



Technical Data

Satisfies the following:

- **C482 Modified, Properties**
- **ANSI A118.1, Properties**
- **ANSI A118.4, Properties**

Description

Veneer Bonding Mortars (VBM) are pre-blended, polymer-modified mortars designed specifically for adhering large format tile (tile with at least one edge measuring 15" or greater), but can also be used with manufactured stone, natural stone, thin brick, precast concrete, or similar masonry veneers and pavers. Perfect for interior or exterior applications, VBM combines exceptional bond strength with non-sag properties that improve any setting.

Uses

Use VBM as a high strength, medium bed bonding mortar for installing masonry veneers and pavers. Used for interior and exterior use cases for residential or commercial applications.

Color

Stock colors are Natural Gray (that has no color) and Tan.

Packaging

- 50 lb moisture-resistant bags (56/pallet)
- Store off ground in covered, cool, clean & dry location.
- Shelf life: 1 year from manufacture date.

Approximate Coverage

- 0.4 Cu.Ft. Yield per 50lb bag
- 10 Sq.Ft Coverage at 1/2" thickness

Safety

Always review Safety Data Sheet (SDS) prior to using this product. Available at ORCO.COM, or contact support.

Support

For questions, technical support, order inquiries, and product information, call (951) 685-8498 or email INFO@ORCO.COM.

Substrates

The substrate must be structurally sound and conform to good engineering practices. Substrate deflection under all live, dead and impact loads, including concentrated loads must not exceed L/360 for thin bed installation or L/480 for thick bed stone installations, where L= span length. Installations shall be in accordance with applicable building codes. Movement joints shall be brought through mortar and veneer to the surface. All surfaces must be sound, clean, and free from any dirt, oil, paint, bond breakers, efflorescence or any contaminants which may hinder bond.

Compatible Substrates

- Lath and Portland cement plaster
- Concrete block (Untreated)
- Masonry brick (Untreated)
- Concrete (Prepared)
- Cement mortar beds and backer board

Notes

- Do not apply when temperatures are below or expected to fall below 40°F prior to cure
- Applicable building codes must be followed
- Substrate must be sound: cracks or excessive movement may telegraph through mortar or cause bond failure
- Avoid applications in high heat, wind or cold
- Masonry products and substrate conditions can vary dramatically - Follow proper design and application procedures
- Always perform quality control testing before and during application
- Not recommend over particle board, plywood, luan, or hardwood floors
- Not recommended for green marble or water sensitive stone
- Color may vary - always test a jobsite mockup when possible

Mixing

- Add mortar to clean, potable water and mix approximately 3 to 5 minutes per ASTM C-270. (Approx. 4-5 qts./50 lbs. or 18 to 20% by weight).
- Mortars may be mixed in a mechanical paddle mixer or mixed in smaller batches with a drill and mixing blade.
- Do not over mix.
- Mixing should be done carefully with a proper blade and at low speed to minimize air entrainment. High air content will reduce performance.
- Best non-sag is achieved at a drier consistency.

Application

Mortar must be firmly pressed into the surface of the veneer and substrate to assure good contact and bond. Do not simply slide mortar onto the surface. Veneer must have 100% coverage with mortar squeezing out on all sides. Mortar shall be a minimum of 3/8" thick. Periodically remove masonry unit shortly after installation to assure an equal amount of mortar is bonding to the veneer and the substrate.

Two methods of application may be used depending on the veneer and substrate:

- Method A: Back buttering the veneer and press onto the substrate with enough pressure to force mortar out around the entire perimeter.
- Method B: Shall be application of a leveling coat to the substrate - back buttering the veneer/paver and pressing with enough pressure to force mortar out around the entire perimeter. Do not allow leveling bed to skin over prior to installation.

Joint Grout/Pointing Mortars such as MAC Plus Mortars (course sand) or VP Joint Grout (fine aggregate) is recommended. Allow bonding mortars to fully set (minimum 24 hrs) prior to grouting to assure bond is not disturbed.

Substrate Application Details

It is the responsibility of the user to ensure the mortar is suitable for the intended application, the substrate is properly prepared and application is performed correctly.

