



North American
ADHESIVES®

NA 1300

Magna Float™

Wall and Floor Rendering Mortar



PRODUCT DESCRIPTION

NA 1300 Magna Float is a pre-blended, cement-based, polymer-fortified thick-bed and render mortar that includes a blend of select aggregates. It can be used for horizontal and vertical rendering. Rather than requiring the use of a latex additive, NA 1300 Magna Float only needs to be mixed with water to produce a thick-bed mortar of exceptional strength.

FEATURES AND BENEFITS

- Polymer-modified, with no need for latex additives
- Pumpable formulation
- Pre-blended – no jobsite blending of powders or additives required
- High-strength formula

USES

- For use as a bonded or non-bonded, conventional thick mortar bed
- For interior/exterior environments for residential and commercial installations in wet and dry areas
- For use as a scratch coat and wall render, or as a concrete patch from 1/4" to 2" (6 mm to 5 cm)

SUBSTRATE REQUIREMENTS

- All substrates should be structurally sound, stable, dry, clean and free of any substance or condition that may reduce or prevent proper adhesion.
- Surfaces for direct-bond applications must be porous with a concrete surface profile (CSP) of #3 to #5. Then, prime the surface with a slurry bond coat mixture consisting of a North American Adhesives (NAA) polymer-modified mortar meeting ANSI A118.4 when mixed with water; this mortar should be mixed to a creamy consistency. NAA mortars meeting ANSI A118.4 include NA 3220 Multi Flex™ Plus, NA 3650 Magna Floor™, NA 3690 Magna Lite™ Pro, NA 3700 Magna Lite, NA 3785 Magna Flex™ Pro and NA 3800 Magna Flex.

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)

- Cured concrete
- Masonry cement block, brick and cement mortar beds
- Cement backer units, or CBUs (should be dampened with water by sponge or spray mist before mortar application). See the manufacturer's installation guidelines.
- Adequately designed wood-frame floor systems per the handbooks of the Tile Council of North America (TCNA) or Terrazzo, Tile & Marble Association of Canada (TTMAC)
- APA (or CANPLY) Group 1 exterior-grade plywood for interior, residential and light commercial applications in dry conditions only, in accordance with TCNA F141 or F145 (or TTMAC 313F-C)
- Existing ceramic and porcelain tile, cement terrazzo, quarry tile and pavers – for interior and dry conditions only when primed with NA 240 Primer Grip™

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- Properly prepared and well-bonded cement plaster

See NAA's "Surface Preparation Requirements" document at www.na-adhesives.com.

LIMITATIONS

- Do not install over substrates containing asbestos.
- Install only at temperatures between 45°F and 95°F (7°C and 35°C). Maintain a temperature within this range for at least 72 hours after the installation.
- For direct-bond applications, the surface must be clean and porous with an International Concrete Repair Institute (ICRI) CSP of #3 to #5. The surface must be primed with a slurry bond coat mixture (see the "Application" section for details).
- Mortar bed installation method TCNA F141 or F145 (or TTMAC 313F-C): Wood-frame floor systems, including the framing system and subfloor panels, over which tile will be installed must conform with the International Residential Code (IRC) for residential applications, the International Building Code (IBC) for commercial applications, or applicable building codes. For calculating suitability for live load or if the suitability of the structure is unclear, consult a structural engineer or design consultant.
- Do not apply over standing water or wet surfaces.

MIXING

Consult the Safety Data Sheet for safe-handling instructions.

For use as a dry-pack mortar bed

1. Hand-mix in a clean wheelbarrow or mortar box by gradually adding water while slowly mixing in mortar using a mortar hoe. For machine mixing, add the water first to the mixer.
2. Use 2 to 3 U.S. qts. (1,89 to 2,84 L) of cool, clean water per 60 lbs. (27,2 kg) of gradually added *NA 1300 Magna Float*.
3. Mix thoroughly to a dry or semi-dry consistency that can be formed, by hand, into a ball without crumbling apart.

