



QUICK START INSTALLATION GUIDE - BAGGED PRODUCTS

IF YOU READ ONLY ONE PAGE, READ THIS!

These are the quick steps. Visit phoscrete.com for the latest installation documents and videos.



Phoscrete Activator



Phoscrete Dry Mix (HC, HF)



Fast-Set Admix



Urethane Mixing Auger



Bosch GBM9-16
9 Amp 5/8" Mixer
with D-Handle

STEPS FOR MIXING PHOSCRETE IN A BUCKET:

- Wear proper safety gear (goggles, gloves, mask) according to the published Safety Data Sheets.
- Cool Phoscrete Liquid Activator Jugs in ice to extend working time above 73°F (23°C).
- Mix ONLY with Phoscrete Liquid Activator. **Mix Ratio = 1 Jug : 1 Bag (18% Wet-To-Dry).** Pour entire contents of Liquid Activator Jug into a clean bucket. Add full Bag of Dry Mix to the bucket. Mix approx 45 seconds, until no dry powder remains. Use a heavy duty mixing auger with a min. 7 amp drill with side handle. Variable speed drill is recommended. *Refer to full installation guide for mortar mixer usage on large volume repairs.*
- Add Fast-Set Admix to liquid in bucket to speed up the set time below 50°F (10°C).
- Quickly Place Phoscrete onto to dry, sound concrete and around clean rebar.
- Finish Phoscrete using a magnesium float, margin trowel, or screed. Work material aggressively or use an air-powered pencil vibrator to increase material flow in tight spaces, to blend multiple batches, and to reduce expansion and increase density caused by bubbling when Phoscrete reacts to some substrates. Rinse tools with water and wipe off excess water when Phoscrete sticks to the trowels. Once material develops a "skin," leave it alone for the best finish.
- Work fast to finish surface of each pour. Phoscrete sets up after only 5-15 minutes, so form up large repairs in smaller segments and work across a repair.
- Bring Water: Clean up tools and bucket with water when finished. Wash hands with soap and water.



Magnesium Float



Margin Trowel

LIMITATIONS:

- ⊗ DO NOT add water when mixing, placing or finishing Phoscrete.
- ⊗ DO NOT use Liquid Activator in proportions greater or less than instructed.
- ⊗ DO NOT apply to concrete that is wet, unsound, dirty, or contaminated by oil.
- ⊗ DO NOT extend with sand or gravel. Phoscrete is a neat mix with aggregates already in the bag.
- ⊗ DO NOT use any non-Phoscrete additives.



Phoscrete bonds super strong to itself and concrete with no cold joints. Phoscrete bonds to steel and stops rust on contact. Phoscrete does not bond to plastic or polystyrene blue foam board (great for forming and to establish expansion joints on bridge headers and control joints for concrete panels).

NET WEIGHT
55 lbs. BAG : JUG 10 lbs.



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Installation Video



PHOSCRETE INSTALLATION GUIDE - BAGGED PRODUCTS

Installation Overview

Using Phoscrete Concrete Repair materials is easy, but for best results, it is important to follow the simple directions provided in this installation guide.

Properties of Phoscrete

Phoscrete is a high early strength MALP Concrete that chemically and mechanically bonds to host concrete (and to itself with no cold joints), stops rust on contact, resists chloride attack, does not shrink, and resists cracking even under severe conditions.

Phoscrete is traffic-ready in less than one hour, achieving 4,000 psi (28 MPa) compressive strength (ASTM C-109), and 1,500 psi (10 MPa) bond strength (ASTM C-882) at 72°F (22°C). For detailed performance characteristics, visit phoscrete.com.

Important things to know when working with Phoscrete

- Never add water when mixing or placing Phoscrete.
- Mix one full jug of Phoscrete Liquid Activator to one full bag of Phoscrete Dry mix, The mix ratio is 18% Wet to Dry. On-site measurement for partial unit mixing is NOT recommended.
- Phoscrete is usually mixed in standard 5 gallon buckets on installations requiring 3 pallets or less (144 kits). On large volume repairs, multiple kits may be mixed at once using a rubber tipped, paddle-type mortar mixer.
- The Phoscrete Urethane Mixing Auger is an excellent tool for fast and easy mixing of Phoscrete in a bucket.
- Do not over-mix Phoscrete. Once it is wetted out, place and finish immediately.
- Typical working time is 5-15 minutes (temperature dependent).
- Phoscrete requires a dry surface (not SSD) for strongest bond. Primer not needed.
- Place using standard concrete finishing tools (magnesium float, margin trowel).
- Phoscrete does not bond to plastic, blue foam board, or petroleum products.
- Wipe down tools with water (and shake off) for ease of placement and best finish, but do not pour water directly on wet Phoscrete.
- Clean tools with water. Clean hands with soap and water.

