Installation Instructions

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Site Prep - Ensure Surface is Clean, Dry and Prepared Properly
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Add a Clear Topcoat like FlexSealer1000 or FlexAspartic
Retain Expansion Joints

B&A FlexKrete Sales & Service **Call Greg at (817) 808-8970**

Detailed Flatwork Instructions

Site Preparation

Ensure that Surface is Clean: Remove any dirt, loose debris, paint, sealants, oils, or other contaminants to produce a clean, dry rough, finish. Also, cut or chip a vertical lip around the repair area to ¼" depth or more. The concrete will actually look white when it is properly cleaned. It is useful to have small tools to chip away loose concrete or clean the area with an angle grinder equipped with a diamond cup wheel or cup stone if necessary.

Ensure that Surface is Dry and Prepared Properly: It is important to remember that FlexKrete is a chemical process, and although superior, is very different than waterborne cement based materials. The area must be completely dry or use FlexPrime before you apply the FlexKrete slurry. If the area is damp, you can use a thin coat of FlexPrime, or simply torch the repair area dry with a propane weed burner. If you opt to use the torch method, you must ensure that the concrete is completely dry and that moisture will not migrate back into the repair before the FlexKrete sets up.

Final Preparation: Now that you have completed the most time consuming part of the FlexKrete repair, now is a good time to sweep up and bag all the debris. You will want to also use a leaf blower to get all the remaining dust and grit out of the cleaned area. In final preparation for your installation, if you want to have crisp borders and a professional looking "full-depth-repair look", you will want to use duct tape to symmetrically tape off around the repair.

Mixing and Applying FlexPrime

Estimate Amount of FlexPrime: You are going to mix enough FlexPrime to paint a VERY THIN coat that completely covers the concrete and voids within the repair area. A simple way to estimate the amount needed is to estimate approximately 300 square foot of coverage per gallon. (i.e. 2.5 sf. an ounce) (38 sf. a pint) (75 sf. a quart).

Mix and Apply FlexPrime: Mix equal parts of A & B for 1 to 3 minutes, then apply a VERY THIN COAT with a brush, roller, or spray. Make sure that the FlexPrime is not puddled (AVOID puddles /ridges). After mixing A&B you may thin it by mixing in up to 10% acetone for easy application and penetration. If the surface is very rough you may need to take a dry brush to thin out any puddles or ridges. If you are priming a lot of area on a hot day, try to only mix up enough FlexPrime that can be applied within 15 minutes. If the FlexPrime starts to thicken up DO NOT apply it DISCARD. Allow FlexPRIME to become very tacky before applying FlexKrete.

Installation Instructions

Mixing and Applying FlexKrete

Estimate The Volume of FlexKrete Slurry Needed: The simplest method is to look at the repair and estimate the volume of sand required to completely fill the void out to the tape, and then divide by 3 or 3.5 to determine the amount of FlexKrete needed. For example, a one gallon sized hole ÷ 3.5 = A little more than a Quart of FlexKrete (35 ounces) to 3.5 Quarts of Sand) or (A four gallon sized hole ÷ 3.5 = 1.2 gallons of FlexKrete (150 ounces) to 3.5 gallons [50lbs] of sand)

Pre-Mix FlexKrete: Open pail and power-mix for 60 seconds minimum with corded drill and rectangle thin-set paddle to disperse material. Ensure no material is left stuck to the bottom of the pail.

Measure and Mix FlexKrete Slurry: Measure out the amount of FlexKrete needed into a mixing container, then add the recommended amount of catalyst (or less) as stated on the catalyst bottle. Do not use less than 25% of the recommended amount of catalyst - FlexKrete will not set up without catalyst. You will need to power mix for 30 seconds. The longer you mix it the faster it will set up. When fully mixed/catalyzed, then power mix in 3 to 3.5 parts of clean, dry, medium to course grade blasting sand until it is thoroughly blended. To buy yourself more workability time, you will want to immediately pour the slurry on the repair area rather than leaving it in the bucket. It is also a good idea to get all of the residual slurry out of the bucket with your trowel so you can easily re-use the bucket.

