

# Harristone™

*A professional guide to Harristone veneer™ installation*





## What is Harrystone?



Harrystone is a light weight, all-masonry precast stone. It requires no footings, foundation or structural support when it is used on a solid surface. The stone installs quickly and easily, making it perfect for professionals and do-it-yourselfers.

This guide outlines our proven system for installing Harrystone. We trust this guide will answer your questions and help make working on your project simple and enjoyable. Of course, if you have questions, please call (888) 878-6631 and one of our experts will be happy to offer advice.



## Step 1 Estimating the Job

### How much stone do you need?

Estimating how much stone you'll need for your project is actually quite simple. You must first determine two basic things: 1) how much flat stone is needed and 2) how many corners you will need. That's it. As you can imagine, Harrystone flats are used on all the flat areas of your job. Likewise, Harrystone corners offer the ideal way to handle outside corners while maintaining a natural stone look.

### Determining square footage for flat areas

To determine the square footage of your project simply multiply the length times the width. For example if you are placing Harrystone on a wall that is eight-feet tall and five-feet wide, the total square footage is 40 feet ( $8 \times 5 = 40$ ). When you are taking your measurements, remember to subtract areas that will not be covered by stone (windows, doors, fireplaces, moldings, corners, etc.) from the total square footage.

### Determining lineal footage for corners

Corners are sold by the lineal foot, which means you must calculate the total running feet of your project. Again, accurately calculating this number is easy. For example if you have an outside corner that measures twelve feet from the starting point to ending point, you will need twelve lineal feet of Harrystone corners. In your final calculation, subtract about  $\frac{3}{4}$  of a square foot from your flat areas for every linear foot of corners.

## Step 2 Preparing the Surface

Because every situation is different, Harrystone is designed to adhere quickly, easily and powerfully to a variety of surfaces. The following section explains how you should prepare the surface of wood substrate, sheet rock and masonry.

### Application to structurally sound wood substrate

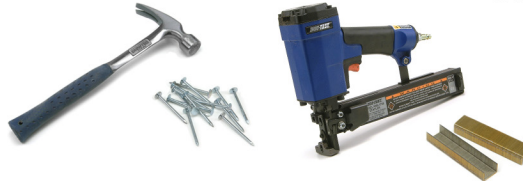
#### Vapor barrier

If you are installing Harrystone over bare wood, you must first attach building paper to create a vapor barrier. We recommend using a two-ply grade D building paper that complies with Section 1402 of the UBC. To attach the paper, start at the bottom of the area to be covered and run the paper horizontally, ensuring that you overlap sheets by at least 4 inches. Use a small hand stapler to firmly tack the paper.

## Metal lath or #17 gauge 1-1/2 inch woven wire mesh



Once you've covered all surfaces that require a vapor barrier, you should attach a 2.5 or 3.4 lb self-furring metal lath or a #17 gauge 1-1/2 inch woven wire mesh. Use appropriately-sized galvanized roofing nails or staples, space the fasteners 6 inches on center, and make sure they are long enough to penetrate at least 1 inch into the supporting studs. Use a hammer to insert the nails. If you are using wire woven mesh, we recommend using a pneumatic staple gun to accommodate the large spaces between wires. In either case, wire ends must be overlapped at least 1/2 inch. The wire must also wrap around all corners so that vertical seams are at least 16 inches from any corner. Installed properly, the wire mesh or metal lath provides a sturdy foundation for your scratch coat.



*Always wear safety glasses when using pneumatic tools*



### Scratch Coat

To provide a rigid backing for Harristone, you should create a scratch coat. The scratch coat is simply a coat of mortar that is spread over the entire surface. To make your scratch coat, apply Type S Mortar (refer to "Mixing the mortar", step 3 in the following section) at least 1/2 inch thick across the area. Use a trowel to apply the mortar and a notch trowel or similar device to texture the surface. Once the surface is covered and is appropriately textured, allow the mortar to dry for at least 48 hours.



### Application to interior sheet rock

Preparation for sheet rock application is virtually identical to wood substrate. However, because sheet rock does not require a vapor barrier, you can skip step 1 in the wood substrate example above. All other steps apply.

### Application to masonry

If you are applying Harristone to clean, non-painted masonry, it is not necessary to use either building paper or mesh. Simply apply the veneer directly to the masonry. Prior to application, all painted or sealed masonry surfaces should be cleaned and sandblasted to provide a good bonding surface. You may also attach metal lath or #17 gauge stucco wire on top of a painted or sealed surface to create a sturdy bond surface.



## Preparing the Mortar



### Mortar type-

Harristone veneer requires the use of Type S mortar. Type S mortar is available pre-mixed at most home improvement stores, or can be made by following the mixing instructions below:

1 part cement, . 3/4 parts lime, 4 parts sand.





## Mixing the mortar

Various mixing methods can be used depending on quantity and available equipment. For small jobs, you can use a wheelbarrow as a mixing tub and garden hoe as a mixer. Another common method is to use a 1/2 inch drill with a paddle mixer attachment to stir the mortar in a five-gallon bucket. For larger projects with multiple masons, we recommend using a drum or paddle mixer.



### Mortar consistency

Proper mortar consistency is critical to your success. Mixed correctly, the mortar should easily adhere to Harristone. If too much water is used, the mixture will be soupy and the stone may not bond correctly. On the other hand, if you don't use enough water, the mixture will be crumbly. Dry and crumbly mortar does not firmly adhere to stone and most stones quickly detach from the surface.

If you purchase pre-mixed Type S mortar, use the mixing instructions printed on the bag as your starting point. Adjust the blend until you achieve a paste-like consistency. If you are installing the stone in high temperatures (usually over 80 degrees), you may need to moisten the back of each stone before application.

