



**POWERHOLD**

# POWERBOND LHT

## Mortero Powerbond LHT

### DESCRIPTION:

Powerhold PH-2 Powerbond LHT Mortar is a one-component, Portland cement based tile mortar designed to set large format ceramic and stone tile firmly in place, without lippage or shrinkage, for interior and exterior floor and wall applications where the embedded thickness is between 3/32"-1/2" (2.4 mm-12 mm). PH-2 can also be used to set standard tile sizes on walls.

PH-2 Powerbond LHT Mortar may be used for the installation of porcelain tile, ceramic tile, quarry tile, non-moisture sensitive natural stone\*, cement tile, pavers and high bottom lugged tile.

*\*All natural stone should be tested to be sure discoloration does not occur.*

### RECOMMENDED SUBSTRATES:

When properly prepared, acceptable floor substrates include:

- Properly cured and finished concrete
- Cured Portland cement mortar
- Cement backer unit (CBU)
- APA Grade Trademarked Exposure 1 Plywood [Underlayment grade or better, two layers, 1 1/8" (28 mm) total minimum thickness, interior floors only]. Requires use with Powerhold 800 latex additive.
- Vinyl composition tile, asphalt tile, linoleum or non-cushioned vinyl sheet goods provided such surfaces are single layered, well-bonded to an approved substrate and properly prepared. Requires use with Powerhold 800 latex additive.
- Adhesive residue (except tacky or pressure-sensitive adhesive). Requires use with Powerhold 800 latex additive.

When properly prepared, acceptable wall substrates include:

- Gypsum wallboard (dry interior wall areas only)
- Water resistant gypsum wallboard (i.e. greenboard, interior walls only, dry to intermittent water exposure only)
- Cementitious backer units (CBU) or glass mat backerboard

### DIRECTIONS/PREPARATION:

All substrates must be dry, structurally sound with maximum deflection per industry standards of L/360 for ceramic tile installations and L/720 for natural stone installations; and free from oil, grease, dust, paint, sealers or concrete curing compounds. All contaminants should be removed prior to installation of tile. Surface protrusions and tile glazes shall be removed by sanding, scraping or scarifying. After preparation, remove all dust by vacuuming.

Concrete floors must be fully cured (28 days) and have a fine broom finish. Sprinkle water on the substrate in various areas looking for penetration. If water droplet or beading of water is noticed then surface contaminates are present that will cause loss of adhesion and must be removed. Smooth troweled surfaces should be scarified to assure bond. Inspect surfaces that will receive the tile and the tools used to install it.

Notes: Vinyl asbestos tile or any substrate containing asbestos must not be sanded, scored or scarified because of the potential health hazard of breathing dust. Any substrate containing asbestos must be handled in accordance with existing EPA regulations. Contact your local EPA office.

Expansion joints must be provided in the tile work over all construction, control and expansion joints in the backing and where backing materials change. Follow ANSI A108.01 Section 3.7 Requirements for Expansion Joints.

Maximum variations in all substrates must not exceed 1/4" in 10 ft. (6 mm in 3 m) and 1/16" in 1 ft. (1.6 mm in 0.3 m) from the required plane for tile less than 15" (381 mm) on all sides.

Maximum variations in all substrates must not exceed 1/8" in 10 ft. (3 mm in 3 m) and 1/16" in 2 ft. (1.6 mm in 0.6 m) from the required plane for tile 15" (381 mm) or greater on any one side.

### MIXING:

**With Water:** For best results, maintain all tiling materials, substrates, room and adhesives at 50°-70°F (10-21°C) for 24 hours before and 48 hours after installation. Thoroughly mix 50 lbs. (22.68 kg) Powerhold PH-2 Powerbond LHT Mortar with 5-6 quarts (4.7-5.7 L) clean, cool water. For wall application, mix on the low end of the water demand. Add powder to liquid for ease of mixing. Mix material to a thick creamy consistency, then allow the mortar to stand for 10 minutes. Remix and apply. Avoid breathing dust and contact with eyes and skin. Avoid using high speed mixing, not to exceed 300 rpm, to prevent entraining air.