The Set Time Speed: Varying the amount of Catalyst and mixing times can regulate the set time speed. At 70 degrees, FlexKrete will set completely in one hour using the recommended ratios. At 100 degrees it will cure in the same amount of time with as little as 1/2 of the recommended ratios. At zero degrees, FlexKrete will set completely in one hour using the recommended ratio of Catalyst and the recommended ratio of **FlexTemp Accelerator/Additive**. At 70 degrees, if you use the full amount of Catalyst and FlexTemp Additive, FlexKrete will set completely in about 10 minutes!

Trowel Slurry: After pouring the slurry out of the bucket onto the repair area, you will first compact the slurry into all the voids, then use your trowel at a moderate pitch, to screed the slurry over the entire repair slightly above grade. To finish trowel, you will work in one direction, keeping the trowel at a low pitch, and applying downward pressure using long smooth strokes as you slick off the top. This process should only take one or two passes. As you pull the slurry off of the tape with your trowel, you will be able to see if your repair is close enough to grade – if not, scrape a couple inches off of the outside edge flush to grade, then try one more pass to ensure the repair is not sticking up too high. The toweling process is more like spackling than floating concrete. Keep your stainless trowels clean by wiping with acetone frequently.

Installation Instructions

Retain Expansion Joints: It is easiest to fill the void with FlexKrete then cut the expansion joints back in. Alternatively, you can retain joints by inserting a spacer board, foam board, tar board, but removal can be very tricky.

Remove Tape and Clean Up: You should pull the tape before the repair is set up. You can also spend these few minutes before opening the repair to traffic by cleaning up the area. If you have spills or primer outside of the taped area, you can easily clean it up with acetone, or simpler yet, by throwing a small amount of sand on the spot and using a hand stone or cup wheel to scuff it off. Retain Expansion Joints: Concrete slabs weigh many thousands of pounds and are designed with joints for inevitable ground movement and shifting. It is important for installers to retain any expansion joints or movement cracks; otherwise you may have failures of the surrounding concrete or FlexKrete repair. Since FlexKrete sets up fast, you can also fill the joint with elastomeric sealer right away. There are several simple methods for retaining worry free expansion and movement joints in FlexKrete repairs.

Open Repair to Traffic

Open Repair to Traffic: With FlexKrete you should never have to leave cones. To check whether the repair has set up, find an inconspicuous area to touch and/or check any leftover bits of slurry. When FlexKrete is completely hard to the touch, it is ready for traffic. On cooler days it is possible for the top of the FlexKrete to remain a little bit sticky to the touch, even after it is hard enough to drive on. To prevent the repair from immediately picking up tire and road grit, you can just sprinkle some sand on top of the repair.

Detailed Vertical and Overhead Instructions

Site Preparation

Ensure that Surface is Clean and Dry: For most vertical work such as Retaining Walls, Bridge Pillars, Columns, Ceiling Joists, and Curbs, there is very little preparation necessary to ensure the area is clean and free of contaminants. If needed, use chipping hammers, grinders, blasting equipment to mechanically remove loose concrete, corrosion, dirt and all contamination to produce a clean, dry, rough surface. Usually a wire brush is more than sufficient to clean the concrete or any rusting rebar. If you are fixing a curb where the damage has been painted over, you will want to grind the paint off with an angle grinder equipped with a diamond cup wheel or stone. You will want to use a leaf blower to get all the remaining dust and grit out of the cleaned area.

Tape or No Tape: If you want a flush to grade repair, you do not need to use duct tape, although some applicators use duct tape to mirror the damaged area. If you prefer an above grade-cut-out-look you will want to use duct tape to symmetrically tape off around the repair.

Mixing and Applying FlexPrime

(Same as Horizontal/Flatwork - Except for special priming)

Estimate Amount of FlexPrime: You are going to mix enough FlexPrime to paint a VERY THIN coat that completely covers the concrete and voids within the repair area. A simple way to estimate the amount needed is to estimate approximately 300 square foot of coverage per gallon. (i.e. 2.5 sf. an ounce) (38 sf. a pint) (75 sf. a quart).

Mix and Apply FlexPrime: Mix equal parts of A & B for 1 to 3 minutes, and apply a VERY THIN COAT with a brush, roller, or spray.

