



# Veneer CORE MIX®

## Manufacturer

HERB-CRETE™ LLC.

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[www.HERBCRETE.com](http://www.HERBCRETE.com)

(844) CORE-MIX (267-3649) or (702) 906-0260

## PRODUCT DESCRIPTION

HERB-CRETE Veneer Core Mix is a mix of essential minerals. It is blended with Portland cement and sand to make a mortar designed to provide a scratch coat and a bond coat for attaching masonry veneers and stone veneers.

## USES

HERB-CRETE Veneer Core Mix is an ideal choice for:

- Manufactured stone veneer
- Natural stone
- Thin Brick

## LIMITATIONS

**Do not** apply less than 3/8 of an inch in thickness.

**Do not** apply to surfaces that are sealed.

**Do not** apply to smooth surfaces that have not been bead-blasted or shot-blasted.

**Do not** use with thin marble.

**Do not** apply to stones larger than manufacturer's stone veneer application specifications.

## SAND REQUIREMENTS

Just about any silica sand and many non-silica sands can be effectively used, but they change the regulated ratios of the mix and the compressive and flexural bond strengths. We strongly recommend and sand that meets the requirements of ASTM C897 (stucco sand) or ASTM C144 (mortar sand). Sand measurements are based on loose damp sand. Such sand contains about 80 Lbs of dry sand per cubic foot. You may use dry sand, but dry sand packs more densely than loose damp sand, and usually contains about 100 Lbs per cubic foot. If using dry sand go to [www.HerbCrete.com](http://www.HerbCrete.com) to find a conversion. Dry sand usually has air bubbles sticking to it. These can be eliminated by letting the initial sand and water soak for a few minutes in the mixer.

## TECHNICAL DATA

### COVERAGE:

#### Packaging

5-lb. bag

10 bags per case = 50 lbs.

#### Scratch Coat

One 5-lb. bag covers

64 -75 sq. ft. @ 1/2"

#### Bonding Mortar

One 5-lb. bag covers

50-60 sq. ft. @ 1/2"

#### High-Bond Mortar

One 5-lb. bag covers

45-55 sq. ft. @ 1/2"

### Technical Data

Compressive Strength (psi)  
when mixed as a scratch coat

3 day @ 840 psi

7 day @ 1480 psi

28 day @ 2290 psi

Flexural Strength (psi)  
when mixed as a scratch coat

3 day @ 50 psi

7 day @ 60 psi

28 day @ 80 psi

Shear-bond Strength (psi)  
when mixed as a bonding mortar

3 day @ 60 psi

7 day @ 90 psi

28 day @ 130 psi

### Technical Support

For additional information and for technical questions, contact HERB-CRETE LLC at:

844-267-3649 (844-CORE MIX)

[www.HERBCRETE.com](http://www.HERBCRETE.com)

[tech@HERB-CRETE.com](mailto:tech@HERB-CRETE.com)



## GENERAL APPLICATION PROCEDURES:

Two coats are required to create a proper bonding of veneer. A scratch coat and a bonding coat. Each coat applied to 1/2" thickness. Scratch coat can be applied by mortar sprayer or trowel. Bond coat to be applied to the back of the stone with a trowel.

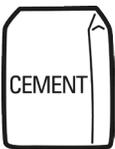
## BASIC MIXING INSTRUCTIONS WHEN USING A TOW-BEHIND MORTAR MIXER

HERB-CRETE Veneer Core Mix is designed to mix with Type I or Type II Portland cement and an appropriate aggregate to produce a high-quality veneer bonding mortar. If rapid set is needed, 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



**Stucco Sand**



**Cement**  
1 bag



**Veneer Core Mix**  
One 5-Pound Bag



**Water**



**Pigment** (optional)

## MIXING INSTRUCTIONS:

### Scratch Coat

Materials quantity

- Water 4 gallons (varies with sand gradation)
- Loose damp sand 4 to 4.7 five gallon buckets
- Veneer Core Mix 5 pound bag
- Portland cement 1 bag

### Mix in the following sequence.

While the mixer is running add most of the water at this time. Add 1/2 of the loose damp sand. Add Veneer Core Mix. Add 1/2 the bag of Portland cement. If mix is starting to get slightly stiff, add more of the premeasured water. Add the other 1/2 of the Portland cement. Add remainder of the loose damp sand. Continue to add measured water slowly until mix has achieved desired consistency. Mix for 5 minutes. Do not over mix as it can entrap air and weaken mortar.