Safety Equipment

Visit phoscrete.com to review the complete Technical and Safety Data Sheets both for Dry Mixes and Activator. Phoscrete Dry Mix is composed of magnesium + calcined aluminosilicates + graded aggregates + fibers. Phoscrete Liquid Activator is a low-odor mono-aluminum phosphoric acid solution. When mixing, placing and finishing Phoscrete, wear a particle filtration mask, nitrile gloves and eye protection. Have water and an eye wash station handy. Wash your hands with soap and water after working with Phoscrete.

Site Preparation

- Remove all loose and damaged concrete from the repair area.



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- Remove all non-cementitious previously used repair materials and remove concrete contaminated by asphalt or oils.
- Remove exposed rust with a wire brush. Shot-blasting is not required. Demolish concrete beneath rebar for best corrosion protection.
- For horizontal repairs, insure at least a one-inch [1"] edge around the repair (do not leave a feather edge).
- Blow out any remaining dust, and standing water from the prepared site. Wipe slurry from wet saw cutting off edges for best bond.
- Use a torch and lightly "kiss" the substrate surface to evaporate ice crystals from frozen concrete and to dry damp concrete.



Ideal Site Preparation



Common Site Preparation



Use Blue Board to Establish Expansion Joints

- Use bond breaking materials such as blue foam board to prevent Phoscrete from bonding across expansion joints. Paint wooden forms and screeds with urethane paint (e.g. Rust-Oleum) for easy removal and when slip-forming cast repairs.

Bucket Mixing Instructions

- Pour the entire contents of Phoscrete Liquid Activator into a clean bucket.
- In temperatures below 50°F (10°C) add Phoscrete Fast-Set Admix to speed up setting time (refer to cold climate temperature chart at phoscrete.com).
- In temperatures above 73°F (23°C) chill the activator on ice to extend the working time.
- Empty entire contents of Dry Mix bag into bucket
- Using Phoscrete Urethane Mixing Auger and dual or variable speed drill (minimum 7 amp drill, ½" chuck with side handle) mix approximately 45 seconds, until until Phoscrete is completely wetted out (no dry material remains).
- Empty bucket into prepared site, place and finish immediately.
- Clean bucket and mixing paddle with water after final pour.



Bosch GBM9-16
9 Amp 5/8" Mixer
with D-Handle



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Mortar Mixer Instructions (Mix Multiple Kits at Once)

- Position mortar mixer close to prepared site. Turn on mortar mixer.
- Agitate, and then pour the entire contents of all Phoscrete Liquid Activator Jugs into a rubber-tipped, paddle-style mortar mixer.



- Empty contents of bags of Phoscrete Dry Mix into mortar mixer and let spin for approximately 1 minute - until no dry material remains.
- Stop the mortar mixer and dump the entire contents into the prepared site.
- Right the mixer and add the next dose of Phoscrete Liquid Activator, allowing the mixer to spin continuously in order to keep material remaining in drum from hardening. Add Dry Mix bags when ready for the next placement.

Paddle-Style Mortar Mixer with plywood to direct material

- Clean mixer with water after final pour.

Placing and Finishing Phoscrete

Plan on about 5-15 minutes (ambient temperature dependent) to place and finish Phoscrete once mixed. If Phoscrete begins setting up in the bucket, better to discard the mix. If you are mixing in a mortar mixer, use plywood to direct the material where desired to save time moving the material with a shovel or wheelbarrow.

On inclines, start at the bottom of the slope and slowly work your way up, allowing the first material placed to set in order to control the slump from subsequent pours. Remember, Phoscrete bonds to itself wet or cured with no cold joints.



Expansion Joint Header Install



Bridge Deck Spall Repair



1.1" (28mm) Pneumatic Pencil Vibrator (Phoscrete Stinger)

Finish using standard concrete magnesium floats, steel margin trowels, and screeds. Push material toward (not away from) edges for maximum bond. Wipe trowels with water and shake off excess water to keep Phoscrete from sticking to the trowel for the smoothest finish. **DO NOT** pour water directly onto wet Phoscrete. Use a pneumatic pencil vibrator to increase material flow in tight spaces, to blend multiple batches, and to reduce expansion and increase density caused by bubbling especially when Phoscrete reacts to some substrates. Apply Joint Sealants and Coatings to Phoscrete as soon as one hour following initial set. Once the Phoscrete surface starts to develop a "skin," stop finishing.