

Strong-Seal® Systems

Pool-Krete® Application Instructions for Vinyl Lined Pools

What is Pool-Krete®?

Pool-Krete® Premix is a quality blend of expanded vermiculite, portland cement, and admixtures designed to be mixed with water and troweled to form a long-lasting hard bottom for in-ground vinyl-lined swimming pools. The proper use of Pool-Krete® will enhance the quality of the pool installation and prolong the life of the vinyl liner.

Pool-Krete® is a porous but rigid liner base which offers numerous benefits to both the pool installer and the pool owner. With no waste and minimal clean up, this professional approach to hard bottom installations results in greater customer satisfaction and can result in increased referral business.

Tools Required

- Shovels
- Trowels -- approximately 4" x 12" round-edged and flexible
- Mortar Mixer (5 cubic foot capacity or larger) or Pool-Krete® Mixer/Pump
- Five Gallon Bucket
- Fifty-five (55) Gallon Drum
- Wood Floats - approximately 4" x 18"
- Wheelbarrow

About the Excavation

Naturally, the excavation of the pool area should be as accurate as possible after carefully reading the pool manufacturer's specifications. The recommended thickness of the Pool-Krete® should be between 1" to 2".

If the pool manufacturer's specifications are finished dimensions, an extra 1" to 2" will be needed to accommodate the hard bottom and hopper walls. Carefully set up string lines to accommodate the proper thickness of the Pool-Krete®. Use re-bars to connect the lines as illustrated.

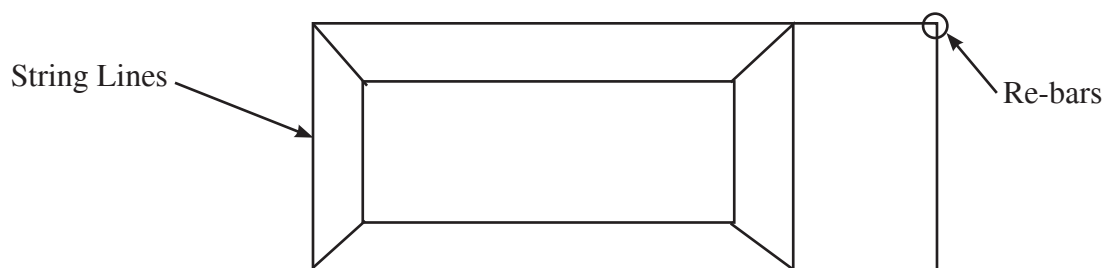


Illustration 1

Important: The accuracy of the excavation will determine the number of bags of Pool-Krete® needed for the job. If the hole is cut too deep or too large the requirements will increase.

Note: After excavation, the bottom and hopper wall should be fine graded with a shovel to the line and raked free of excess loose dirt. Loose dirt and rocks should be removed. Do not tamp or attempt to pack loose debris as

this will result in a non-suitable base for the Pool-Krete® and will encourage erosion of the bottom and sides.

Benefit: Pool-Krete® properly installed will outlast packed sand or sand/cement bottoms due to its high adhesion characteristics which prevents wash-outs and liner abuse due to abrasions.

Any recesses left by over digging or rock removal should be dry-packed with Pool-Krete® and allowed to stiffen before the bottom is installed.

Conditions to Observe Before Installation

Moisture in the Excavation

Extremely wet hopper walls and bottom resulting from recent rainfall should force postponement of the Pool-Krete® installation for at least a day or until the walls dry out. Pool-Krete® will not adhere properly to mud. The adhesion of Pool-Krete® will not be adversely affected if the walls or bottom are merely moist.

Note: Installation of Pool-Krete® on extremely hot days can be simplified by slightly wetting down hopper walls and bottom with a gentle mist. This will prevent the dry dirt from absorbing moisture out of the Pool-Krete® too quickly. This practice will minimize cracking and ensure proper setting-up.