### Bond Coat- Mortar

Choose either Bond coat or High Bond then following the materials quantity. The main difference to achieve high bond mortar is the amount of sand used.

Bond Mortar - Materials quantity

- Water about 4 gallons
- Loose damp sand 3.4 five gallon buckets
- Veneer Core Mix 5 pound bag
- Portland cement 1 bag

High Bond Mortar – Materials quantity

- Water about 4 gallons
- Loose damp sand 3 five gallon buckets
- Veneer Core Mix 5 pound bag
- Portland cement 1 bag

### Mix in the following sequence.

While the mixer is running add most of the water at this time. Add 1/2 1/4 of the loose damp sand. Add Veneer Core Mix. Add 1/2 the bag of Portland cement. If mix is starting to get slightly stiff, add more of the premeasured water. Add the other 1/2 of the Portland cement. Add remainder of the loose damp sand. Continue to add measured water slowly until mix has achieved desired consistency. Mix for 5 minutes. Do not over mix as it can entrap air and weaken mortar. Measure water used and make future batches with that amount of water.

\*See sand section for loose damp sand measurement in cubic feet.



## COMPROMISES

The more water added, the lower the compressive strength and the higher extent of bond which impacts the flexural bond strength until you reach a point where the suction of the mortar does not hold the veneer where you placed it.

The more sand you add, the less likely for cracks to develop at the veneer/mortar interface, but the lower the compressive and flexural bond strengths.

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## KEEP READING FOR DETAILED INSTRUCTIONS.

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

Up to 8 pounds of inorganic concrete pigments can be added per batch.

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

HERB-CRETE is not designed for mixing with mortar cements, masonry cements, plastic cements, or blended cements.

### **Producing a white or pastel veneer bonding mortar**

HERB-CRETE is the whitest high-quality veneer bonding mortar concentrate available. To produce a white veneer bonding mortar, blend the HERB-CRETE Veneer Core Mix with white Portland cement and the whitest sand that you have in your area. If you want a pastel color, add weighed amounts of pigment to the mixer when the HERB-CRETE Veneer Core Mix is added. Some clients do not want any variation in the color of their veneer bonding mortar. Others prefer to have some variation. If you need instructions on how to mix and apply to produce the least color variations, please contact us at 844-267-3649.

If the color of the veneer bonding mortar is not a concern (such as for the scratch coat or a groutless application), you will save money by using gray Portland cement.

## **Sand**

It is ideal to use a good grade of stucco or masonry sand meeting the requirements of ASTM C897 or ASTM C144. There are many sands available across the United States that do not meet either standard. In some areas, 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, it is necessary to reduce the amount of sand used. This will usually produce a veneer-bonding mortar 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 refers to 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:

- **Scratch coat:** 4 to 4.7 five gallon buckets of loose damp sand to equal 3 to 3.5 cubic feet
- **Bonding coat mortar:** 3.4 five gallon buckets of loose damp sand to equal 2.5 cubic feet
- **High bond mortar:** 3 five gallon buckets of loose damp sand to equal 2.25 cubic feet
- **1 gallon of loose, damp sand at 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



### **Sand** *(continued)*

Four 5-gallon buckets of loose, damp sand contains 211 pounds of dry sand. That amount of dry sand would fit into (3.2) three point two 5-gallon buckets.

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

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

### **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 upon using loose, damp sand. The amount of water and the fluidity of the mix are adjusted based on the judgment of the lead mason on the job. Limiting the amount of water and producing a stiff mortar will result in a mortar with a higher compressive strength, but the flexural bond strength will be lower because of reduced extent of bond. As more water is added to the mix, the compressive strength decreases and the bond strength increases. The ideal amount of water in the mix is the maximum amount of water that can be added and still have sufficient suction so that the veneer can be placed and will be held in place without sagging.

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## **ENVIRONMENTAL REQUIREMENTS**

Only apply at temperatures of 40 degrees F (5 degrees C) and above. Avoid application when there is risk of frost within 24 hours after application. Take proper precautions on extremely hot or windy weather days. Do not submerge product.

## **APPLICATION - SCRATCH COAT**

The first coat (scratch coat) of veneer bonding mortar can be either trowel-applied, or sprayer-applied. If SpiderLath is used, which we recommend, spray application of the scratch coat works best. We recommend that the first coat be nominally 1/2-inch thick.