Allow FlexPrime to Tack: For vertical repairs it is critical to ensure that the FlexPrime is TACKY enough to hold the FlexKrete in place while it cures. The FlexPrime should be tacky enough to ensure the repair material achieves a mechanical bond to the repair area. Depending on the temperature, FlexPrime can take 15 to 30 minutes at 70 degrees and much longer when cold outside. If you do not want to wait for the FlexPrime to reach it's VERY STICKY stage, a torch can be used to preheat the concrete before applying FlexPrime so that it will tack more rapidly.

Special Priming

Installation Instructions

Fast Option - Overcoat Primer: If you are in a rush and cannot wait for the FlexPrime to completely tack up, you can mix up a FlexKrete Resin Priming Coat using the standard catalyst and our FlexTemp Accelerator / Additive. The FlexKrete resin painted on top of the FlexPrime can speed up the thermosetting and tackiness of both materials.

Fast Option - FlexKrete Resin Priming Only - On dry concrete some contractors omit the FlexPrime altogether and substitute with a thick coat of the FlexKrete priming coat only.

Mixing and Applying FlexKrete

Estimate The Volume of FlexKrete Slurry Needed: Since you will want to mix enough slurry to fill the repair area but not throw any away, it is a good idea to have all the repair areas in the immediate area, primed and ready. The simplest method is to look at the repair and estimate the volume of sand required to completely fill the void, and then divide by 2 to determine the amount of FlexKrete needed. (Example: One gallon void ÷ 2 = ½ gallon of FlexKrete to 1 gallon of fumed silica and 1 gallon of sand

Determine Consistency of FlexKrete Vertical/Overhead Slurry: A good starting point for a stiff batch is 1 part FlexKrete, 2 parts amorphous fumed silica, and 2 parts medium blasting sand. MORE FUMED SILICA MAKES IT STIIFFER, LESS SAND MAKES IT LIGHTER. If you are doing overhead repairs that are very thick, you may want to cut back on the sand to 1.5 parts to lighten up the slurry. For curbs, you can cut back on the parts of fumed silica and replace with sand if you do not need that stiff of a mixture. You can vary the ratios to meet your needs as long as the there are no more than 4 parts of fumed silica and sand to one part of FlexKrete.

Vertical Applications: After measuring and catalyzing FlexKrete, mix in 2-parts blast sand and 2 to 3-parts fumed silica. 3-parts fumed silica produces a stiff, dough-like material that can be hand-placed and toweled smooth. 2-parts fumed silica and 2-parts sand produces a less-stiff material and recommended as a good starting point to evaluate ratios needed.

Overhead Applications: After measuring and catalyzing FlexKrete, mix 1-part blast sand and 2 to 3-parts fumed silica. If material is too heavy, decrease amount of sand.

Mixing the Vertical/Overhead Slurry: The easiest way to mix in the fluffy fumed silica is to catalyze the FlexKrete for one minute, then stop mixing. Then add fumed silica and load most of the sand on top of it, working it in manually with your rectangle paddle before paddle mixing. Some applicators also use cardboard covers

over their mixing bucket to prevent loss of fumed silica. You should always wear respiratory protection when working around fumed silica.

Trowel Slurry: The vertical slurry mix is very stiff like bread dough or silly putty, therefore, the easiest way to get the material out of the bucket and onto the repair is to use a gloved hand to simply grab handfuls of material and pack them into the void above grade. Then you can then slice to grade or trowel above grade to the tape. Keep your stainless trowels clean by wiping with acetone frequently.

Retain Expansion Joints: On vertical and overhead repairs it is usually easiest to place expansion joint strips at the point of movement, while you are packing in the FlexKrete slurry.

Finishing

Finishing: If you use the tape off method, you should pull the tape before the repair is set up. If you use the "Flush-to-Grade" method, and the area is not going to be painted, you may want to put some finishing touches on the cured repair with an angle grinder or stone for final smoothing, "dusting" and/or color matching.

Installation Instructions

Detailed Overlay-Broadcast Instructions

This process is where you apply a coat of FlexKrete with 3/8" rollers, and immediately broadcast sand, quartz, aluminum oxide, vinyl chips or other aggregate onto the wet FlexKrete. After the FlexKrete sets up, you will broom off all loose aggregate, and then seal the decorative finish with a clear top-coat like FlexSealer1000 or FlexAspartic.

