

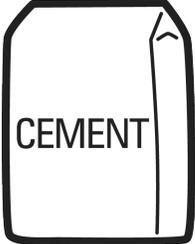
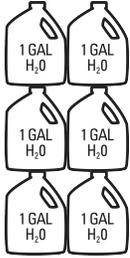
# HerbCrete

## Stucco Core Mix™

### Basic mixing instructions when using a tow behind mortar mixer

HerbCrete Core Mixes™ are designed to mix with Type I or Type II Portland cement and an appropriate aggregate to produce a high-quality stucco. If rapid set is needed, then Type III Portland cement may be used, but the working time is greatly reduced. If working in an area where sulfate resistance is needed, Type IV or Type V may be used.

#### Materials List

				
<b>Stucco Sand</b>	<b>Cement</b>	<b>HerbCrete</b>	<b>Water</b>	<b>Pigment (optional)</b>
Five 5-gallon buckets of loose damp well graded sand (see pg. 2)	1 bag	Stucco Core Mix™ One 5-Pound Bag	About 6 gallons	

#### Instructions

**Add to your tow-behind mixer in the following sequence**

Step	Ingredient	Quantity
1	Water	4 gallons
2	Sand	One 5-gallon bucket
3	HerbCrete	One 5-pound bag
4	Pigments	As specified
5	Portland cement	1/2 bag
6	Water	To make a workable paste
7	Portland Cement	1/2 bag
8	Sand	Four 5-gallon buckets
9	Water with sand	To maintain a workable paste

***Keep Reading For Detailed Instructions***

### ***Additives, approved and potentially deleterious ones***

Up to eight pounds of inorganic concrete pigments can be added per batch. If you want to produce a water resistant stucco, you may add Dry Core according to the instructions that come with the Dry Core package. Dry Core does reduce the breathability of the stucco. (Dry Core is still in development and not on the market yet.)

Do not add any admixtures, magic potions, or other components unless you have written assurance from Herb, of HerbCrete, that such addition will not cause a problem.

HerbCrete is not designed for mixing with mortar cements, masonry cements, plastic cements, or blended cements.

### ***Producing a white or pastel stucco***

HerbCrete is the whitest high-quality stucco concentrate available. If you want a white stucco, or a pastel color, you can use HerbCrete for the finish coat rather than buying a high-cost white or pastel finish coat. To produce a white stucco, you should blend the HerbCrete stucco concentrate with white Portland cement and the whitest sand that you have in your area. If you want a pastel color, you should add weighed amounts of pigment to the mixer when the HerbCrete Stucco concentrate is added. Some clients do not want any variation in the color of their stucco. Others prefer to have some variation. If you need instructions on how to apply the finish with minimal color variations, let us know.

If the color of the stucco is not a concern (such as for the scratch coat and the brown coat), you will save money by using gray Portland cement.

### ***Water usage***

The amount of water used will vary, based on whether the sand is wet or dry and on the gradation of the sand.

These instructions are based on using loose, damp sand.

### ***Sand***

Ideally you should use a good grade of stucco sand meeting the requirements of ASTM C 897. If that is not available, then use a good grade of masonry sand meeting the requirements of ASTM C 144. There are many sands across the US that do not meet either standard, and there are areas where sand meeting these specifications is not available. If you do not use one of these sands, you will have to modify the amount of sand used to obtain a creamy, workable mix. This will also impact the amount of water used.

Sands that are graded to a single size, such as sandblasting sand, have much more void space and thus the amount of sand that can be added is greatly reduced. If you use sandblasting sands, blend at least two different sizes.

Sands that have been produced by crushing (referred to as manufactured sand) are harder to trowel than sands that are naturally rounded. With a manufactured sand, you will need to reduce the amount of sand used. This will usually produce a stucco with a higher compressive strength.

Most loose, damp sand contains 80 pounds of sand per cubic foot and about 6 pounds of water. Most dry sand contains about 100 pounds of sand per cubic foot. When the instructions call for a bucket of sand, that is a 5-gallon bucket of loose, damp sand. Such a bucket, level-full, will hold 5.5 gallons. Following are some weights and measures concerning sand:

1 gallon of loose, damp sand @ 6% moisture

10.2 pounds total weight (9.6 pounds of sand and 0.6 pounds of water)

1 gallon of dry sand

12.0 pounds of sand

1 gallon of sand standing in water

12.0 pounds of sand

Four 5-gallon buckets of loose, damp sand would contain 211 pounds of dry sand. That amount of dry sand would fit into 3.2 5-gallon buckets.

Five 5-gallon buckets of loose, damp sand would contain 264 pounds of dry sand. That amount of dry sand would fit into four 5-gallon buckets.

Since sand gradation varies, with your first batch or two, if you do not get the creaminess that you desire, cut back on the sand by half a bucket.

