



**North American**  
**ADHESIVES®**

**NA 3150**

# Tile Mortar

**Thin-Set Mortar for  
Tile and Stone**



## PRODUCT DESCRIPTION

NA 3150 Tile Mortar is a single-component, thin-set mortar formulated with a unique dry polymer, resulting in good adhesion to substrates and tile. Use NA 3150 Tile Mortar for most residential/commercial installations on indoor floors/walls/countertops, residential outdoor floors/walls and commercial outdoor floors. Mixed with water only, NA 3150 Tile Mortar meets ANSI A118.4 standards and is good for installing dimensional stone, ceramic, porcelain, quarry tile and pavers over most traditional substrates.

## USES

- For setting most ceramic, porcelain and quarry tiles, as well as most types of natural stone
- For most residential interior/exterior floor and wall installations
- For most commercial interior walls and commercial interior/exterior floors

## SUBSTRATE REQUIREMENTS

- Substrates 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 substance or condition that may reduce or prevent proper adhesion to the substrate. If the surface contains these substances, they must be mechanically removed.

See North American Adhesives' (NAA's) "Surface Preparation for Tile and Stone Installations" document in the Document Library section at [www.na-adhesives.com](http://www.na-adhesives.com).

## Tile Council of North America (TCNA) Statement on Deflection Criteria

Floor systems, whether wood framed or concrete, over which the tile will be installed using the appropriate TCNA method, according to the Floor Tiling Installation Guide, shall be in conformance with the International Residential Code (IRC) for residential applications,

the International Building Code (IBC) for commercial applications, or applicable building codes.

The owner should communicate in writing to the project design professional and general contractor the intended uses of the tile installation, including in-service loads or information to allow a project design professional to calculate such.

The tile contractor shall not be responsible for problems resulting from any structural subfloor installation not compliant with applicable building codes, unless structural subfloor was designed and installed by tile contractor, nor for problems from overloading. Please reference the most current version of the TCNA Handbook for more complete substrate requirements.

## SUITABLE SUBSTRATES

- Fully cured concrete (cured for at least 28 days)
- Cement backer units – see manufacturer's installation guidelines
- Cement mortar beds and leveling coats
- Masonry block and brick
- Gypsum wallboard and plaster – interior walls in dry areas only (priming may be required)

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

## LIMITATIONS

- Install only at temperatures between 40°F and 95°F (4°C and 35°C).
- Not recommended for:
  - Application over plywood, presswood, particleboard, chipboard, oriented strand board (OSB), hardwood flooring, Masonite, Lauan, plastic laminate surfaces, vinyl composition tile (VCT), substrates containing asbestos, cutback adhesive residue, metal, or dimensionally unstable materials



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- Setting glass tile or moisture-sensitive stone (green marble, some limestones and granites), agglomerate tiles or resin-backed tiles. Instead, use a suitable epoxy or urethane adhesive.
  - Use on exterior commercial building facades, such as shopping malls, office buildings, high-rise residential units, etc.
  - Use in areas of prolonged water immersion (swimming pools, spas, steam rooms, gang showers, hot tubs, fountains)
  - For areas subject to freeze/thaw conditions, use *NA 3000 Mortar Additive* for best results.
- To use directly over gypsum-based patching or leveling substrates, apply a suitable primer before use.
  - Do not spread more material than can be tiled over before ridges skin over.
  - For light-colored and translucent natural stone, a white mortar is recommended.
  - Product has about 2 hours of working time after mixing.

## MIXING

Before product use, take appropriate safety precautions. Consult the Safety Data Sheet for safe-handling instructions.

1. Into a clean mixing container, pour about 5 to 6 U.S. qts. (4.73 to 5.68 L) of clean potable water. Gradually add 50 lbs. (22.7 kg) of powder while slowly mixing.
2. Use a low-speed mixing drill (at about 300 rpm), with an angled cross-blade mixer or double-box mixer. Mix thoroughly for about 3 minutes or until mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
3. Let mixture stand (“slake”) for 5 minutes.
4. Remix for 1 minute.
5. If mixture becomes heavy or stiff, remix without adding more liquid or powder.

## APPLICATION

Read all instructions thoroughly before installation.

