

GENERAL SHALE
NATURAL THIN ROCK VENEER
Installation Guide

GeneralShale.com



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CHECK LOCAL BUILDING CODES FOR PROPER INSTALLATION GUIDELINES AS BUILDING CODES VARY BY REGION.

Thank you for choosing General Shale natural thin rock veneer.

Thin veneer may be applied over virtually any surface, preferably over metal lath if it is a surface other than masonry. As building codes vary by region, it is important to check local building codes for proper installation guidelines.

This Installation Guide serves as a guide only. As with any construction project, observe safety precautions when installing this product.

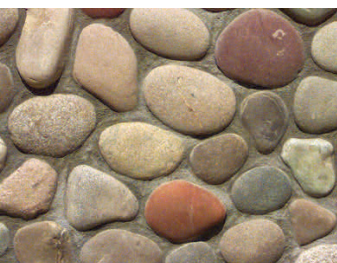


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PACKAGING

General Shale Rock is packaged as follows:

Large Boxes: 100 square feet of flats, or 100 linear feet of corners

Small Boxes: 5 square feet of flats, or 5 linear feet of corners



PACKAGING - CALCULATING PRODUCT COVERAGE**CALCULATING HOW MUCH PRODUCT YOU'LL NEED**

Calculate the amount of General Shale Rock you'll need for your project by following these steps:

1. Measure the width and height of all areas to be covered. Multiply width by height to determine the **total square footage**.
2. Estimate the corners required by measuring the total length of the wall corners to be covered. This will equal the **number of linear feet of Thin Rock corners** needed.
3. Subtract 75% of the corner calculation from the total square footage calculation you made in step #1. This will equal the **number of square feet of Thin Rock flats** needed

Important Note: If you intend on dry stacking the product on the wall (no mortar joints) you'll need 30% more product. General Shale Rock is packaged assuming that the product will be installed with a minimum 1/2" mortar joint. Dry stack patterns are not recommended for exterior applications in cold weather climates where freeze-thaw cycles are anticipated.

Example:Measurements:

Width of wall: 15 feet

Height of wall: 10 feet

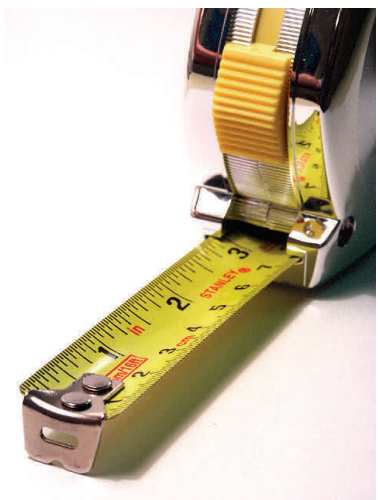
Length of corners: 20 feet = total linear ft. of corners needed

Calculations:

1. Multiply Width x Height: $15 \times 10 = \mathbf{150}$ square feet
2. Multiply 75% x length of corners to be covered:
 $.75 \times 20 = \mathbf{15}$ (use this number below)



Standard 1/2" Mortar Joint

No Mortar Joint
(Dry-Stacked)**Take the Measurements:**

- Measure width of wall in feet: _____ Measure height of wall in feet: _____
- Measure length of corners to be covered: _____ = **Total linear feet of corners needed**

Perform the Calculations:

1. Multiply Width x Height: _____ x _____ = _____ Total square footage of surface area
2. Multiply 75% x length of corners to be covered: $.75 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ (use this number below)
3. Subtract the 75% calculation (2) from the total square footage calculation (1):
 _____ - _____ = _____ **Total square feet of flats needed**

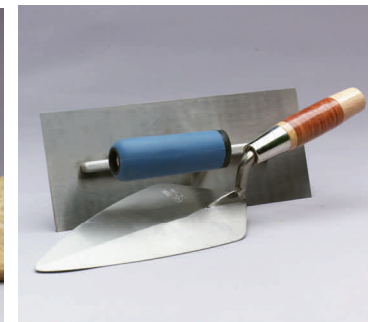
MATERIALS CHECKLIST

In addition to General Shale Rock flats and corners (per your calculations made on page 3), here are the materials you'll need when installing General Shale Rock:

