



North American
ADHESIVES®

NA 3700

Magna Lite™

Lightweight, Thin-Set Mortar with Polymer



PRODUCT DESCRIPTION

NA 3700 Magna Lite is a premium-grade, lightweight, thin-set mortar fortified with polymer for enhanced bonding to ceramic, porcelain, quarry, pavers and most marble, granite and natural-stone tiles. This formula is also good for medium-bed and nonsag applications, and can be used for large-and-heavy-tile installations. It provides twice the coverage of a standard mortar per pound/kg and may contribute to LEED points with more than 20% recycled content. Its neutral color makes it a good choice for use with natural stone and light-colored grouts. It has a smooth and creamy consistency, and is mold- and mildew-resistant.

USES

- For residential interior and exterior floors/walls, and for interior countertops
- For commercial interior floors and walls
- For commercial 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 that can weaken the adhesive's bond to the substrate. If the surface contains these substances, they must be mechanically removed.

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.

SUITABLE SUBSTRATES (properly prepared)

- Concrete (cured at least 28 days)
- Masonry cement block, brick, cement mortar beds and leveling coats
- Cement backer units (CBUs) – see manufacturer's installation guidelines
- Gypsum wallboard – interior walls in dry areas only (prime with *NA 240 Primer Grip™*)
- APA and CANPLY Group 1 exterior-grade plywood (interior, residential and light commercial in dry conditions only)
- Properly prepared vinyl composition tile (VCT) and cutback residue (interior only)
- Properly prepared existing ceramic and porcelain tile, quarry tile and pavers (interior only)
- *NA 1740* Waterproof Coating and *NA 1550* Crack-Isolation Membrane (limited to thin-set applications only when using weak stone)

See North American Adhesives' (NAA) "Surface Preparation Requirements" document at www.na-adhesives.com.

LIMITATIONS

- Install only at temperatures between 40°F and 95°F (4°C and 35°C).
- Not recommended for:
 - Moisture-sensitive stone (green marble; some limestones and granites), agglomerate tiles or resin-backed tiles. Instead, use suitable epoxy or urethane adhesives. See the products' respective Technical Data Sheet for more information.

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- Dimensionally unstable substrates such as hardwood flooring, oriented strand board (OSB), substrates containing asbestos, or metal. See the “Suitable Substrates” section above.
 - Installations subject to prolonged water immersion.
 - Areas subject to severe freeze/thaw conditions unless mixed with *NA 3000* Mortar Additive.
- To use directly over gypsum-based patching or leveling substrates, apply a suitable primer before use.
 - Installations of tile over nonporous surfaces (waterproofing membranes, sheet membranes, existing tile, etc.) may require extended setting/curing times.

MIXING

Consult the Safety Data Sheet for safe-handling instructions.

Thin-set applications:

1. Into a clean mixing container, pour about 5.5 U.S. qts. (5,20 L) of clean potable water. Gradually add 25 lbs. (11,3 kg) of powder while slowly mixing for at least 1 minute. Adjust the consistency with water, adding up to an additional 1 U.S. qt. (946 mL) as needed, without overwatering. Mix again for 2 minutes.
2. Use a low-speed mixing drill (at about 300 rpm) with an angled cross-blade mixer or double-box mixer. Mix thoroughly until the mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
3. Let the mixture stand (“slake”) for 5 to 10 minutes.
4. Remix.
5. If the mixture becomes heavy or stiff, remix without adding more liquid or powder.

Medium-bed and nonsag wall applications:

1. Into a clean mixing container, pour about 5 U.S. qts. (4,73 L) of clean potable water. Gradually add 25 lbs. (11,3 kg) of powder while slowly mixing for at least 1 minute. Adjust the consistency with water, adding up to an additional 1 U.S. qt. (946 mL) as needed, without overwatering. Mix again for 2 minutes.
2. Use a low-speed mixing drill (at about 300 rpm) with an angled cross-blade mixer or double-box mixer. Mix thoroughly until the mixture becomes a smooth, homogenous, lump-free paste. Avoid prolonged mixing.
3. Let the mixture stand (“slake”) for 5 to 10 minutes.
4. Remix.
5. If the mixture becomes heavy or stiff, remix without adding more liquid or powder.

