



MVIS™ Hi-Bond Veneer Mortar

DS-246-0320

**Globally Proven
Construction Solutions**



1. PRODUCT NAME

MVIS™ Hi-Bond Veneer Mortar

2. MANUFACTURER

LATICRETE International, Inc.
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3. PRODUCT DESCRIPTION

The ultimate, polymer fortified, thin-set mortar for interior and exterior installation of masonry veneer, stone, ceramic tile, quarry tile, pavers and thin brick. MVIS Hi-Bond Veneer Mortar, designed to mix just with water, has a long open time with unsurpassed adhesion and workability.

Uses

- Excellent for interior, exterior and submerged applications as well as providing superior bond to exterior glue plywood (interior only) and concrete. The ultimate thin-set for masonry veneer.

Advantages

- Ultimate adhesion for masonry veneer
- Incredible bond to exterior glue plywood* and concrete
- Excellent shear bond strength
- High performing
- Contains Microban® antimicrobial protection to inhibit the growth of stain causing mold and mildew in the substrate
- smooth and creamy formula

- Exceeds ASTM C270 compressive strength requirements for masonry veneer installations
- Passes IBC and IRC shear bond strength code requirements for adhered masonry veneer when tested in accordance with ASTM C482
- Exceeds ANSI A118.4
- Conforms to ISO 13007-1 with a classification of C2TES1P1
- LATICRETE® 25 Year System Warranty (United States and Canada) for masonry veneer installations over concrete and masonry substrates**
- ANSI A118.11 and ANSI A118.15
- * Interior Only.
- ** When used as a component of the LATICRETE® 25 Year System Warranty (United States and Canada) (DS 025.0)

Suitable Substrates

- Exterior Glue Plywood (Interior Only)
- Concrete
- Concrete Block
- CMU
- Existing Masonry and Brick
- Existing Ceramic Tile And Stones
- Cement Terrazzo
- Gypsum Plaster (Interior use only, non-wet areas)
- Gypsum Wallboard (Interior use only, non-wet areas)
- Cement Backer Board (Consult cement backer board manufacturer for specific installation recommendations and to verify acceptability for exterior use)
- Cement Mortar
- Cement Render

Packaging

50 lb bag (22.7 kg); 54 bags per pallet

Color

Grey

Approximate Coverage

Vertical Applications	Ft ²	M ²
1/4" x 3/8" (6 mm x 9 mm) Notched Trowel	60-70	5.6-6.5
1/2" x 1/2" (12 mm x 12 mm) Notched Trowel	40-45	3.7-4.2
Adhered Masonry Veneer Application Method	30-33	2.8-3.1

Coverage will vary depending on trowel notch size, type and size of tile/stone and substrate.

Shelf Life

Factory sealed containers of this product are guaranteed to be of first quality for two (2) years if stored off the ground in a dry area. *** High humidity will reduce the shelf life of bagged product.

Limitations

- Mastics, adhesive mortars and pointing mortars for masonry veneer, stone, ceramic tile, pavers and thin brick are not replacements for waterproofing membranes or air and water barriers. When a waterproofing membrane or air and water barrier is required, use Air & Water Barrier (see Section 10 FILING SYSTEMS).
- For veneer installations using this product, consult local building code requirements regarding limitations and installation system specifications.
- Not for use directly over particle board, luan, Masonite® or hardwood floors.
- Use LATAPOXY® 300 Adhesive for installing green marble, resin backed, or water sensitive tile, stone and agglomerates (refer to DS 633.0 for more information).
- Note: Surfaces must be structurally sound, stable and rigid enough to support ceramic/stone tile, thin brick and similar finishes. For exterior vertical installations over framed construction, the substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/600 where L=span length (except where local building codes specify more stringent deflection requirements).

Cautions

- Consult SDS for more safety information.
- Some stone have low flexural strength and may not be suitable for all installations.
- Protect finished work from traffic until fully cured.
- Contains portland cement and silica sand. Causes severe skin burns and serious eye damage. Wear protective gloves, protective clothing and eye protection. In case of contact, flush thoroughly with water.
- DO NOT take internally. Silica sand may cause cancer, respiratory irritation or serious lung problems. Do not breathe dust. Wear a respirator in dusty areas.

- For white and light-colored stones, conduct test area to ensure no shadowing or staining is observed.
- Keep out of reach of children.

4. TECHNICAL DATA

VOC/LEED Product Information

This product has been certified for Low Chemical Emissions (ULCOM/GG UL2818) under the UL GREENGUARD Certification Program For Chemical Emissions For Building Materials, Finishes and Furnishings (UL 2818 Standard) by UL Environment.

Total VOC Content pounds/gallon (grams/liter) of product in unused form is 0.00 lb/gal (0.00 g/L).