Hopper Wall Seepage

Pool installation in geographical areas where water seepage is observed to be a problem can be remedied and controlled. Seepage occurring where the hopper walls converge can be controlled by digging a trench approximately 6” wide by 6” deep into the wall; filling 1” washed gravel; covering with visqueen, polyethylene or empty Pool-Krete® bags; then dry-packing with Pool-Krete®. After Pool-Krete® has stiffened, installation of the Pool-Krete® onto the hopper walls can proceed.

Hopper Bottom Seepage

This problem will not go away unattended. One recommendation is to excavate the hopper bottom a foot or so deeper than specifications require; spread approximately 4” of washed gravel into the bottom; install a small sump pump on top of the gravel with a flexible drain hose inserted up through the trench outlined on page 6 (see Illustration 2); and backfill the bottom with an additional 8” of washed gravel. Cover the bottom with visqueen and then proceed with Pool-Krete® installation. The drain hose mentioned above should extend out of the pool area, as a permanent fixture and should be plugged after the removal of the groundwater, subsequently used again if the need arises.

The pump should continue to run, removing all water after installation of Pool-Krete® and until liner is installed and pool filled with water to the level of the wall panel bottoms. Only then should the pump be shut off.

If seepage occurs across one or more of the hopper walls, the following recommendation can be used. Repeat steps outlined in next sections and above (see Illustration No. 2). In addition, add a horizontal trench connecting into the above (see Illustration No. 2), as well as a vertical trench running from the middle of the horizontal trench into the hopper. This procedure should be repeated for each wall where seepage is observed.

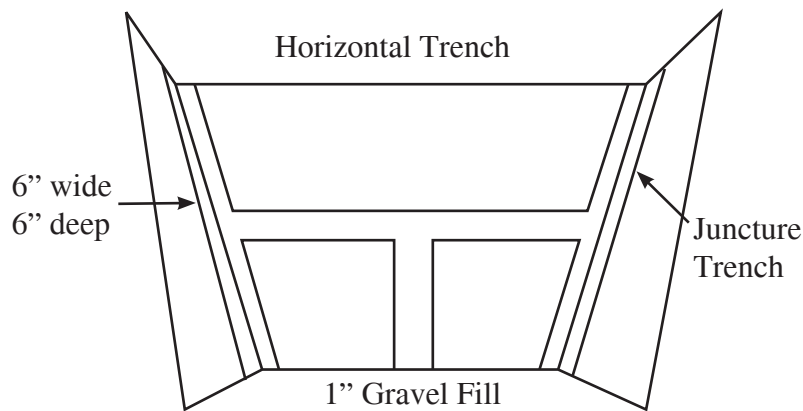


Illustration No.2

Mud in the Hopper Bottom

A muddy condition in the hopper bottom resulting from rainfall can be remedied by working hydrated lime into the problem area at a rate of 100 lbs. per 9 square feet. After stiffening, Pool-Krete® installation can proceed. This procedure will be more effective and less costly than simply adding dry Pool-Krete® to the muddy areas.

Rain During Installation

Although Pool-Krete® should not be used during a rain, there will be occasions when the weather simply rolls in quickly during installation. If possible, cover the pool area with polyethylene. A light mist will generally not affect the Pool-Krete®. Large drops or heavy rainfall, however, will cause the wet Pool-Krete® to pock-mark or even wash out.

Helpful Hint: Pool-Krete® that has pock-marked can be easily repaired by first sweeping the surface lightly, removing the irregularities and then with plaster-wet Pool-Krete® mix, lightly trowel over the affected areas with a thin top coat. This will restore the bottom to its intended surface texture.

Mixing

Mortar Mixer

A conventional mortar mixer five cubic feet capacity or larger can be used to mix Pool-Krete® with water. Naturally, the larger the mixer the larger the batch. Approximately five to six gallons of water should be poured first into the mixer followed by a bag of Pool-Krete®.