Traditionally a scratch tool is used to cut grooves into that first 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 surface and allows it to breathe. This reduces hairline cracks. If you slicked the first coat down with the trowel, there would not be much mechanical bond between the first coat and the veneer bonding 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 traditional scratch tool does not allow for cutting down the high spots. MortarSprayer.com has a scratching trowel that is designed to both scratch and cut down on the high spots on the wall.

Due to conditions of the substrate, it is possible that the first coat can crack. A vast majority of the plastic shrinkage cracking will occur within 48 hours. If you delay bonding the veneer to the wall for 48 hours, any cracking that has occurred in the first coat will not telegraph through.

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## **APPLICATION - BONDING COAT**

To bond the veneer to the wall, butter the back of the veneer with at least 1/2 inch of veneer bonding mortar and press it into the scratch coat so that mortar squeezes out on all sides. If you are looking for a grouted look, use a little more veneer bonding mortar. Hold for a moment and release. Ideally the water content should be such that you hold the veneer in place for two seconds and the suction then holds it securely. After you release the veneer, it should not be moved or touched. If it must be moved, remove it, remove all of the veneer bonding mortar and start over.

Work clean, but do not try to clean the veneer as you go. That will break bonds. Wait until the veneer bonding mortar has set and then use a brush to clean the surface.



## COMPOSITION

A blend of proprietary chemicals carries the Portland cement reaction further so that the final product is more stable than a conventional Portland mortar. It is designed to mix with Portland cement and an appropriate aggregate to produce a high-quality scratch coat or a high-quality veneer bonding mortar.

This is normally produced with Type I Portland cement. However, you may modify by substituting different types of Portland cement as follows:

- For moderate sulfate resistance use
  - Type II Portland cement
- For high early strength use
  - Type III Portland cement which produces rapid set
- For low heat of hydration use
  - Type IV Portland cement
- For high sulfate resistance use
  - Type V Portland cement
- White cement can be used and takes pigments extremely well.

## ACCEPTABLE SUBSTRATES

- Follow standards for manufactured stone veneer installation.
- SpiderLath or 2.5 or heavier diamond metal lath.
- CMU—direct-applied as long as a good bond can be established. Note: Many CMU are manufactured with a water repellent incorporated into the units; therefore, a layer of lath must be used.
- Pre-Cast/Tilt Wall—curing compounds are used in the manufacturing process that can interfere with bonding; bead-blast or sand blast to create a good bonding surface
- ICF—fasten lath securely to the wall.
- Structural concrete insulated forms are an ideal for masonry and stucco veneers.

## CURING

All cementitious products need to be cured, not just HERB-CRETE products.

The basic curing process is simple: After the first coat has been scratched and is stiff enough so that it will not be eroded with the moisture that is applied, moisten it often enough so that it 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 first coat. If it remains the rich gray color of freshly applied mortar, it has plenty of moisture. If the color fades and what had been a rich gray color becomes a pale gray color, the mortar has dried out. This stops the chemical curing of the mortar.

While many people use a hose to wet down a wall, it can lead to erosion of the mortar. Herb prefers 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 mortar. You are trying to maintain surface conditions so the mortar does not dehydrate. This can be done by periodically lightly misting or by hanging polyethylene plastic in front of wall.

Weather conditions may affect drying; high heat, sunlight, and wind may be detrimental to proper curing. Minimize application during harsh conditions. Initial set should be achieved in eight hours.

## CLEANUP

Except veneer faces, immediately remove product from surfaces not intended to receive mortar using a damp sponge or tools and equipment prior to material set. Use clean water.

Working clean is better than having to clean up. If mortar gets on face of veneer, wait until the bonding mortar has cured for several days and then brush it off. Cleaning as you go may break the bond between the bonding mortar and the unit.



## MAINTENANCE

HERB-CRETE veneer mix does not require routine maintenance but the veneer may need to be treated with a silane or siloxane water repellent every five years. Check with your veneer supplier. Only apply at temperatures of 40 degrees F (5 degrees C) and above.

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## STORAGE

Store product in a dry, covered location on pallets. Do not expose to weather elements or allow getting wet or moist. Do not stack pallets.

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## SHELF LIFE

12 months if stored in original packaging, away from moisture.

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## PRECAUTIONS

In case of contact with eyes, wash immediately with water and consult a physician. Wear appropriate goggles. Keep away from children.

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## WARRANTY

HERB-CRETE LLC warrants this product when used according to manufacturer directions. Warranty covers refund of the purchase price or replacement of product at manufacturer's/seller's option. HERB-CRETE is not liable for installation costs or cost of labor.