Applicable Standard

- ASTM C270
- ASTM C482
- ANSI A118.4
- ANSI 118.11
- ANSI A118.15
- ISO 13007-1
- This product has a cradle-to-gate (with options) Product-Specific (Type III) Environmental Product Declaration. The PCR review, life cycle assessment and declaration were independently verified by UL Environment in accordance with ISO 14025, ISO 14040 and ISO 14044.

Physical Properties

Test	Test Method	ISO 13007-1 C2 Specification	Results
28 Day Cure Tensile Adhesive Strength	ISO 13007 2 4.4.2	1 MPa (145 psi)	2.3 – 2.6 MPa (333–377 psi)
7 Day Cure 21 Day Water Immersion Tensile Adhesive Strength	ISO 13007 2 4.4.3	1 MPa (145 psi)	1.3–1.5 MPa (188 – 218 psi)
14 Day Cure 14 Day Heat Age Tensile Adhesive Strength	ISO 13007 2 4.4.4	1 MPa (145 psi)	2.4–3.0 MPa (348 – 435 psi)
7 Day Cure 21 Day Water Immersion 25 Freeze/Thaw Cycle Tensile Adhesive Strength	ISO 13007 2 4.4.5	1 MPa (145 psi)	1.2–1.4 MPa (174 – 200 psi)
Open Time After 30 Minutes	ISO 13007 2 4.1	0.5 MPa (73 psi)	1.7–1.9 MPa (246 – 276 psi)
Slip	ISO 13007 2 4.2	Less than or equal to 0.5 mm (0.02 inches)	0.5 mm (0.02 inches)
Transverse Deformation	ISO 13007 2 4.5	Greater than or equal to 2.5 mm (0.1 in.) and less than 5 mm (0.2 in.)	3.2-3.6 mm (0.13- 0.14 in.)

MVIS™ Hi-Bond Veneer Mortar is ISO 13007-1 C2TES1

Working Properties

Test	Test Method	Specification	Results
28 Day Cure Vitreous Tile Shear Strength	ANSI A118.15 7.2.5	>400 psi (2.76 MPa)	475–520 psi (3.2–3.6 MPa)
Shear Bond Vitreous Tile Water Immersion	ANSI A118.15 7.2.4	>200 psi (1.38 MPa)	275–300 psi (2.0-3.6 MPa)
28 Day Cure Quarry Tile To Plywood Shear Bond	ANSI A118.11 4.1.2	>150 psi (1.0 MPa)	240-270 psi (1.7-1.9 MPa)
28 Day Cure Bond Strength To Calcium Silicate	ASTM C482	N/A	350–370 psi (2.4–2.6 MPa)
28 Day Cure 20 Cycle Freeze/Thaw Bond Strength To Calcium Silicate	ASTM C482	N/A	230–260 psi (1.6–1.8 MPa)
28 Day Compressive Strength	ASTM C270	2000 psi (13.8 MPa)	2400–2450 psi (16.5-16.9 MPa)

Open Time	40 minutes
Pot Life	2 hours
Time to Heavy Traffic	24 hours
Wet Density	13.8 lb/gal (1.65 g/cc)

Specifications subject to change without notification. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation methods and site conditions.

5. INSTALLATION

• Surface Preparation

All surfaces should be between 40°F (4°C) and 90°F (32°C) and structurally sound, clean and free of all dirt, oil, grease, paint, concrete sealers or curing compounds. Rough or uneven concrete surfaces should be made smooth with MVIS™ Premium Mortar Bed. Dry, dusty concrete slabs or masonry should be dampened and excess water swept off. Installation may be made on a damp surface. Concrete slabs must be plumb and true to within 1/4"(6 mm) in 10 ft (3 mm).

1. Installer must verify that deflection under all live, dead and impact loads of substrates does not exceed industry standards of L/600 for AMSMV units or stone installations where L=span length. For exterior vertical installations over framed construction, the substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/600 where L=span length.

Note: MVIS Hi-Bond Veneer Mortar does not require a minimum cure time for concrete walls or slabs. Expansion joints shall be provided through the veneer from all construction or expansion joints in the substrate. For natural stone installations on floors follow ANSI specification A108.01-3.7 "Requirements for Movement Joints: Preparations by Other Trades" or TCNA detail EJ-171 "Movement Joints—Vertical & Horizontal". Do not cover expansion joints with mortar.

Mixing

Place clean, potable water into a clean pail. Add MVIS Hi-Bond Veneer Mortar. Use approximately 5.5 qts (5.2 L) of water for 50 lbs (22.7 kg) of powder. (To mix smaller quantities use 3.6 parts powder to 1 part water.) Mix by hand or with a slow speed mixer to a smooth, trowelable consistency. Allow mortar to slake for 5–10 minutes. Remix without adding any more water or powder. During use, stir occasionally to keep mix fluffy. DO NOT temper with water.