1. Choose a typical notched trowel (see the “Approximate Coverage” chart) with sufficient depth to achieve more than 80% mortar contact to both the tile and substrate for all interior applications, and more than 95% for exterior installations, commercial floor and wet applications. It may be necessary to back-butter the tile in order to meet these requirements. (Refer to ANSI A108.5 specifications and TCNA handbook guidelines.)

2. With pressure, apply a coat by using the trowel’s flat side to key mortar into the substrate.
3. Apply additional mortar, combing it in a single direction with the trowel’s notched side.
4. Spread only as much mortar as can be tiled before product skins over. Open time can vary with jobsite conditions.
5. Place the tiles firmly into the wet mortar. Push the tiles back and forth in a direction perpendicular to trowel lines, to collapse the mortar ridges and to help achieve maximum coverage. Ensure proper contact between mortar, tile and substrate by periodically lifting a few tiles to check for acceptable coverage.
6. Remove excess mortar from the joint areas so that at least 2/3 of the tile depth is available for grouting (see ANSI A108.10 guidelines).

## MOVEMENT JOINTS

- Provide for expansion and control joints as specified per TCNA Method, Detail EJ-171, or TTMAC Specification Guide 09 30 00, Detail 301MJ. Do not cover expansion joints with mortar.
- 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.

## GROUTING

- Wait 24 hours before grouting with an appropriate NAA grout.

## CLEANUP

- Clean tools, tile and other surfaces with water only while mortar is fresh.

## PROTECTION

- Provide for dry, heated storage on site and deliver materials at least 24 hours before tilework begins.
- Protect from foot traffic and wait 24 hours before grouting. Protect from heavy traffic for 7 days. Protect from frost and rain for 7 days.
- 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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<b>Product Characteristics</b> at 73°F (23°C) and 50% relative humidity	
Colors	Gray; white
Packaging	Bag: 50 lbs. (22.7 kg), gray Bag: 50 lbs. (22.7 kg), white
VOCs (Rule #1168 of California's SCAQMD)	0 g per L
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.
Open time*	20 to 30 minutes
Pot life*	> 2 hours
Time before grouting*	24 hours
Cleanup	With clean water while mortar is fresh

\* Open time, pot life and time before grouting vary based on jobsite conditions.

<b>ISO 13007 Classification</b>	
Classification Code	Classification Requirement
C2 (cementitious, improved adhesion)	≥ 145 psi (1 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles

<b>ANSI Specification</b>	
Test Method	Test Results
ANSI A118.4 – shear strength, impervious ceramic (porcelain) mosaics	> 200 psi (1.38 MPa) at 28 days
ANSI A118.4 – shear strength, glazed wall tile	> 300 psi (2.07 MPa) at 28 days
ANSI A118.4 – shear strength, quarry tile to quarry tile	> 150 psi (1.03 MPa) at 28 days

<b>Approximate Coverage**</b> per 50 lbs. (22.7 kg)		
Tile Size	Typical Trowel	Coverage
Ceramic mosaics, wall tiles and small modular tiles up to 6" x 6" (15 x 15 cm)	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm), square-notched	75 to 90 sq. ft. (6.97 to 8.36 m <sup>2</sup> )
Large modular tiles, from 6" x 6" (15 x 15 cm) to 16" x 16" (41 x 41 cm)	1/4" x 3/8" x 1/4" (6 x 10 x 6 mm), square-notched	55 to 65 sq. ft. (5.11 to 6.04 m <sup>2</sup> )

\*\* Coverage shown is for estimating purposes only. Actual coverage depends on substrate profile and porosity, equipment used, thickness applied, temperature and humidity.



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Refer to the Safety Data Sheet for specific data related to health and safety as well as product handling.  
For the most current product data and warranty information, visit [www.na-adhesives.com](http://www.na-adhesives.com).

For information on sustainability and transparency, as well as product certification programs,  
contact Technical Services at 1-800-637-7753.

MKT: 24-1488

## LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the NAA product installation. For the most up-to-date TDS and warranty information, visit our Website at [www.na-adhesives.com](http://www.na-adhesives.com). **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED NAA WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **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.**