



COVERAGE

Trowel Size	FT ²
1/4" x 1/4"	130-150
1/4" x 3/8"	90-105
1/2" x 1/2"	65-80
Masonry Method	40-55

Approximate coverage per 80 lbs bag. Coverage may vary due to the type of veneer, ambient or surface temperatures, surface preparation, and/or mixing or application methods.

PACKAGING

80 lb (36.3kg) bag

STORAGE

1. Store bags in a cool, dry location.
2. Store away from direct contact with the ground and/or concrete.
3. Store out of direct sunlight.
4. Protect bags from weather and other damage.

SHELF LIFE

1 year from date of production in an unopened bag when stored properly.

COLOR

Grey, white, off white, and tan. Available in standard and custom colors; addition charges may apply.

PRODUCT DESCRIPTION

RIO 1000 is a polymer-modified, factory blended mortar specifically designed for bonding thin natural stone and manufactured veneers. This bonding mortar is a mixture of portland cement, specialty polymers, aggregate, and other proprietary additives. The advanced technology and high quality ingredients gives RIO 1000 excellent workability, greater sag and efflorescence resistance, and superior bond strength than standard Type S or field mixed mortars. RIO 1000 is an excellent choice for some of the more challenging masonry applications, such as stacked stone.

Manufactured with the highest quality control standards, RIO 1000 exceeds ASTM C270, TMS 402/602 shear strength, and ANSI A118.4 requirements. It is available in grey, white, off white, tan, and a variety of standard and custom colors. RIO 1000 is also available in two sand profiles:

- Standard: Sand that is similar to Type S masonry mortars.
- Fine: Sand that is similar to thin set mortars.

RIO 1000 is part of the Masonry Adhered Veneer Systems (MAVS) family of products backed by Omega's system warranties. Get up to a 15 year wall system warranty when RIO 1000 is used over an Omega wall system, such as Diamond Wall or Super Cement.

FEATURES

Polymer-modified

Sag-resistant

Smooth consistency

High performance

Efflorescence-resistant

Low shrinkage

Two sand profiles

BENEFITS

Increased shear bond strength and water-resistance

Holds veneer in place

Excellent workability and easy to use

Exceeds ASTM C270, TMS 402/602 shear strength, and ANSI A118.4 requirements

Reduces chance of efflorescence from the mortar bed

Reduces risk of cracking

Gives applicator greater flexibility to choose the installation method

BASIC USES

RIO 1000 is designed to bond thin natural stone and manufactured masonry veneers to solid surfaces such as: cement mortar beds, brown coat, masonry, and approved cement boards in residential and commercial, interior and exterior installations. For large, heavy, dense or more challenging veneers, use MAVS 2000 or MAVS 3000 bonding mortars. Do not use RIO 1000 to install porcelain tile veneer.

AREA OF USE

RIO 1000 may be applied to the following substrates:

1. Masonry and CMU
2. Poured-in-place and tilt-up concrete*
3. Stucco brown coat
4. Cement boards (per manufacturers' specifications)
5. Cement mortar beds
6. Brick

Note: Do not use over fluid applied membranes.

*Release agent must be removed prior to installation of RIO 1000; sandblasting or bead blasting is required. Pressure washing is not acceptable.

Application Instructions

RIO 1000

SURFACE PREPARATION

All surfaces to receive application must be stable, structurally sound, clean and free of debris, dirt and dust, efflorescence, grease, oils, curing or release agents, cleaning solutions, coatings, sealers, or adhesive residues which may hinder bond. Smooth or painted cementitious surfaces can be prepared by mechanical means such as sandblasting or scraping. Dampen the surface prior to the application of RIO 1000. Refer to Omega MAVS system literature for additional wall system and structural requirements, including the use of expansion joints.

MIXING

1. Add 1.6 to 1.9 gallons (6 to 7.2 L) of cool, potable water per 80 lb bag.
2. Slowly add one bag of RIO mortar to the water while continuously mixing with a paddle mixer.
3. Mix thoroughly for approximately 2 to 3 minutes until material reaches a smooth, uniform consistency. Do not over mix to prevent air entrapment.
4. Allow mixture to slake (stop mixing) for 5 to 10 minutes then break the set (remix). During the application, occasionally stir the mixture to help maintain workability, but do not add more water.

NOTE: Use the same water-cement ratio to achieve consistency in workability and color. Troweled ridges should stand without slumping when properly mixed. Do not mix too dry.

APPLICATION

Apply RIO mortar per local code requirements and the recommendations of the stone veneer, thin brick, tile, or masonry product manufacturers' specifications.

It is the responsibility of the user to ensure the mortar is suitable for the intended application, substrate is properly prepared and application is performed correctly. Always check with local building codes prior to installation. Quality control testing should be performed before and during application to ensure proper bond is achieved.

Ensure the substrate and veneer product are free from dust or other contaminants which may hinder bond. When hot, dry, or windy conditions exist, provide additional moisture or other protection to prevent flash drying of the mortar.

Masonry Installation Method

1. Key (press or burn) a thin layer of mortar into the substrate using the flat edge of a trowel. (Optional on small or light veneer).
2. Apply mortar to back of the veneer to ensure sufficient mortar to completely fill the space between the veneer and the substrate.
3. Apply the veneer to the substrate using firm pressure until excess mortar is squeezed from all sides of the veneer. Slightly move the veneer side to side to eliminate voids and ensure complete coverage.
4. Periodically check already placed veneer to verify that there is 100% coverage on both the substrate and veneer.
5. Clean excess mortar from veneer surface and joints before mortar dries.

