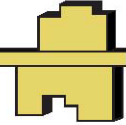




KEY RESIN COMPANY

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Installation Instructions

Key Mortar Standard-HP

I. GENERAL INFORMATION

KEY MORTAR STD-HP is a high performance resin flooring system consisting of 100% solids epoxy resin and aggregates which provide heavy-duty protection at 3/16" to 1/4". When grouted and sealed, **KEY MORTAR STD-HP** eliminates porosity and produces a dense, skid-inhibiting finish that will minimize dirt and chemical penetration.

II. SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful resinous flooring system application. All substrates must be properly prepared as outlined in **KEY RESIN COMPANY'S TECHNICAL BULLETIN #1**. Specific attention should be paid to the following:

- A. Concrete Placement
- B. Curing and Finishing Techniques of the concrete substrate
- C. Age of Concrete
- D. Previous Contamination of the substrate
- E. Present Condition of the Substrate
- F. Moisture Vapor and Moisture Content Testing

Also, the temperature and humidity conditions of the area to receive the flooring system should be checked. An optimum room temperature of 75°F with a minimum slab temperature of 50°F is required for proper cure of the resin flooring system.

III. MATERIAL QUANTITIES

A. Guideline System Requirements for 1000 ft ²	1/4 inch	3/16 inch
<i>Key Mortar STD-HP</i>	<i>Qty./ 1000 ft²</i>	<i>Qty./ 1000 ft²</i>
1. Key # 502 Primer/Low-Modulus Binder	4 gallons	4 gallons
2. Key #510 Epoxy Binder	26 1/4 gallons	21 gallons
3. Key Mortar Blended Aggregate (BMA-50)*	2100 #	1680 #
4. Key #625 Chemical Resistant Coating (grout coat)	10-12 gallons	10-12 gallons
5. Key #625 Chemical Resistant Coating (optional seal coat)	6-10 gallons	6-10 gallons

*Note: For a more resin-rich mortar, substitute Key One-Step Aggregate Blend. This will require 36 gallons of Key #510 for the 1/4" system and 28 gallons for the 3/16" system.

B. Recommended Batch Quantities

1. 1.25 gallon unit *Key #510*
2. 100 pounds (2 x 50#) *Key Mortar Blended Aggregate—BMA-50*

Estimated Batch Coverage: 44-48 ft² at ¼”

Recommended quantities for smaller mixers

1. ½ gallon *Key #510* part A/ 1 pint *Key #510* part B
2. 50 pounds *Key Mortar Blended Aggregate—BMA-50*

Estimated Batch Coverage: 22-24 ft² at ¼”

Note: Alternative blended mortar aggregates may be substituted for BMA-50. When using Key One-Step Aggregate Blend or similar blend, use following batch mix design:

C. Recommended Batch Quantities

1. 1.25 gallon unit *Key #510*
2. 74 pounds (2 x 37#) *Key One-Step Aggregate Blend*

Estimated Batch Coverage: 33-36 ft² at ¼”

Recommended quantities for smaller mixers

1. ½ gallon *Key #510* part A/ 1 pint *Key #510* part B
2. 37 pounds *Key One-Step Aggregate Blend*

Estimated Batch Coverage: 16-18 ft² at ¼”

IV. INSTALLATION

A. Priming

Key Resin Company recommends that every flooring system be installed with a primer to insure maximum adhesion to the prepared substrate. Priming will also help to seal air in the concrete and prevent outgassing and air bubbling in the finished system.

1. Mixing **Key #502 Low Modulus Epoxy Primer**
 - a. Stir each component prior to mixing.
 - b. Mix two (2) parts by volume of Part A (Base) with one (1) part by volume of Part B (Hardener) for three minutes with a low speed electric drill mixing paddle.
 - c. If thinning is desired, add no more than one pint of xylene per gallon of epoxy at time of mixing.
 - d. **Mix only that amount of material that can be used in 40 minutes.**
2. Application
 - a. Pour primer onto the prepared concrete.
 - b. Spread with either a flat trowel or squeegee to a coverage of 200 to 250 ft² per gallon.
 - c. Back roll with a short nap roller.
3. Allow Primer to sit for 30 minutes. Trowelled mortar may be applied to wet primer for up to seven (7) hours after primer application. If primer is to be allowed to sit overnight or for prolonged periods, broadcast lightly with dry silica sand.

B. Trowelled Mortar

1. Mixing **Key #510 Epoxy Binder & Aggregate**
 - a. Stir each component prior to mixing.
 - b. Mix four (4) parts by volume of Part A (Base) with one (1) part by volume of Part B (Hardener) for three minutes with a low speed electric drill mixing paddle.
 - c. Slowly add *Key Blended Mortar Aggregate* to the premixed *Key #510* while mixing in a KOL Mixer, paddle type mixer, or in a suitable container for mixing with a drill and paddle.

- d. Continue mixing resin/aggregate mortar for 3 to 4 minutes or until aggregate is uniformly wet.
2. Application
 - a. Place mortar mixture on primed surface and spread with flat trowel or screed to a thickness of 3/16 to 1/4 inch as required by project specifications.
 - b. Finish trowel with a flat steel trowel (recommended 3" x 12"). Use sufficient pressure to compact the surface of the topping. Machine trowelling is recommended for better compacting of the mortar for applications where feasible.
3. Allow the trowelled mortar to cure overnight.

C. Grouting and Sealing

1. Lightly sand and sweep trowelled mortar after overnight cure prior to grouting. Grouting should be performed with *Key #625 Chemical Resistant Coating*.
2. **Grouting**
 - a. Mix **Key #625 Chemical Resistant Coating** as outlined below:
 - i. Thoroughly mix each component prior to combining.
 - ii. Mix two (2) parts by volume of Part A (Resin) with one (1) part by volume of Part B (Hardener) for three minutes with a low speed electric drill mixing paddle.
 - iii. ***Do not mix more material than can be immediately poured out and spread/backrolled in 20-25 minutes. Do not leave mixed material in the pail for longer than 5 minutes or working time will be significantly reduced!***
 - b. Application
 - i. Pour material onto floor in a line and spread with a flat or notched squeegee or flat trowel to a coverage of 80-100 ft²/gallon depending on desired finish texture.
 - ii. Back roll with a short nap roller to even the surface texture of the coating.
 - iii. Allow material to cure at least 12 hours at 75 degrees F. before topcoating (if specified). Do not open to light foot traffic for 24 hours at 75 degrees F. Full chemical cure and maximum resistance are achieved in five (5) days.
3. **Sealing (optional depending on project requirements)**
 - a. Mix **Key #625 Chemical Resistant Coating** as described above.
 - b. Application
 - i. Pour material onto floor in a line and spread with a flat or notched squeegee to a coverage of 100-160 ft²/gallon depending on desired finish texture. Non-skid additive or aluminum oxide may be added to topcoat to create additional texture as necessary or specified.
 - ii. Back roll with a short nap roller to even the surface texture of the coating.
 - iii. Do not open to light foot traffic for 24 hours at 75 degrees F. Full chemical cure and maximum resistance are achieved in five (5) days.