Helpful Hint: Weather conditions will dictate the amount of water needed to properly mix one bag of Pool-Krete®. Hot, windy conditions will dry out the Pool-Krete® faster than will cool, cloudy conditions. An additional two or three quarts per bag may be necessary on a hot, sunny day. The extra water will allow easier troweling and minimize cracking of the Pool-Krete®.

Hairline cracks can be expected to occur using any cement-based product and should not cause alarm. Stress cracks can be caused by too rapid hydration and, if desired, can be cosmetically eliminated by lightly troweling some dry Pool-Krete® over the affected area.

Mixing Time

After the Pool-Krete® has been added to the water, mixing time should not exceed two minutes. Mixing should

continue until all dry pockets of Pool-Krete® have disappeared into a wet, uniform consistency. Over mixing will cause the vermiculite particles to break down and can result in troweling problems.

Benefit: The vermiculite in Pool-Krete® provides the porosity necessary in a lightweight concrete. This porosity is a primary benefit to the hard bottom as it is responsible for allowing water to pass through during periods of rising water tables. In an empty pool, the water will pass through the hard bottom and unseat the liner. As the water table recedes, the water in the pool will reverse its passage down through the Pool-Krete® hard bottom. This important benefit is an advantage over other types of pool bottoms since it prevents shifting, wash out, cracking, and expensive bottom repair.

Pool-Krete® Mixer and Pump

This specialized piece of equipment used by builders who annually install high volumes of pools adds speed, efficiency, and further consistency to the installation of hard bottoms. With the pump and 75' hose, the Pool-Krete® can be placed accurately into the pool without wheelbarrows and buckets. Labor saving speed is the key factor when using a Pool-Krete® machine. A unique feature of the Pool-Krete® mixer is the contra-blend paddles used to mix the Pool-Krete® and water.

Unlike a mortar mixer, the Pool-Krete® machine folds the mixture gently without degrading the vermiculite particles. Mixing time, however, should not exceed 1 minute.

Benefit: Yields of Pool-Krete® in these machines will increase dramatically as a result of the special designed paddles.

After mixing, the Pool-Krete® should be discharged out of the mortar mixer (if used) into a mortar box or wheelbarrow. After discharge, it is important to repeat the first step of adding water to the mixer for the next batch regardless of the time interval between batches. This will prevent any leftover material from adhering to the paddles or mixer causing unnecessary clean up or down time.

Helpful Hint: For ease of installation, one recommendation is to set up the mortar mixer at one corner of the shallow end. This can be accomplished by backfilling the selected corner with dirt. Setting the mixer close to the pool wall allows the Pool-Krete® to be discharged over the wall to a waiting wheelbarrow, resulting in time savings and eliminating excessive moves of the mixing operation as the installation proceeds into the shallow end.

Helpful Hint: When setting up the mixing operation on the outside corner of the pool, drape a sheet of polyethylene over the pool wall to avoid splattering of the Pool-Krete®. This will eliminate any extra clean up.

Placement of Pool-Krete®

Prior to the placement of the Pool-Krete®, form a dam on the outside of the pool wall to fill any large gaps between the bottom of the pool wall panels and the ground. This can be accomplished with either the concrete footing used to anchor the wall braces or packed backfill. (See Illustration No. 3.)

Helpful Hint: The 55 gallon drum recommended allows the mixer operator a continuous and ample supply of water not always available through a common garden hose. Prior to beginning the hard bottom installation, the operator should have a batch mixing and another already in the wheelbarrow. This will allow the mixer operator to work slightly ahead of the troweling operation.

Installation technique can vary, but one recommendation is to start in the hopper and work toward the shallow end. When installing by this method, begin by applying the Pool-Krete® to the vertical areas where the hopper walls join. (See Illustration No. 2.) Work from the top to avoid reaching over in-place Pool-Krete® or accidentally sliding dirt over the troweled areas. The Pool-Krete® should be troweled 1" x 2" onto the pool wall panels and gently tapered down onto the top of the hopper wall. (See Illustration No. 3.)