Notched Trowel Installation Method

Use the proper sized notched trowel to ensure full adhesion of the veneer product. Notched trowels with 1/4" x 3/8" x 1/4" (6 mm x 9 mm x 6 mm) notches are often used for smaller veneer, and 1/2" x 1/2" x 1/2" (12 mm x 12 mm) notches are generally used for large or heavy veneer.

1. Key (press or burn) a thin layer of mortar into the substrate using the flat edge of a trowel.
2. Comb on additional mortar using the notched side of the trowel. Do not allow mortar to skin over (begin drying) before applying veneer.
3. Apply additional mortar to back of the veneer (back-buttering) to ensure sufficient mortar to completely fill the space between the veneer and the substrate.
4. Set the veneer over wet mortar, applying firm pressure to flatten the ridges and ensure full contact. Align tile or veneer immediately after placement. Veneers that have been set for more than 10 - 15 minutes should not be readjusted. If any adjustment is needed after set time, scrape off existing mortar and reapply with fresh mortar as described above.

5. Periodically check already placed veneer to verify that the notches are completely flattened and there is 100% coverage on both the substrate and veneer.
6. Clean excess mortar from veneer surface and joints before mortar dries.
7. For grouted profiles - Grout the joints with MAVS Masonry Mortar & Grout using a grout bag or a grout float to fill joints completely. Apply material as needed to cover all voids and gaps to ensure that the material is well compacted. Once the grout has started to set, approximately thumb print hard, strike back or sponge the grout to achieve the desired appearance. Remove excess grout using a damp sponge. Avoid using too much water because discoloration may occur.

DRYING & CURING

Curing and/or drying time may vary due to climate and job conditions. Drying should occur within 24 hours at an ambient and surface temperature of 70°F (21°C) and 55% R.H. When hot, dry, or windy conditions exist, protection should be provided. All freshly applied material must be protected from inclement weather until fully dry. Full adhesion strength should take three to seven days. Full curing strength typically occurs in approximately 28 days.

LIMITATIONS

DO NOT apply product when the ambient and surface temperature is below 40°F (4°C).* The ambient and surface temperature must maintain the above requirements until fully dry (See Drying & Curing). Material that is allowed to freeze before fully drying may suffer irreparable damage.

DO NOT add any other materials to the mixture of the product without written approval from Omega Products International.


DO NOT deviate in the mixing or application procedures contained in this, or any other Product Data Sheets, without written approval from Omega Products International.

DO NOT apply RIO mortar if there are contaminants on the receiving surface. Contaminates may include, but are not limited to, dust, debris, efflorescence, paint over sprays release agents, and/or oils.

DO NOT add any more water than prescribed.

DO NOT saturate the wall during preparation.

NOTE: Failure to follow manufacturer's written specifications could result in the following, but not limited to spalling, cracking, peeling, chipping, delamination, discoloration, wash off, and overall system failure.

 *To ensure proper hydration in cold weather applications (approximately 50°F to 32°F) use OmegaCure admix. Refer to OmegaCure data sheet for additional information.

CLEANING

Cleaning may be accomplished with water immediately after use.

SAFETY

Avoid contact with eyes and prolonged contact with skin. Wash thoroughly after handling. In case of eye contact, flush immediately with running water for at least 15 minutes. Consult a physician immediately. Do not take internally. Be sure to provide adequate ventilation in enclosed areas. Use of an approved respirator is recommended.

KEEP OUT OF REACH OF CHILDREN

DISCLAIMER

RIO 1000 is manufactured by Omega Product International. Omega Products International [Manufacturer] MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE PRODUCT(S) SOLD HEREIN. The recommendations, suggestions, statements and technical data are based on the best knowledge available to Manufacturer and are given for informational purposes ONLY and without any responsibility for their use. It is expressly understood and agreed, as a condition of the use of this product, that the buyer's sole and exclusive remedy for any claimed defective product against Manufacturer shall be the replacement of products actually proven to be defective. Handling and use of the products are beyond the control of Manufacturer; therefore, no warranty is made, expressed or implied, as to the results obtained from the use of the product or against any claims for infringement of patents resulting from use of the product. Under no circumstance shall Manufacturer be liable for incidental or consequential damages arising out of the use or the improper application of the product. Before applying the product, the user shall determine the suitability of the product for their independent use, assuming all risks and liability whatsoever in connection therewith. This writing constitutes a complete and exclusive statement of the understanding between Manufacturer and Buyer.

CLAIMS

Any Claimant shall notify Manufacturer immediately in writing of any alleged defect in the material. Claimant will provide Manufacturer with a reasonable and exclusive opportunity to investigate and test for the alleged defect. For any claim that is not valid Claimant agrees to pay Omega's reasonable charges, including travel and labor associated with investigation of such claim.

TECHNICAL ASSISTANCE

Technical assistance and information is available by calling Rio Grande at 303-825-2211 or by email at device@riograndeco.com

WARRANTY

The following is made in lieu of all expressed and implied rights, warranties and conditions, statutory or otherwise. The manufacturer's only obligation shall be to replace such quantity of products proven to be defective within one year following the date of manufacture, provided that the alleged defective product is returned prepaid to the manufacturer's plant and is accompanied with proof of purchase and batch number.