,7 kg) of NA 3100 Floor Set powder while slowly mixing.
2. Use a low-speed mixer (at about 300 to 400 rpm).
3. Avoid air entrapment by prolonged mixing, this will shorten the pot life.
4. Mix thoroughly to a homogenous and smooth consistency.
5. Let sit ("slake") 5 minutes.
6. Remix without adding any more liquid or powder.
7. Some stiffening may occur before all material is used. If so, simply restir by hand or machine, but do not add any liquid.
8. Wash hands and tools with water immediately after mixing.

APPLICATION

1. Use only at temperatures between 40°F and 95°F (4°C and 35°C).
2. Use a typical notched trowel (see chart) with sufficient depth to achieve at least 85% mortar contact to the back of the tiles for all indoor applications, 95% for outdoor installations as well as light commercial floors and 100% when installing marble, granite and agglomerate tile floors. It may be necessary to use the trowel's flat edge to back-butter each tile before laying, to achieve 100% mortar contact and a void-free installation.

Note: When back-buttering is required, do so at the same time you are applying the mortar to the substrate. (Refer to ANSI A108.5 specifications and TCNA guidelines.)

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 or cooling the latex additive 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 over the fresh mortar with a slight push/pull motion across the direction of the mortar ridges to achieve good tile-to-mortar contact.
7. Follow immediately with proper and thorough beat-in 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. Clean all joints and 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 (see Technical Data Sheets for details).

PROTECTION

1. Provide for dry, heated storage on site and deliver materials at least 24 hours before tilework begins.
2. Protect tilework from adverse weather and freezing for at least 21 days after installation.
3. Protect floors from light foot traffic for at least 24 to 48 hours after grouting and from general traffic for at least 72 hours after installation. Stepping boards may be used after 24 hours when occasional stepping on the floor is unavoidable.
4. 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%.

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®

MAPEI® Corporation
1144 East Newport Center Drive
Deerfield Beach, FL 33442
Customer Service and
Technical Services: 1-800-637-7753
www.na-adhesives.com

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