Site Preparation

Ensure that Surface is Clean and Dry: As with all FlexKrete applications, you need clean concrete. Many broadcast applications are done on interior floors that have been previously sealed, painted, or may contain contaminants like hydraulic fluid. You must ensure clean white concrete by bead blasting and/or grinding, brushing, brooming and vacuuming clean.

Tape Area: You will want to use duct tape to symmetrically tape off the area accurately. Anything not taped will end up being very hard to remove, and anywhere misaligned tape is on an area to be covered it will look sloppy.

Mixing and Applying FlexPrime

Estimate Amount of FlexPrime: You are going to mix enough FlexPrime to paint a VERY THIN coat that completely covers the concrete within the repair area. A simple way to estimate the amount needed is to estimate approximately 300 square foot of coverage per gallon. (38 sf. a pint) (75 sf. a quart).

Mix and Apply FlexPrime: Mix equal parts of A & B for 1 to 3 minutes, and apply a VERY THIN COAT with a roller. Make sure that the FlexPrime is not puddled at all. If you are unsure, a good policy is to lightly roll a dry roller over the area after applying. If you are priming a lot of area on a hot day, try to only mix up enough FlexPrime that can be applied within 15 minutes. If the FlexPrime starts to thicken up DO NOT apply it DISCARD. For easy application and penetration, you may thin the FlexPrime after mixing A & B by adding up to 10% acetone by volume.

At this point you can lightly sprinkle some sand onto the FlexPrime which will help you on the next step with a high build coat of FlexKrete. You should let the FlexPrime become very tacky before applying FlexKrete.

Mixing and Applying FlexKrete

Estimate FlexKrete Coverage: The goal is to apply the thickest coat of FlexKrete you can, without having puddles or ridges. Typically, you should try to apply the FlexKrete at about 75 square foot a gallon for a medium grade sand broadcast. A

normal thickness for coating-broadcasts is 10-mil to 20-mils. This translates to 80-160sq. ft. per gallon, depending on the broadcast material and substrate condition. Since you won't know how much EXACTLY the concrete will accept, when you pour out the ribbons – hold back on pouring about 10% to the end of the roll area.

Pre-Mix FlexKrete Before Using: Even if you are using Clear FlexKrete, you must pre-mix the bucket for 60 seconds.

Broadcast Application: Catalyze the FlexKrete using a rectangle thin-set paddle. Pour out ribbons, then with 3/8" knap roller apply the FlexKrete thickly and evenly without leaving uneven ridges or puddles. Back roll material then IMMEDIATELY broadcast the aggregate to refusal, onto the wet FlexKrete. It is a good idea to have the "thrower" start the broadcast on the first portions of the rolled areas as soon the "roller" gets ahead a few feet. When you broadcast the quartz, sand, or aluminum oxide, ensure to initially throw the sand up in the air so it lands flat upon the surface and does not create any ridges from the broadcasting. Two coats are recommended for extreme vehicle traffic or a richer color and the most durable finish.

Finishing

Remove Tape: If possible, remove the tape before FlexKrete completely sets up or the tape may be stuck to the pavement in spots. A utility knife or multi-tool comes in handy to remove stubborn tape.

Broom Clean: When the FlexKrete is sufficiently set up, usually within 30 minutes to 1 hour, you should use a very stiff broom and leaf blower/shop vacuum to completely remove any and all loose aggregate.

Add a Clear Topcoat: We offer FlexSealer1000 and FlexAspartic.

Applying FlexSealer 1000: When the new floor is completely free of loose particles, you may coat it with a clear sealer for a shiny decorative finish. You may use an airless sprayer or a roller. If using a roller, use a ¼" to 5/8" knap. Pour out small puddles of FlexSealer onto the floor starting at one end of the area and lightly and slowly pull the FlexSealer1000 puddles toward you. Do not overwork the material or you will create air bubbles. Do not leave the sealer on thick. If you want a high shine thick coating it is better to do 2 or 3 thin coats with sufficient drying time between them.

Retain Expansion Joints