### Coloring mortar (optional)

Although many people choose a natural tint, mortar can be colored to suit your tastes. Powder and liquid tinting materials are available in a variety of colors. A word of caution: Most tinted mortar will dry to a different color. We recommend that you allow a sample to completely dry before committing to a color or using it on your project. Additionally, accurate measurement of pigment will help eliminate color variations from one batch of mortar to the next.

## Step 4 Installing Harristone



### Spreading out the stone

All Harristone offers unique colors and features. Before you begin applying stone to your project, it's a good idea to spread the stone on the ground and look it over. This gives you the chance to compare colors and shapes and allows you to custom-design the overall look of your project. If multiple boxes are used, we recommend that you select stones from multiple boxes to achieve an even distribution of color.

### Applying the stone

There is no "right" way to install Harristone. Depending on personal preference, Harristone and Harristone corners can be applied from the top down, or from the bottom up. There are advantages to both approaches. If you work from the top down, the stone tends to stay clean because it remains free from falling debris and mortar. On the other hand, when you work from the bottom up, stones are supported by the rocks below. Again, both methods work equally well, choose the method that works best for you.





## *Keeping the job clean*

When it comes to laying stone, clean work makes easy work. Mortar on the face of cast stone hides color and is difficult to clean. Remember this: The more time you spend keeping stone faces free of mortar, the less time you'll have to spend cleaning your project.

## *Installing Harrystone accessories*

If your project requires accessories such as sills, jackarches, keystones, quoins, caps, hearths, or trimmers, you should install them before you install the Harrystone flats. If you must install the flats first, make sure you leave enough space to accommodate the accessory and a joint.



When applying Harrystone accessories, spread a 3/4 inch-thick layer of mortar on the back of each accessory. Hold the accessory for a few seconds until it is set. Use a grout bag to apply a sufficient bead of mortar in the joint space.

## *Install corners first*

Installing the corners first makes for easy fitting. After establishing which corner piece will be used, apply a layer of mortar about 3/4 inches thick to the back of the corner. Press the corner into position with enough force to displace a small amount of mortar. Hold the stone for a few seconds until the corner is set. Lay the corners so that the long and short sides are offset from one another or staggered. If a joint is desired, leave the appropriate spacing between the stones. Use a grout bag to apply a sufficient bead of mortar in the joint space.



## *Installing the stone*

### *Cutting and fitting stones*

There are a number of ways you can cut or trim stones. A circular saw with a carborundum or diamond blade works well. If a saw is unavailable, use a pair of slip joint pliers to nip off the required piece. In most applications where a joint is desired, a 1/2 inch spacing is optimal. On the other hand, if a dry stack style is being used, little to no spacing is desired. Use your best judgment.



## *Attaching the stone*

When it comes to attaching the stone, you should try to maintain an attractive pattern and natural color distribution. As each stone is chosen, apply about 3/4 inch layer of mortar to the back. Press the stone into place so that it displaces a small amount of mortar. If any areas around the stone needs filling, use the grout bag to fill the joint.





## Placing and finishing joints



### *Joint placement*

Joints are placed using a grout bag. It is essential that all joints provide a watertight seal. When grouting, use the same mortar you used to apply the stone. Once the grout bag is partially filled with mortar, twist the top so you can easily apply pressure. Squeeze the bag so that a generous bead of mortar is placed in the joint space. Grout must be placed in any areas or voids that remain once your stone is set.



### *Joint finishing*

Finishing your joints is the final, yet critical step in your project. So how long should you wait before you begin working on your joints? A good rule of thumb is to wait until the joints are no longer wet, yet not too dry to manipulate. Here's a little test: If your mortar begins to crumble when you touch it, the joints are ready to be finished. Depending on temperature, joints are usually workable between 30 to 45 minutes after stone placement.



Use a strike tool to pack and remove excess mortar. Again, you must ensure that water is unable to penetrate the mortar joints. If any holes or voids are apparent, pack or fill them with mortar. After the joints are worked to the appropriate depth, use a wisk broom or automotive parts brush to clean and buff the joints.

### *Cleaning the project*

If any mortar does contact the face of the stone, don't immediately wipe it off. Wait until the mortar becomes crumbly, then lightly go over it with a wire bristle brush. Remember, if the mortar is not cleaned off the same day you work on your project, you may never be able to remove it.

Never use water to clean wet mortar because it will coat the stone with a foggy layer of mortar. Unlike brick and real stone, cast stone cannot be washed with acid. Also, don't power-wash the stone because high pressure may damage the surface.



## Important Information

### *Sealing the stone*

Exterior surfaces can be sealed with a quality masonry sealer. You can either choose a "wet look" sealer or one that you won't see. Again, the choice is yours. In some cases, sealer is used to make stone colors appear more brilliant. Regardless of the type of sealer you choose, always follow the manufacturer's instructions for appropriate application.

### *Follow local building codes*

Before attempting any installation, check with the appropriate local authorities for building codes.





## *Avoiding harsh conditions*

Harrystone is not recommended for surfaces that are subjected to running or standing water. All exterior Harrystone installations should have a drip ledge, cap, flashing or an eave properly installed to prevent water from running down the finished surface. Surfaces subjected to extreme conditions, coupled with regular freezing and thawing, often exhibit surface impairment and lack structural integrity.

## *De-icing*

Salt and other chemicals used for de-icing are abrasive and can damage Harrystone products. Any contact with chemicals and natural abrasive materials should be avoided. Harrystone is not warranted under any such conditions.



Harrystone™... A rock-solid company

Harrystone has provided affordable, durable and attractive precast stones for more than 30 years. As a pioneer in the precast stone industry, our designs add an earthy sophistication to homes, cabins and commercial areas alike. We offer the experience and expertise to turn your dreams into reality.



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