



HOW TO PREPARE, MIX, AND APPLY FLEXIBLE CEMENT BASED  
WATERPROOFING

# **FLEXCRETE APPLICATION OVERVIEW**

# Being Site Ready

Preparing for the application

Being site ready means you have reviewed all written materials and viewed this presentation in its entirety. It is imperative that the principles, methodology and procedures outlined in this training video are adhered to with diligence.

The primary conditions outlined in this video are for general purpose application in swimming pools, spas, fountains etc. For specialized applications over differing substrates contact Valcon Industries Technical Department for project specific guidelines ie; tile over tile etc.

Valcon warrants its products as stipulated in the Valcon 2014 Warranty Program. The warranty extends to materials only as the proof of application is reliant upon the applicator to complete the project in accordance with the Valcon Application System.

# LEARNING FACTORS REGARDING FLEXCRETE APPLICATION

1. Pre Application Conditions
2. The products
3. Tools you will need to mix and apply.
4. Proper material storage on site and elsewhere.
5. Engineering and Architectural Details.
6. Temperature
7. Saturated Surface Dry Wall conditions. (SSD)
8. Proper mixing and wait time with remixing and agitation as necessary.
9. Proper application by hopper gun
10. Working Flexcrete Into The Substrate.
11. Cure Times
12. Clean Up.
13. Water Testing
14. **TEAMWORK TO MAKE IT HAPPEN**



## **PRE APPLICATION CONDITIONS**



**Clean means clean.  
No Dirt  
No Sawdust  
No Metal Particles  
No Laitenance  
No Water**

**Surface must be  
cleaned with 3000  
psi pressure wash  
and or vacuumed  
prior to application  
of the Flexcrete  
waterproofing.**



## THE PRODUCTS

- Flexcrete polymer in 5 & 1 gal. containers and Flexcrete Compound packaged in Gray, White and Black, in 50 lb. sacks
- FX-180 Densifier and Curing Agent for all types of cement based materials.
- X-Ten 100% clear and pure RTV silicone rubber chemical proof waterproofer.
- Geltekk 100% GRAS safe Super De Greaser
- Stabitol™ Safe Acid Etching and Cleaning Technology
- Flexcrete Reinforcing Mesh For Cold Joints and Transitions

VALCON™  
INDUSTRIES



**FLEXCRETE  
POLYMER**



**FX-180  
DENSIFIER**



**X-TEN  
CLEAR SILICONE**



**GELTEKK  
SUPER CLEANER**



**ETCHEX  
CHEMICAL ETCH**



## TOOLS YOU WILL NEED TO MIX AND APPLY

1. Empty buckets to mix in
2. Drill and mixer to mix material
3. Margin and pool trowels
4. Masons brush
5. Hopper / Texture gun with air compressor and hoses
6. Flexcrete Polymer
7. Flexcrete Compound
8. Garbage can and ice for hot weather application
9. Garden type sprayer for applying water to dampen the substrate prior to application
10. Tarp to protect mixing area from spills
11. Tape to protect fittings to be embedded in Flexcrete

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## PROPER MATERIAL STORAGE ON SITE AND ELSEWHERE



Keeping materials in the shade and out of the weather is always the right thing to do. Bagged material setting in the sun becomes thermal heat sinks, gathering and holding the heat which will definitely accelerate the set. All bagged goods should be kept in a cool and dry place. Open bags should be sealed after opening or placed into a five gallon bucket with a lid to limit moisture exposure and premature setting.



Flexcrete Compound

Flexcrete Polymer

Flexcrete Mesh

# ENGINEERING AND ARCHITECTURAL DETAILS



Transition and thru wall fittings as well as drains etc., need to be sealed to the substrate with Flexcrete.

1. Make sure the concrete substrate is undercut around the perimeter of the pipe. Assure that the surface is clean and dry.
2. Apply tape to mask off the areas that you do not want to get Flexcrete on.
3. Apply Flexcrete a minimum of ¼" thick around the outside of the pipe etc. This should be done prior to primary basecoat and repeated during each application.