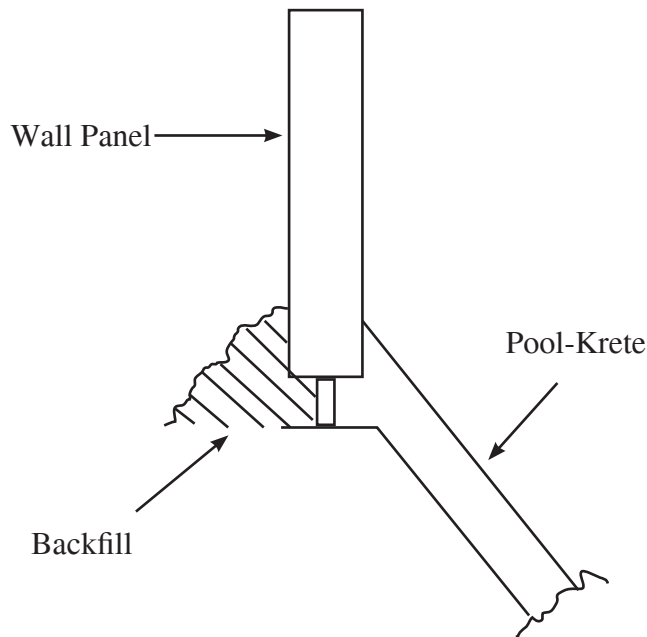


Illustration No. 3

Helpful Hint: On particularly hot days, troweling can be made easier by dipping the trowel into a water bucket kept nearby.

Helpful Hint: The angles created by the joining of the sloped hopper walls should be as sharp and as well defined as possible. Avoid creating a radius at these junctures as it could result in liner wrinkles.

After connecting all the hopper walls, complete the hopper bottom and work toward the shallow end, placing the Pool-Krete® first on either side and working toward the middle of the slope.

Helpful Hint: The placement of 2" by 2" wood stringers halfway up the hopper wall, parallel to the pool bottom, will allow for accurate placement of desired Pool-Krete® thickness assuring the builder straight slopes.

Installation of Liner

The vinyl liner may be installed immediately upon completion of the Pool-Krete® hard bottom; however, it is recommended that there be no traffic in the pool until the Pool-Krete® has had sufficient opportunity to harden. This period will normally be two days depending upon temperature. Traffic in the pool prior to sufficient hardening will result in unsightly indentations which serve as collection points for dirt and potential algae. The pool, however, may be filled immediately after liner installation.

Pool-Krete® Usage Chart

This chart represents the typical number of bags of Pool-Krete® Premix needed for various types of pool kits. Usage will vary depending on soil types and individual builders, but this table will provide a rough guide for supplying the proper amount of Pool-Krete® for different size and type pool kits.

Pool-Krete® Premix Usage Per Pool In-Ground Pools			
Rectangular Pools		L-Shape Pools	
Size	Pool-Krete® Bags Per Pool	Size	Pool-Krete® Bags Per Pool
12 x 24	30	16 x 36 x 24	72
14 x 28	40	20 x 44 x 36	114
15 x 24	38	L-Shape Pools	
16 x 24	40	Size	Pool-Krete® Bags Per Pool
16 x 32	53	16 x 40 x 20	72
16 x 34	56	20 x 46 x 24	105
17 x 33	58	This space left blank	
17 x 37	65		
18 x 24	44		
18 x 36	67		
20 x 40	83		
21 x 41	89		
25 x 50	129		
30 x 60	185		

Above & Below Ground Pools					
Oval			Round		
Size	Above Ground (Flat Bottom)	Below Ground (8' Deep)	Size	Above Ground (Flat Bottom)	Below Ground (8' Deep)
12 x 28	31	34	18	24	26
16 x 32	47	53	20	29	32
18 x 35	58	64	22	35	39
18 x 36	59	66	24	42	45
20 x 40	74	8	27	53	58
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