ITEM	PURPOSE
<input type="checkbox"/> Tarp to cover floor	Floor protection - interior applications
<input type="checkbox"/> Weather barrier sheet	Protect wall from moisture
<input type="checkbox"/> Staple gun	Installing weather barrier
<input type="checkbox"/> 18-gauge galvanized metal lath*	To create a mason wall for rock to hold on to
<input type="checkbox"/> 3/4" corrosion-resistant screws (preferred) or nails	To secure metal lath
<input type="checkbox"/> Electric screwdriver or hammer	To secure screws/nails into metal lath
<input type="checkbox"/> Heavyweight trimming shears or wire snips	To cut metal lath
<input type="checkbox"/> Large sponge	To clean back of rock and eliminate dust
<input type="checkbox"/> Mortar:	Mortar mix for rock application/joint filling
For Scratch Coat: 1 part Portland Cement to 2.5 parts sand	
For Buttering Units: 1 part Portland Cement to 2 parts sand	
For Joints: 1 part masonry cement to 2 parts sand	
(As an alternative, use Type S or Type N Mason Mix and Water)	
<input type="checkbox"/> Bucket or Wheelbarrow	To mix mortar in
<input type="checkbox"/> Hoe or large mixing stick	To mix mortar with
<input type="checkbox"/> Point Trowel	To apply mortar to rock
<input type="checkbox"/> Flat Trowel	To apply mortar to "scratch coat"
<input type="checkbox"/> Chisel	To chip and cut rock pieces to fit
<input type="checkbox"/> Small electric saw - optional	To custom-cut rock
<input type="checkbox"/> Mortar/Grout bag	To fill in joints
<input type="checkbox"/> Joint tool	To smooth out joints
<input type="checkbox"/> Stiff brush (not a wire brush)	To wipe away excess mortar
<input type="checkbox"/> Gloves	To protect hands during installation
<input type="checkbox"/> Safety glasses	To protect eyes during installation
<input type="checkbox"/> Dust mask	Protection during mortar mixing

*Metal lath should be:

1. A minimum of 2.5 lb galvanized expanded metal lath in accordance with ASTM C847, or
2. A minimum 18 gauge galvanized mesh in accordance with ASTM C1032.



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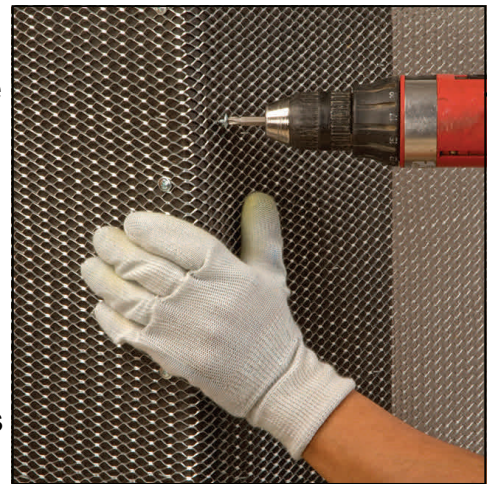
SURFACE PREPARATION**Step 1: Install Weather Barrier**

A weather resistant barrier should always be used when installing product over rigid backwall, wallboard, paneling, or wall sheathing. For more details about weather barriers, see page 8.

Cover the walls and corners with the weather resistant barrier, overlapping the joints 4". Staple the weather barrier on to the wall with staples no more than 6" apart.

**Step 2: Install Metal Lath**

Metal lath is installed over the weather barrier, and used as the foundation to which a mortar scratch coat will be applied, and onto which the rock will be installed. Secure the lath to your wall studs using 3/4" corrosive-resistant screws. Additional screws should be used between the studs and installed a minimum of 6" apart. Correctly installed, metal lath will feel rough to the touch going down and smooth going up. The rough side will grab and hold the mortar scratch coat. At the corners, overlap the vertical joints at least 16" around the corner to avoid corner cracking. Trim the lath around the edges with wire snips.

**Step 3: Mix Mortar**

Mix up rich mortar in a tub, bucket, or wheelbarrow. Use the mixture formula described on the Materials Checklist (page 6), or combine Mortar Mix and water. Mix the mortar with a hoe or mixing stick, bringing it to the consistency of peanut butter.

**Step 4: Apply Scratch Coat
and Allow to Cure**

With a point trowel, scoop up some mortar and drop onto the flat trowel. Apply the mortar to the entire wall and corners - about 1/2" to 3/4" thick. This creates a "scratch coat" on top of the lath. Allow it to set up/cure for 12-24 hours.