APPLICATION

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 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, parallel to the tile’s shortest dimension, with the trowel’s notched side.
4. Spread only as much mortar as can be tiled before the 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 the 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).

EXPANSION AND CONTROL JOINTS

- Provide for expansion and control joints as specified per TCNA Detail EJ171 or TTMAC Specification Guide 09 30 00 Detail MJ301. Do not cover expansion joints with mortar.

GROUTING

- Allow the tile to reach a firm set before grouting with an appropriate NAA grout.

CLEANUP

- Clean tools and tile with water while the mortar is fresh.

PROTECTION

- Protect from traffic for 24 hours. Protect from heavy traffic for 7 days.
- Protect from frost and rain for 7 days.
- Large-format tiles may require a longer time to fully set before they can be grouted.



Product Characteristics	
at 73°F (23°C) and 50% relative humidity	
Color	Neutral
Packaging Bag: 25 lbs. (11,3 kg)	Product code #370025000
VOCs (Rule #1168 of California's SCAQMD)	0 g per L
Shelf life	1 year in a dry place in original, unopened container
Open time*	30 minutes
Pot life*	> 2 hours
Time before grouting*	24 hours
Cleanup	With clean water while fresh

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

ISO 13007 Classification	
Classification Code	Classification Requirement
C2 (cementitious, improved adhesion)	≥ 145 psi (1 MPa) after standard aging, heat aging, water immersion and freeze/thaw cycles
T (slip resistance)	≤ 0.019" (0,5 mm)
E (extended open time)	≥ 72.5 psi (0,5 MPa) after 30 minutes
S1 (normal deformation of mortar)	≥ 0.1" (2,5 mm)
P1 (normal adhesion to plywood)	≥ 72.5 psi (0,5 MPa)





ANSI Specification		
Test Method	Specification Standard	Test Results
ANSI A118.4 – shear strength, impervious ceramic (porcelain) mosaics	> 200 psi (1,38 MPa) at 28 days	245 to 440 psi (1,69 to 3,03 MPa)
ANSI A118.4 – shear strength, glazed wall tile	> 300 psi (2,07 MPa) at 28 days	445 to 640 psi (3,07 to 4,41 MPa)
ANSI A118.4 – shear strength, quarry tile to quarry tile	> 150 psi (1,03 MPa) at 28 days	395 to 590 psi (2,72 to 4,07 MPa)
ANSI A118.11 – shear strength, quarry tile to plywood	> 150 psi (1,03 MPa) at 28 days	150 to 240 psi (1,03 to 1,66 MPa)



Industry Standards and Approvals	
LEED Points Contribution	LEED Points
MR Credit 4, Recycled Content**	Up to 2 points
MR Credit 5, Regional Materials**	Up to 2 points
IEQ Credit 4.1, Low-Emitting Materials – Adhesives & Sealants	1 point
IEQ Credit 4.3, Low-Emitting Materials – Flooring Systems	1 point

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

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Approximate Coverage* per 25 lbs. (11,3 kg)		
Water	Typical Trowel Size	Coverage
Thin-set applications		
5.5 to 6.5 U.S. qts. (5,20 to 6,15 L)	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) 	75 to 90 sq. ft. (6,97 to 8,36 m²)
	1/4" x 3/8" x 1/4" (6 x 10 x 6 mm) 	55 to 65 sq. ft. (5,11 to 6,04 m²)
Medium-bed and nonsag wall applications		
5 to 6 U.S. qts. (4,73 to 5,68 L)	1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) 	75 to 90 sq. ft. (6,97 to 8,36 m²)
	1/4" x 3/8" x 1/4" (6 x 10 x 6 mm) 	55 to 65 sq. ft. (5,11 to 6,04 m²)

5 to 6 U.S. qts. (4,73 to 5,68 L)	1/2" x 1/2" x 1/2" (12 x 12 x 12 mm) 	38 to 45 sq. ft. (3,53 to 4,18 m²)
	3/4" x 9/16" x 3/8" (19 x 14 x 10 mm) 	25 to 30 sq. ft. (2,32 to 2,79 m²)

* Trowel dimensions are width/depth/space. Actual coverage will vary according to substrate profile and tile type.



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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.**