The brown or second coat should be a little weaker than the scratch or first coat. This can be accomplished by adding 1/4 bucket more sand in the brown coat than in the scratch coat.

### **Mixing HerbCrete**

The 5 pound bag size HerbCrete is designed to mix with one bag of Portland cement in large tow behind mixers. We also produce a conviened size bag which is mixed in a 5-gallon bucket. If you are using the convience (bucket) size packaging, please request the separate set of instructions.

Use an appropriate-sized, paddle-type mortar mixer. Rather than filling it to the brim, you are going to want to fill it to the level of the horizontal shaft, or slightly above the horizontal shaft. This gives sufficient mixing room for the

stucco to be mixed. There are mixers on the market that are identified as 2-bag mixers, that will mix only one bag at a time. These instructions are for mixing one bag at a time. If you have an appropriate-sized mixer, you can increase the number of bags that are mixed at any given time.

### ***Components to be used***

About 6 gallons of water

One bag of Portland Cement

One large bag of HerbCrete Stucco Core Mix™

Five 5-gallon buckets of sand

### ***Mixing instructions***

With the mixer running:

Add 4 gallons of water to the mixer.

Add one 5-gallon bucket of stucco sand.

Add 1 bag of HerbCrete concentrate.

If you are going to add pigment, now is the time to add pigment.

Add half a bag of Portland cement.

If the paste is starting to get slightly stiff, add additional water, but measure the amount of water that is added.

Add the other half-bag of Portland cement.

With periodic adding of water, and measuring it, continue adding sand, until five 5-gallon buckets of sand have been added.

Add water, slowly, until the mix is an appropriate consistency for trowelling or spraying.

Mix for 5 minutes and use the stucco. Overmixing can entrain excess air and weaken the stucco.

For your next batch, start off with 90% of the water you used to produce the first batch.

## ***The mixing process***

**Add to your tow-behind mortar mixer in the following sequence**

Step	Ingredient	Quantity
1	Water	4 gallons
2	Sand	One 5-gallon bucket
3	HerbCrete	One 5-pound bag
4	Pigments	As specified
5	Portland cement	1/2 bag
6	Water	To make a workable paste
7	Portland Cement	1/2 bag
8	Sand	Four 5-gallon buckets
9	Water with sand	To maintain a workable paste

## **Applying HerbCrete Stucco Core Mix™**

HerbCrete Stucco Core Mix™ can be either trowel applied, or sprayer applied.

Follow standard techniques for applying. After the 1st coat, also called the scratch coat, has been applied, the surface needs to be prepared to receive the 2nd coat, also called the brown coat. Traditionally a scratch tool has been utilized to cut grooves into that 1st coat. Testing has shown that back dragging the trowel over the stucco produces a surface that is as conducive to bonding the next coat as scratching does. The back dragging also opens up the stucco surface and allows it to breathe. This reduces hairline cracks. If you slicked the 1st coat down with the trowel, there would not be much mechanical bond between the 1st coat and the 2nd coat.

Back dragging with the trowel also allows the applicator to cut down high spots on the wall. This results in a flatter-finished wall. A scratch tool does not allow for cutting down the high spots.

Due to conditions of the substrate, it is possible that the 1st coat of stucco can crack. A vast majority of the plastic shrinkage cracking that will occur will take place within 48 hours. If you delay applying the 2nd coat for 48 hours, any cracking that has occurred in the 1st coat will not telegraph through.

The 2nd coat may be troweled smooth, but the surface should not be slicked or burned. I prefer back dragging with the trowel to give a sandpapering surface.

If the stucco was made with extra water, or if the sand contains efflorescence-causing salts, and the finish coat was applied within 7 days of the 2nd coat, efflorescence will occur. By delaying 7 days before applying the finish coat the chances of efflorescence coming through are greatly reduced..

## **Curing HerbCrete stucco**

All stucco needs to be cured, not just HerbCrete.

The basic curing process is simple: moisten the wall often enough so that the stucco does not dry out and dehydrate before it has had an opportunity to cure. The easy way to determine whether you are successful is to observe the color of the stucco. If it remains the rich gray color of freshly applied stucco, it has plenty of moisture. If the color fades, and what had been a rich gray color becomes a pale gray color, the stucco has dried out. This stops the chemical curing of the stucco.

While many people use a hose to wet down a wall, it can lead to erosion of the stucco. I prefer to use a Hudson type sprayer and add just enough water to keep the surface moist.

This curing process should be maintained for about 48 hours. Remember, you are not trying to add water to the stucco. You were trying to maintain surface conditions so the stucco does not dehydrate.

***\*If you are unable to mix with a tow behind mixer and need to scale down to smaller quantities please contact us.***