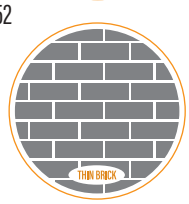
DS 080122

Liteweight Veneer Bonding Mortar

VBM™ PolyThin™ 300

THINBED BONDING MORTAR



1 | **PRODUCT**: **VBM™ PolyThin™ 300** (Level 2 performance product)

2 | **MANUFACTURER**: **Hess Performance Products**, 100 Hess Drive, Malad, Idaho 83252
Product Availability & Support: 208.766.4777 x142 · salesteam@hesspumice.com | **Website**: hesslite.com

3 | **PRODUCT DESCRIPTION**: **VBM PolyThin 300** is a polymer modified, lightweight, THINBED (LESS than 1/2") bonding mortar for use over smooth, even surfaces (such as cement backer board, finished concrete, flush-joint masonry units, and gypsum board). Provides enhanced bonding, non-sag, and water repellency performance.

Specifications: Meets the property specifications of ANSI 118.4. Manufactured per ASTM C1714.

Uses: Applications include drystack-type masonry units with limited or no grout joint, cast board forms, pavers (pedestrial traffic), large format tile, and panelized units of manufactured stone or brick. For interior or exterior applications.

Advantages: **VBM PolyThin** bonding mortars have these advantages:
- Lightweight for easy handling and reduced structural loading, reducing weights by <100 lbs/cu.ft.
- Water repellent/freeze-thaw durability
- Extra tack and non-sag properties
- High shear bond strength
- Low shrinkage

Colors: Available in standard gray and soft white.

Packaging: VBM PolyThin mortars are available in 35 lb. moisture-resistant bags.

Coverage: Coverage can vary based on job conditions and application thickness. Yield is approximately 0.39 cu.ft. per 35 lb. bag.

1/4" x 1/4" x 1/4" (6x6x6mm)	70-80 sq.ft.
1/4" x 3/8" x 1/4" (6x9.5x6mm)	50-60 sq.ft.
1/2" x 1/2" x 1/2" (13x13x13mm)	25-35 sq.ft.

Shelf Life: When stored in a cool dry area, with low humidity: approximately six months to one year.

Efflorescence: All VBM PolyThin mortars reduce the potential for efflorescence and provide some water repellency, however due to variables beyond our control, we cannot guarantee against efflorescence.

Limitations: Do not apply when temperatures are below 40º F prior to cure. Do not add any admixtures without prior consent. Follow ANSI, TCA, or ASTM guidelines for installation in high heat, cold or wind. Always perform quality control testing before and during application. Not recommended over particle board, plywood, Luan, or hard wood floors. Not recommended for green marble or water-sensitive stone. Do not apply over 1/2-inch thickness.

4 | **TECHNICAL DATA**: VBM PolyThin bonding mortars contain Portland Cement (ASTM C150), graded lightweight aggregate, Type S Lime (ASTM C207), R-Mortar Aid and proprietary polymer additives. Manufactured in accordance with ASTM C1714. Meets the shear bond requirements of ANSI - 118.4 Modified Portland Cement Mortar (Tile). VBM PolyThin Premium meets the shear bond requirements of ANSI 118.15.

Open time @ 70°F (23°C)	20 min
Adjustability @ 70°F (23°C)	10 min
Pot life @ 70°F (23°C)	2 hrs
Compressive strength (ASTM C-109)	>2500psi

Hess IDAHO USA | Performance Products
hesslite.com
100 Hess Drive, Malad City, ID 83252

VBM™ TM - R-Crete Inc.

VBM Bonding Mortars: 20+ years and over 100 million square feet of proven performance.

HESSLITE INSTALLATION SYSTEM

PRODUCT CROSS REFERENCES

- For laying up natural stone, brick, and CMUs with a grout joint, we recommend using **HessLite MAC Type-S Mortar**.
- For advanced bonding and performance in the most demanding installations—including large-format profiles, heavy veneers, and dense, closed-surface materials—use **VBM PolyThin Premium** (meets ANSI 118.15 shear bond requirements).
- For thinbed bonding of traditionally grouted tile, pavers, or stone and brick veneers, use **VBM PolyThin 100**.
- For MEDIUM BED applications (mortar bed GREATER than 1/4") over rough or uneven surfaces, we recommend using one of the **VBM BondMate** products.
- For bonding pavers with vehicle traffic (and other difficult bonding applications), use **VBM BondMate Premium**.
- If a bond-ready surface is needed over a poor bonding substrate, use lath and **HessLite MAC Scratch & Brown**.