- Concrete block (Untreated) – May be directly adhered to or lath and plaster may be attached.
- Wood or steel studs – Shall receive an approved sheathing, lath and plaster.
- Lath and Cement Plaster – Lath and cement plaster shall conform to IBC, CBC, ASTM guidelines, and veneer manufactures requirements. Allow to cure 72 hours prior to application.
- Poured in place/tilt up concrete (Prepared) – Ensure all release agents and bond breakers are completely removed; mortar will not bond to surfaces with any bond breakers still on the substrate. This is best achieved by removal of the surface layer by bead blasting, grinding or equivalent. The substrate must still be checked to assure complete removal of any bond inhibiting substances. Smooth concrete must be roughened. High pressure washing is typically not adequate for complete removal of bond breakers or release agents. Concrete should be well cured. 28 days recommended.
- Cement backer board (Prepared) – A VBM thin bed mortar (ie VBM-Thinset, VBM-Poly ThinBrick, VBM-Bonder) must be used as the bonding mortar on cement backer board. Additional damp proofing/waterproofing may be required in some applications- see VBM-MAC Installation Guide. Application shall be approved by the stone or brick manufacturer. All joints must be taped with fiberglass tape and joints filled with VBM Bonder, R-Lastic or equal. Consult cement backer board manufacturer for specific installation recommendations and limitations. A suitable substrate for bonding does not mean it is recommended for all veneer or job conditions.

Bonding Mortar (Medium Bed) - OBP VBM

Warranty & Claims

ORCO manufactured articles are warranted for 1 year, conforming to standards and specifications ORCO certifies and publishes at the time of shipment. **ORCO MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED (INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES), OTHER THAN THE FOREGOING EXPRESS WARRANTY.** Products manufactured by others and sold by ORCO are solely warranted by the originating manufacturer. Use or installation of ORCO sourced product by the CUSTOMER shall be an admission by the CUSTOMER and conclusive proof that such articles are in every respect as warranted and shall release ORCO from any and all claims for damage or loss sustained by CUSTOMER. For product not yet installed, CUSTOMER must submit a written breach of WARRANTY notice within 7 calendar days of delivery. Upon ORCO's request, CUSTOMER is responsible for all costs incurred in returning product to the originating ORCO facility for evaluation. If ORCO's investigation supports the claim, the parties agree that CUSTOMER'S sole and exclusive remedies shall be replacement of the defective article or refund of the price of the defective article at ORCO's election. **IN NO EVENT SHALL ORCO BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.** Variations in color or shades of color, texture and site of aggregate are inherent in these products. Exact matches are never guaranteed. No claims will be allowed for these variations. Since natural gray products reflect the natural color of the raw materials used (no color is added during manufacturing), ORCO will reject any claim regarding gray color variation. Efflorescence (white powdery deposit) is a naturally occurring phenomenon and is not considered a defect. Samples of ORCO products are submitted as representative of type, color, shade, and texture. The products subsequently furnished may vary from such samples. ORCO will not be liable for and will not recognize any claims made after the start of installation on products said to be incorrectly sized or shaded, inconsistent texture, not matching prior shipments, or otherwise held to be unsatisfactory. Any charges incidental to inspection or tests made by or on behalf of the CUSTOMER to determine compliance with specifications shall be paid by the CUSTOMER. Natural elements - like sun, wind, and moisture - plus site specific conditions / applications may cause products to fade, which is never warrantable. All product weights and coverage / usage charts and listings are estimated. All product formulations and published product counts per pallet are subject to change without notice. ORCO does not obligate itself to furnish signed receipts for material delivered.

Caution

This product should only be used outdoors. Protective face and eye protection, impervious gloves, long pants and long sleeve shirts are recommended. Use NIOSH approved mask for silica dust. Prolonged exposure to dust may cause delayed lung disease. Freshly mixed materials may cause skin irritation. Avoid direct contact where possible and wash exposed skin areas promptly. If any materials get into the eyes, rinse immediately and repeatedly with clean potable water and get prompt medical attention. See SDS sheet.

⚠ Warning

This product can expose you to Silica, crystalline (airborne particles of respirable size) which is known to the State of California to cause cancer. For more information go to www.p65Warnings.ca.gov.