For use as a scratch coat and wall render

1. Mix by machine or drill, adding the water first.
2. Use 3 to 3-1/2 U.S. qts. (2,84 to 3,31 L) of cool, clean water per 60 lbs. (27,2 kg) of gradually added *NA 1300 Magna Float*.
3. Mix thoroughly to a plastic consistency.

For use as a concrete patch

1. Mix by machine or drill, adding the water first.

2. Use 3 to 4 U.S. qts. (2,84 to 3,79 L) of water per 60 lbs. (27,2 kg) of gradually added *NA 1300 Magna Float*.
3. Mix thoroughly to a plastic consistency.

Note: Adding too much water will reduce the overall performance and invite shrinkage cracks.

APPLICATION

For use as a direct-bond mortar bed

1. Apply a slurry bond coat made from a NAA polymer-modified mortar that meets ANSI A118.4, mixed with water to a creamy consistency. Then, while the slurry bond coat is wet, spread *NA 1300 Magna Float* and compact it well.
2. If placing tile while *NA 1300 Magna Float* is still fresh, then apply a slurry bond coat made from a NAA polymer-modified mortar to *NA 1300 Magna Float*. While the slurry bond coat is wet, set the tile and beat it in well.

For use as a floated or unbonded mortar bed

- Follow ANSI A108.1A industry requirements.

For use as a scratch coat and wall render (follow methods approved by TCNA or TTMAC)

Over masonry or concrete:

1. Dampen the surface with a sponge.
2. Apply a slurry bond coat made from a NAA polymer-modified mortar that meets ANSI A118.4, mixed with water to a creamy consistency. This slurry bond coat should be keyed with pressure into the substrate using the flat side of a 1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) square-notched trowel. Immediately apply *NA 1300 Magna Float* as a scratch coat to the desired thickness with the trowel's flat side and scratch the coat with an appropriate scratching tool – such as the trowel's square-notched side – before the coat hardens. The scratch coat should not exceed 3/8" (10 mm) in thickness.
3. After the scratch coat hardens, key *NA 1300 Magna Float* into the scratch coat. Then, apply a render coat (also known as a "brown coat" or "float coat") that does not exceed 5/8" (16 mm) in thickness per lift.
4. Scratch all lifts that will receive additional render coats. Use a standard steel trowel to apply the final render coat and a screed bar to create a plumb and true mortar surface.
5. Allow the completed render coat to cure for 24 hours at 70°F (21°C) before tile installation. Temperatures below 70°F (21°C) may require longer cure times. Wait 24 hours per 1/2" (12 mm) in thickness before applying a waterproofing membrane.

Over cleavage (unbonded) membrane and metal lath attached to studs or to solid backing:



1. With pressure, apply a scratch coat of *NA 1300 Magna Float* over the metal lath to encapsulate the lath within the mortar bed. The scratch coat should not exceed 3/8" (10 mm) in thickness.
2. Before the coat hardens, scratch it with an appropriate scratching tool.
3. After the scratch coat hardens, key *NA 1300 Magna Float* into the scratch coat. Then, apply a render coat (also known as a "brown coat" or "float coat"). A render coat should not exceed 5/8" (16 mm) in thickness per lift.
4. Scratch all lifts that will receive additional render coats. Use a standard steel trowel to apply the final render coat and a screed bar to create a plumb and true mortar surface.
5. Allow the completed render coat to cure for 24 hours at 70°F (21°C) before tile installation. Temperatures below 70°F (21°C) may require longer cure times. Wait 24 hours per 1/2" (12 mm) in thickness before applying a waterproofing membrane.

Pumping method over masonry, concrete and solid backing with metal lath:

- If *NA 1300 Magna Float* is pumped, a liquid plasticizer/pump aid should be used. Confirm with the pump aid's manufacturer the compatibility with *NA 1300 Magna Float* mixes and mixing ratios. Coverage will vary according to mixing, pumping methods/equipment, placement, jobsite conditions and "rebound." Do not exceed 5/8" (16 mm) in thickness per lift/application of pumped render. This pumping method should not be used over clay-based materials.