Liteweight Veneer Bonding Mortar

VBM™ PolyThin™ 300

Shear Bond ANSI 118.4 Requirements		
Glazed Wall Tile		
	7 Days	>300psi
	Water Immersion	>200psi
Porcelain Tile		
	7 Days	>200psi
	28 Days	>200psi

5 | INSTALLATION

Substrates: All substrates must be clean and free from any dirt, oil, paint, bond breakers or any substances which may hinder bond. 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. Suitable substrates include:

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. We recommend HessLite MAC Scratch & Brown or Scratch & Brown PM to provide a high strength, water-resistant plaster substrate.

Poured in Place Concrete (prepared) and **Tilt Up Concrete** (prepared)—Ensure all form release agents and bond breakers are completely removed; mortar will not bond to surfaces with any trace of release or breaker agents 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. If a bond-ready surface cannot be achieved, install lath and a scratch coat. Concrete should be well cured. 28 days recommended.

Cement backer board (prepared)—Additional damp proofing/waterproofing may be required in some applications. Application shall be approved by the stone or brick manufacturer. All joints must be taped with fiberglass tape and joints filled with VBM PolyThin Premium, 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.*

Gypsum Board—May be used as a substrate on dry, interior walls only. All joints must be taped with fiberglass tape and filled with VBM PolyThin, R-Lastic™, or equal.

Ceramic Tile—Existing tile must be sound, well bonded, clean and free of any deleterious substance that may prevent adhesion. Smooth surfaces require roughening to promote bonding. Replace the mix water with R-FlexAd™ latex additive.

Plywood—Interior applications only. Use only over exterior grade plywood (EGP) 5/8" minimum. Wooden flooring should not have a deflection exceeding 1/360 of span in either dead or live loads. Securing should be done with screw-type nails and glue. A 3/16" gap for expansion should be left around the plywood sheets and surrounding materials. These gaps should be left empty after the installation. Replace the mix water with R-FlexAd™ latex additive.

Mixing Instructions: Proper mixing is critical for performance and workability. Add mortar to clean water* (approximately **4½–5 quarts** per 35 lbs. of dry bonding mortar or 29%-31% by weight) and mix approximately **3 to 5 minutes** at LOW SPEED. **Correct water volume is critical to achieving good non-sag properties. Best non-sag is achieved at a drier consistency.** Mortars may be mixed in a mechanical paddle mixer or in smaller batches with a drill and mixing blade. DO NOT OVER MIX. Mixing should be done carefully to minimize air entrainment, as high air content will reduce performance. **Allow to slake for 7 to 10 minutes.** (Lightweight aggregate will continue to absorb water.) Gently re-mix and adjust consistency with additional water if necessary.

Application: Apply mortar to the substrate with the flat side of a notched trowel. Firmly press mortar, keying it into the substrate. Apply additional mortar using the notched side of the trowel. Spread only as much mortar as can be covered in 10-15 minutes. Use the correct size notched trowel to make sure veneers are fully embedded (100% coverage). Back-butter large veneers and pavers for 100% coverage. Press tile or veneers into the wet mortar and beat into place. Do not apply to skinned over mortar. IMPORTANT: **Mortar must be firmly pressed on to 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 bed shall be a minimum of 1/4" thick; maximum of 1/2" thick. Assure full coverage and bond by periodically removing and inspecting the back of tile. Tile or veneer pieces that have been set for more than 10–15 minutes cannot be readjusted. For additional installation methods refer to MVMA, ASTMC1780, TCNA, and local building codes.

NOTE: 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. TEST/QUALITY CONTROL ON PRE-CONSTRUCTION MOCK-UP.

Admixture: *Replacing all or part of the mix water with **R-FlexAd** will increase flexural bond and impact resistance. Recommended for difficult substrates or for areas subject to heavy traffic.

Joint Grouting/Pointing: Use of **HessLite MAC Fine Pointing Mortar** is recommended. Allow bonding mortars to fully set (minimum 24 hrs) prior to grouting to assure bond is not disturbed. This mortar also contains efflorescence reducing additives.

Caution: Prolonged exposure to dust may cause delayed lung disease. Eliminate exposure to dust. Use NIOSH approved mask for silica dust. Freshly mixed materials may cause skin irritation. Avoid direct contact where possible and wash exposed skin areas promptly. If materials get into the eyes, rinse immediately and repeatedly with water and get prompt medical attention. **Note**: Testing for crystalline silica (airborne particles of respirable size) finds no measurable Crystalline Silica (Si02) to be present in HessLite VBM Bonding Mortars. See SDS sheet.

System: VBM PolyThin thinbed bonding mortars are part of the lightweight **HessLite Installation System**. Visit **HessLite.com** for complete product line.

6 | AVAILABILITY AND COST

VBM PolyThin products are available from select distributors. For distributor information, contact Jason at **208.766.4777** x142 or **salesteam@hesspumice.com**

7 | WARRANTY

The technical information and usage statements are based on our best knowledge. The contents of this specification sheet are presented for informational purposes only and do not constitute responsibility for their use. The manufacturer will replace only that material which is proven defective due to quality of the components or the manufacturing process.