**With Latex Additive:** Use of Powerhold 800 latex additive in place of water is required for installations over plywood and other non-cementitious substrates as detailed in Substrate Suitability and Preparation section. When mixed with Powerhold 800 latex additive, PH-2 Powerbond LHT Mortar meets all ANSI A118.11 specifications for latex mortars over exterior grade plywood. When using a mortar additive, always follow label directions for detailed mixing and substrate recommendations.

The bucket life is approximately 2-3 hours, warmer temperatures will reduce bucket life.

**PH-2**



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## APPLICATION:

Apply only to surfaces that are frost free and above 50°F (10°C) and below 100°F (38°C) within 24 hours of application and 72 hours thereafter. Installation must conform to the current specifications in ANSI A108.5 and the TCNA Handbook for Ceramic Tile Installations.

The proper trowel should result in a minimum of 80% coverage for interior or dry areas and 95% for exterior, wet areas or when placing natural stone. Use only for direct bond adhesive applications.

With pressure, apply a skim coat to the substrate with the flat edge of the trowel. Comb the mortar in one direction, with the recommended notched trowel. Apply mortar only on sections that can receive tile before skinning. If skinning occurs, scrape and discard skinned mortar. Press tile into place and slide perpendicular to the combed ridges to insure proper coverage. Final bond coat thickness must be between 3/32"-1/2" (2.4 mm-12 mm) after the tile is embedded. Tile may be adjusted up to 15 minutes after placing.

## DRYING TIME:

Grouting may be accomplished when tiles are held firmly in place, typically 16 to 24 hours after installation is completed. No traffic is permitted over the tiles prior to grouting. Cold temperatures or high humidity may extend curing time. Unglazed tiles may require sealing prior to grouting so discoloration will not occur.

## CLEAN-UP:

Clean tools, hands, and excess materials from face of tile, while mortar is still fresh, with warm soapy water.

## TECHNICAL DATA:

Physical State:.....	Dry powder
Color:.....	Available in white and gray
Pot Life:.....	2 to 3 hours
Initial Cure [at 72°F (22°C)]:.....	16 to 24 hours
Final Cure:.....	21 days
Storage:.....	Store in a cool, dry area away from moisture and direct sunlight. Do not store open containers.

## PACKAGING

50 Pound (22.68 Kg) Bags

## SHELF LIFE

Maximum of 1 year from date of manufacture in unopened package.

## COVERAGE:

Coverage may vary according to substrate conditions and thickness of application. Select the trowel size that will ensure 100% coverage. Figures below are presented only as guidelines.

- 1/2" x 1/2" x 1/2" (12 x 12 x 12 mm) square notch trowel; 45-50 sq. ft. (4.2-4.6 m<sup>2</sup>)
- 3/4" (19 mm) rounded-notch trowel; 25-30 sq. ft. (2.3-2.8 m<sup>2</sup>)

## LIMITATIONS:

1. Not for installing green marble, other moisture-sensitive stone tile or resin-backed marble.
2. For non-green marble tile applications, use white PH-2 Powerbond LHT Mortar.
3. Do not expose to freezing conditions during the first 72 hours of curing.
4. Do not adjust tile after mortar takes its initial set or the bond will be permanently broken.
5. Do not soak tile.
6. Do not use worn trowels. It is important to have the ridges of the tile setting mortar the full depth of the trowel notches.
7. Do not allow traffic on freshly installed tile for 24 hours.
8. Do not allow heavy traffic until 72 hours after installation.
9. Do not use over masonite, particle board, luan or plastic.
10. Do not use over wood.
11. Do not use to level floors.
12. Certain natural stone tiles may be affected by mortar shadowing or staining. Test a small area prior to use to determine suitability.
13. Do not use as a patch.

## WARRANTY:

Powerhold offers a limited warranty for this product when used in accordance with printed specifications. A copy of the limited warranty can be obtained by calling technical service at 800-832-9023 or visiting [powerhold.com](http://powerhold.com).