

# **PercoCrete Slab Application Methods**

## **Standard Operating Procedure (SOP)**

1. **Professional installers always have a prepared strategy.** Break down each load to a specific area that has been properly formed and headed before the beginning of the pour. These areas should be limited in scope so the crew can screed, compact and fully finish the material before moving to the next area. Plan to complete one area before the next truck arrives. Do not place material too far ahead of the crew. Unlike normal concrete, PercoCrete™ must be worked immediately upon coming out of the truck. It cannot be left to sit; it should be edged and compacted immediately. If too much material is placed the crew will not keep up and a poor finish may result. Please note that PercoCrete™ can not take much surface finishing after it has been compacted.
  
2. **What Professional installers look for when the PercoCrete™ arrives on the site.**
  - Did the truck arrive with the barrel “dead rolled” (not moving)? If not, beware of balling in the mix.
  - If there is balling in the mix, throw 2 pieces of 2’ sections of 2x4 Trex boards into the mixer to break down the balls.
  - Does the PercoCrete™ material meet the “bounce” test? That is: compact some PercoCrete™ material into a ball with your hand and bounce it in your hand. The ball of PercoCrete™ should stay together for the first bounce and not fall completely apart until at least the third bounce. There should be no watery sheen to the PercoCrete™ material. If the material falls apart easily during the “bounce” test, it needs water to be added to the mix (2 to 3 gallon/5 yards). It’s better to be too wet than too dry. Too wet will mean you have to be easy on the compaction, but it should hold together well. If the mix is too dry, the cement will not be properly transformed from its powder state into strong glue. That can result in a weak and brittle surface that ravel easily.
  - One 7 – 10 yard load should unload in about 25 minutes. If material is taking longer and balling up, check to see fins are properly cleaned and not gummed up. To prevent this make sure the batch plant only sends trucks with clean unworn fins.
  
3. **Site preparation**

Adequately pre-water the sub-grade so it will not wick moisture from the PercoCrete™ mix. Soak the base the day before the pour and again immediately before the PercoCrete™ placement.

  - Make sure all form stakes are lower than top of form.
  - Steel forms work best.
  - Lay out all plastic sheeting ahead of application. Best method is to roll prepared sheeting onto a bar so that it can unroll and follow application work immediately upon completion. Having the sheeting ready to cover completed surfaces immediately greatly improves the curing process.

#### 4. Tools: In addition to normal concrete finishing tools

- Vibrating compactor rated to 5 psi compaction sized to meet the particular job
- Wide strap-on shoes with foam bottom cushioning
- Hand rollers
- Hand edgers
- Water misting canister (make sure this has fine mist capability)
- Hand-sized, water misting bottles of approx. 16 oz. in size
- A water hose with a misting nozzle (make sure the nozzle has a fine mist capability)
- Pole thumper, elephant's foot
- Rolls of white, plastic Visqueen sheeting (enough to cover the entire area of the Percocrete™ placement)

#### 5. Application. It is strongly suggested to limit initial Percocrete™ placements to 5 cubic yards per mixer truck to allow the crew to develop teamwork and proper finishing techniques.

- Hold a pre-construction meeting with the flatwork foreman and crew at least one day before the actual placement. Go over the particulars of the various PercoCrete™ installation techniques. Establish who is responsible for the pour.
- Temperature limits: Hot weather; do not pour during mid-day peak heat. Do not pour in weather exceeding 75 degrees rising to 80 degrees.
- Keep chutes angled sharply to allow free flow of Percocrete™.
- Percocrete™ should flow with up to two chute extensions.
- **Do Not** attempt to pour PercoCrete™ on an incline with the truck cab below the chute. This will prevent PercoCrete™ to from discharging and increase balling. Always pour from a level truck or with the truck cab pointed uphill to allow PercoCrete™ to flow out freely.
- PercoCrete™ will compact approximately 1/8" per 1" of target slab thickness. Use a riser strip when placing, then remove strip to compact to grade.
- Take time to screed PercoCrete™ tightly with short, 6" stroking motions. Taking close screeding strokes will help improve the final surface.
- For sidewalks and pathways, foot compact perimeter edges as screeding to assure solid edge face.
- If transporting PercoCrete™ to the application site other than directly out of the concrete mixer truck chute (i.e.: wheelbarrow, Tele-belt™, front-end loader, etc.), compensation must be made for the additional aeration of the PercoCrete™ that may lower the water/cement ratio and require more water misting of the slab surface. In such a case, use a water hose with a mister nozzle set on very light mist.
- Fill in any perceived voids in the surface during screeding- before compaction.
- If pouring is not continuous, any breaks must be headed off before continuing pour. Any cold joint will develop a crack. If excess material is used as a base, it must be used only in the inside areas at least one foot away from any perimeter edge.
- Start working the edges of the PercoCrete™ slab with hand or walking edgers immediately following the screeding process. Use a water mister spray

- whenever appropriate to get a solid edge. Do not worry about the edge of the PercoCrete™ slab being as porous; preventing raveled edges is very important.
- While working the edges around the entire PercoCrete™ slab perimeter, remove riser strips to set final grade.
  - Roll entire PercoCrete™ slab surface to pre-pack material and to fill in any apparent voids. Continue to work edges.
  - **Do Not Throw** loose PercoCrete™ material across the slab surface and attempt to pack it in, this material becomes too dry to properly harden and it will eventually ravel.
  - **(Not Optional)** - Compact entire PercoCrete™ slab surface as soon as possible. Compactor operator must have wide, cushioned strap-on shoes.
  - Work all slab edges and slab surfaces with finishing tools and rollers to fix any blemishes. With use of wide, cushioned strap-on shoes, the slab surface can be immediately walked on to do finish work. Once again, **Do Not Throw** loose PercoCrete™ material across the slab surface and try to pack it in. Use of water mist bottles can help while working the edges. Apply a fine water mist to the entire slab surface if exposure is causing difficulty in finishing the PercoCrete™ slab surface.
  - Cover the entire PercoCrete™ slab surface with white plastic sheeting IMMEDIATELY after finish work is complete. 20 minutes maximum after compacting to grade. Make sure that the plastic sheeting is secured with weights and/or boards to prevent wind from blowing under the plastic and off of the slab during the curing process. Do not uncover finished surface once it has been covered with plastic for any reason.
  - Keep the PercoCrete slab covered for as long as possible, minimum 24 hours in cool damp weather, typically, three days to three weeks depending on weather and intended use.
  - (Optional) - Return after 24 hours and water down the entire slab surface with a hose. If this choice is selected the slab must kept wet for 48 additional hours.

## 6. Slab Surface Stamping

- Cover the PercoCrete™ slab surface with 1 mil plastic sheeting immediately after initial compaction to keep the concrete from sticking to the texture stamp.
- Use a stamp with thick edges that can handle compaction without moving.
- Stamp directly over plastic sheeting.
- Uncover and fix any edges with the assistance of a water mister bottle/canister if needed.
- Cover the stamped; PercoCrete™ slab surface immediately after the stamping procedure is finished with 6 mil sheeting and anchor securely for curing. Apply a very fine water mist if needed before covering.