PRODUCT PREPARATION AND INSTALLATION**Step 5: Lay Out and Clean the Product**

While the scratch coat is curing, remove the Rock corner and flat units from the box and lay them out in the desired pattern on a protected work table or floor. Keep in mind that the product may be sawn or chiseled during installation to fit precisely. Sponge off the back of the rock pieces to remove dust and help ensure a permanent bond to the wall.

**Step 6: "Butter" the Back of the Rock**

Once the scratch coat is cured (nothing sticks to your hand when you touch it), you are ready to begin applying the rock. Wet the wall with water to provide moisture for the mortar on the rock to absorb and adhere to. Mix up mortar as explained in Step 3.

With the point trowel, apply mortar to the back of the rock, about 1/2" thick.

**Step 7: Install Rock Corners**

Beginning with the corner pieces, work either from the top-down, or bottom-up. Press the corner piece onto the wall, rotating back and forth slightly, and forcing some of the mortar to "squeeze out". Vary the corner returns while working your way up or down the wall to avoid unattractive vertical mortar joints near the corners. Allow about 1/2" space between the rock pieces.

**Step 8: Install Flat Rocks**

After the corner pieces are installed, apply flat pieces starting at an outside corner and working your way in. Remove excess mortar from around or on the rock with a sponge or stiff brush.



PRODUCT AND WALL FINISHING**Step 9: Cut Rock as Needed**

To fit pieces or create unique cuts in the rock, chisel small sections of the rock prior to installation. For larger cuts, a small electric saw with a diamond blade may be used.

**Step 10: Fill Joints with Mortar**

Once all of the rock is in place, use a mortar/grout bag to fill in the joints between the rock (unless you have chosen the dry-stack method, in which case proceed to step 12). Add colorant to the mortar if desired, and more water to the mortar so that it is smooth and flows easily out of the bag. Fill the bag about half full with mortar, and twist the bag at the end. Fill the vertical and horizontal joints with mortar, and sponge or whisk off excess mortar that gets onto the rock face.

**Step 11: Smooth out Joints**

As the mortar begins to stiffen to the consistency of wet beach sand, use a joint tool to smooth out the mortar joints to the desired depth. A stiff-bristled paint brush may also be used to push mortar into the crevasses and smooth joints.

**Step 12: Sponge off the Rock**

Use a wet sponge or stiff brush* to clean off any remaining mortar on the rock face.

Congratulations, your rock installation project is complete! See the notes section on page 8 for other important information.

*Do not use a wire brush to clean rock.



NOTES AND SAFETY INFORMATION**Weather Resistant Barriers (WRB)**

1. A weather-resistant barrier should always be used when installing product over rigid backwall, wallboard, plywood, paneling or wall sheathing. General Shale recommends the use of two weather resistant barriers for exterior applications and/or a drainage-type system behind the thin veneer with a drainable panel, flashings, and weep holes. Check your local codes prior to installation.
2. A weather barrier is not needed when thin rock is being applied over masonry or concrete.
3. Depending on local building code requirements, a weather barrier should meet the requirements of International Building Code (IBC) Acceptance Criteria #38: Acceptance Criteria for Water-Resistive Barriers.

Cleaning Information

1. In general, thin veneer units should be kept clean during the installation process. Mortar smears should be removed by gently dry-brushing and wiping with a damp sponge at the end of work periods. For general cleaning, bucket and brush hand cleaning methods described in BIA Technical Note #20, with non-acidic detergent cleaners is recommended. Pressure wash cleaning methods should not be used.

Safety Information

1. When installing masonry products, it is recommended that you wear protective clothing, gloves, and eyewear.

Installation Information

1. As building codes vary by region, it is important to check local building codes for proper installation guidelines.
2. This Installation Guide serves as reference only and is not meant to act as a substitute for professional advice.
3. Product should not be installed if the ambient temperatures are expected to drop below 40°F within 24 hours after installation. Antifreeze-type mortar additives or chloride-based additives are not recommended. For additional information on cold weather construction, refer to ACI 530-05 Section 1.8C.

For more information about General Shale Rock or to find a showroom or distributor near you, visit **GeneralShale.com** or call 800.414.4661.