For use as a concrete patch

1. Apply a slurry bond coat of a NAA polymer-modified mortar meeting ANSI A118.4 requirements to the concrete surface.
2. Place *NA 1300 Magna Float* while the slurry bond coat is wet and transferable.
3. Compact the mortar surface with a flat trowel, filling all voids from 1/4" to 2" (6 mm to 5 cm). Avoid over-troweling.

Notes:

- The setting of Portland cement mortars is retarded by low temperatures. Protect finished work for an extended period when installations take place in cold weather.
- The evaporation of moisture in Portland cement mortars is accelerated by hot, dry conditions. When installing in temperatures over 85°F (29°C), dampen substrates, apply *NA 1300 Magna Float* and protect the freshly spread mortar from premature drying using standard concrete protection methods.
- A slurry bond coat should also be applied to the edges of mortar beds installed from previous work periods.
- Previous mortar beds should have squared shoulders.

EXPANSION AND CONTROL JOINTS

- Provide for expansion and control joints as recommended per TCNA Detail EJ171, or TTMAC Specification Guide 09 30 00 Detail 301MJ.
- Provide for expansion and control joints at the perimeter edge of the floor; around columns, curbs and other areas where a change of plane occurs; and at the intersection between areas of different substrates.
- Expansion and control joints in the substrate or placed within the mortar bed should be carried up through any tilework and left as soft joints that are filled with an approved expansive material.
- Do not cover expansion joints with mortar.

CLEANUP

- Clean tools promptly with water while the mortar is fresh.

PROTECTION

- Provide for dry, heated storage on site and deliver materials at least 24 hours before work begins.
- Protect from rain, snow, freezing and direct solar heat, which may affect curing and performance properties.
- Maintain a temperature between 45°F and 95°F (7°C and 35°C) for at least 72 hours after the installation.
- Because temperature and humidity (during and after installation of tile) affect the final curing time, allow for extended periods of cure and protection when jobsite temperatures drop below 60°F (16°C) and/or when relative humidity is higher than 70%.
- Before installing tile, allow the mortar to fully cure for 24 hours per 1/2" (12 mm) of thickness. Curing time depends upon thickness applied and jobsite conditions.
- When installing per ANSI A108.1B, cover the mortar bed for the initial 24 hours.
- If the installation will be covered with a non-breathable membrane or if a moisture-sensitive stone is the finish, allow an extended period of curing before applying the membrane.
- Excessive heat and/or wind could cause premature surface drying and result in cracking.
- Protect the installation from foot traffic for 16 hours.
- Protect the installation from water immersion for 7 days.

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Product Characteristics at 73°F (23°C) and 50% relative humidity	
Color	Gray
Packaging Bag: 60 lbs. (27,2 kg)	Product code #0376027NA
VOCs (Rule #1168 of California's SCAQMD)	0 g per L
Shelf life	2 years
Pot life at 70°F (21°C)*	90 to 120 minutes
Time before foot traffic	16 hours
Cleanup	With water while fresh

* Pot life varies based on jobsite conditions.

Product Performance Properties at 73°F (23°C) and 50% relative humidity	
Laboratory Tests	Results
Application temperature range	45°F to 95°F (7°C to 35°C)
Compressive strength – ASTM C270	4,000 to 5,000 psi (27,6 to 34,5 MPa)
Flexural strength – ANSI A118.7.3.7	1,100 to 1,300 psi (7,59 to 8,97 MPa)
Shrinkage at 28 days' cure – ASTM C157	0.15%
TCNA service rating – ASTM C627	Extra heavy
Pull-out rupture at 28 days	200 to 300 psi (1,38 to 2,07 MPa)

Approximate Coverage** per 60 lbs. (27,2 kg)	
Thickness	Coverage
At 1/2" (12 mm)	12 sq. ft. (1,11 m ²)
At 1" (2,5 cm)	6 sq. ft. (0,56 m ²)
At 2" (5 cm)	3 sq. ft. (0,28 m ²)

** Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions and setting practices.

Industry Standards and Approvals	
LEED v4 Points Contribution	LEED Points
Health Product Declaration (HPD)***	Up to 2 points

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

RELATED DOCUMENTS
Reference Guide: "Surface Prep: Tile and Stone" [†]

[†] At www.na-adhesives.com



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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.



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.**

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