# TEMPERATURE

Temperature affects all aspects of the Flexcrete application. If the substrate temperature is too hot it will cause the water to leave the waterproofing too early and flash set. This can be offset by assuring a SSD (saturated surface dry) condition. This can cause delamination if applied to a dry substrate. If the polymers or the compound is too hot it can highly reduce the pot life to fifteen minutes. Generally if the temperature of the working material is between 65 and 75 degrees F. the working time can be a least 30 – 45 minutes.



*Substrate temperature in the shade*



*Substrate temperature in the sun*



1 hour before

- Container For Bucket & ice
- Ice and Water

Temperature Drop

- Bucket pulled from container
- Polymer temperature 63 deg. F.

Pot Life Extended

- Compound kept in shade and added to cold polymer
- Batch temperature 74 deg. F.

## SATURATED SURFACE DRY CONDITION

Saturated Surface Dry Condition (SSD) means that the substrate (concrete) has been wet with a fine mist continuously so that the surface has absorbed water and will allow for the proper hydration of the waterproofing once applied to the substrate.



Saturated

Surface

Dry

# PROPER MIXING, WAIT TIME AND RE-MIXING

1. Pour approximately 1.5 gallon of polymer into a five gallon bucket.
2. Open compound bag
3. While mixing add dry powder to the liquid as it mixes
4. Mix till a smooth pancake batter consistency is achieved and then stop. Allow material to dwell five minutes.
5. Remix until pancake batter consistency is achieved.
6. Rinse mixer in water
7. Spin dry
8. Pour material into hopper gun.
9. Apply as needed



## PROPER APPLICATION METHODOLOGY



Proper application methodology is essential in order to achieve not only a waterproof condition but increase and improve the productivity in the field. Shown are three men :

1. One man mixes and keep the walls damp.
2. The second spray applies the material.
3. The third brushes and works the material into the concrete substrate.

*"You can let the material work you or you can work the material. "*



## WORKING FLEXCRETE INTO THE SUBSTRATE

Working the material into the substrate on the first coat is essential. This fills all the voids and pinholes as much as possible. Once sprayed, the surface is worked with a masons brush and given a final stroke in a single direction. The second coat is usually done with a different color and applied perpendicular to the first coat.



## Second Coat Flexcrete With Different Color Compound



Two coats of Flexcrete are required to create a waterproof system. The earlier first coat was white over gray concrete. The second coat is gray over the white first coat. Each coat is put on perpendicular to the first, with a broom finish for better mechanical adhesion of the pool plaster itself.

### *For Improved Adhesion and Bonding Of The Plaster Coat*

*1 quart of the Flexcrete polymer per 150 pounds of material and water is used by many of the plasterers to improve adhesion and create a water resistant plaster finish with less dusting.*



## CLEAN UP

Always clean the mixer after each mixing set up. Clean all trowels and hand tools as you go. Clean the hopper as needed to prevent internal build up and slower spray speeds. Always protect all surfaces from overspray, once cured it is virtually impossible to remove.



## TEAMWORK MAKES IT HAPPEN

Teamwork is essential in order to complete the application of the waterproofing. Here each member is doing their part to provide a simple and repetitive process assuring a waterproof condition.





## WATER TESTING

Water testing is the final facet of the waterproofing prior to the application of the plaster and the tile finishes. Water is placed in the vessel that has been waterproofed with Flexcrete and cured a minimum of seven days after the last application. This allows the material to reach full cure and waterproofing capability. Water should be maintained for several days in the vessel to assure a waterproof condition has been achieved.



## CURING TIMES

### MATERIAL CURING IS ESSENTIAL

#### Concrete:

Concrete curing time before Flexcrete application is generally 28 days.

If FX-180 is applied to the concrete after placement application can begin in 14 days.

#### Flexcrete:

24 hours between coats never sooner.

#### Water Testing:

Material must fully cure for seven days before filling.



# NEXT On Site Application

By Nassau Pools Construction, Inc.  
Naples, Florida

Lets Head To The Beach Where  
Flexcrete Waterproofing Is  
Being Applied To A  
Suspended Pool And Spa With  
Weir Wall And Infinity Edge

Bonita Beach, Florida



It has been our pleasure to provide you integral training and education regarding waterproofing with permanence and quality you can be assured of.

**THANK - YOU**