Note: For use as a slurry bond coat; mix 7 quarts (6.6 ?) water to a 50 lb (22.7 kg) bag of MVIS Hi-Bond Veneer Mortar.

Application

See applicable LATICRETE details in Masonry Veneer Installation System Brochure (DS 002.8).

Note: If installing on sheathed wood or steel frame construction with wire lath, use MVIS Premium Mortar Bed for the wall render prior to installing applicable MVIS Air & Water Barrier or MVIS Hi-Bond Veneer Mortar.

If waterproofing is required, install MVIS Air & Water Barrier per instructions (see DS 663.0 and DS 663.5) to the substrate prior to installation of MVIS Hi-Bond Veneer Mortar. For adhered stone, thin brick and manufactured stone masonry veneers installations, use a gauging trowel to key a thin coat of MVIS Hi-Bond Veneer Mortar to cover entire back of the veneer units. Spread additional mortar onto the back of the skim coated veneer sufficient to completely fill the space between the veneer and the substrate when compressed against the substrate. Press the mortar covered back of the veneer against the substrate at the desired final position. Slide the unit roughly 1 -1.5" (25-38mm) diagonally from the desired final position and back into the desired position while maintaining even pressure. This should be done in such a manner as to squeeze the mortar to fill the entire space between the veneer unit and the substrate, allowing excess mortar to extrude on all sides around the veneer unit. Clean excess extruded mortar with trowel and spread onto the next veneer unit to be installed.

Note: Prior to installation, ensure back of veneer units are clean of dust, laitance, loose concrete crumbs and any excess film that could impede bond.

Alternate method for thin brick, tile, calcium silicate unit and stone installations: key MVIS Hi-Bond Veneer Mortar into the substrate thoroughly. Then, comb on additional mortar with the notched side, use 1/4" x 3/8" (6 mm x 9 mm), 1/2" x 1/2" (12 mm x 12 mm) loop or notch trowel. Back butter all thin brick, veneer units 8" x 8" (200 mm x 200 mm), 3/4" (19mm) loop trowel or larger to provide full bedding of the veneer. Place veneer into the mortar and adjust to desired position. Clean any excess mortar on sides of stone or tile veneer.

Note: Use proper sized notched trowel to ensure full bedding of the stone veneer. Spread only enough mortar for maximum coverage with tile within 15–20 minutes. Trowel notch size determined by contractor, size of veneer and job-site coverage. Adjust as necessary. Check mortar for complete coverage by periodically removing veneer unit and inspecting the transfer onto substrate and back of the stone veneer. The size and weight of the veneer will vary.. Due to job site conditions and differences in finish material types; ledger boards, shims, wedges or spacers may be required to maintain finish levels and heights.

Grouting/Pointing (if required)

When required, point installation after a minimum of 24 hours curing time at 70°F (21°C). Point with MVIS Epoxy Pointing Mortar (conduct test area to determine suitability and

acceptability with veneer) MVIS Premium Pointing Mortar mixed with water or MVIS Pointing Mortar mixed with water.

Cleaning

Clean tools and stone work with water while mortar is fresh.

6. AVAILABILITY AND COST

Availability

LATICRETE materials are available worldwide.

For Distributor Information, Call:

Toll Free: 1.800.243.4788

Telephone: +1.203.393.0010

For on-line distributor information, visit LATICRETE at laticrete.com

Cost

Contact a LATICRETE Distributor in your area.

7. WARRANTY

See 10. FILING SYSTEM:

- DS 230.13: 1 Year Product Warranty
- DS-230.15SPD: LATICRETE 15 Year System Warranty For Steel or Wood Framed Exterior Facades (United States and Canada) MVIS

8. MAINTENANCE

Non-finish LATICRETE® and LATAPOXY® installation materials require no maintenance but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

9. TECHNICAL SERVICES

Technical Assistance

Information is available by calling the LATICRETE Technical Service Hotline:

Toll Free: 1.800.243.4788, ext. 1235

Telephone: +1.203.393.0010, ext. 1235

Fax: +1.203.393.1948

Technical and Safety Literature

To acquire technical and safety literature, please visit our website at laticrete.com.

10. FILING SYSTEM

Additional product information is available on our website at laticrete.com. The following is a list of related documents:

- DS 230.13: LATICRETE Product Warranty
- DS 230.15: LATICRETE 15 Year System Warranty – For Steel or Wood Framed Exterior Facades (United States and Canada)
- DS 025.0: LATICRETE 25 Year System Warranty (United States and Canada)**** When used as a component of the LATICRETE® 25 Year System Warranty (United States and Canada) (DS 025.0)

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