Manufactured Masonry Spec Data

04 70 00

Heritage Stone LLC

"Producing America's Best Stone Value"

1. Product Name: Heritage Stone®

2. Manufacturer

Heritage Stone LLC
2225 Greif Rd, Zanesville, OH 43701
(740) 450-4236 (740)-450-4370 Fax
www.heritagestone.com

3. Product description

Basic Use: Heritage Stone® is a lightweight concrete veneer product, designed for cosmetic use on interior or exterior walls in both residential and commercial applications. The product is intended for non-structural use, and because of its light weight, requires no additional footings. Heritage Stone® veneer is easy to install and can be applied to almost any load-bearing wall, wood frame, steel, or masonry.

Composition and Materials: A blend of portland cement, lightweight aggregates and iron oxide pigments make up Heritage Stone® veneer products. Heritage Stone® produces its own molds using natural stone. These molds, in remarkable detail, capture the look, feel and texture of natural stone and are used to cast Heritage Stone veneer.

Types

Flat Stone Veneer	Corner Stone Veneer
Hearth Stones	Wall Caps
Water table Sill Stones	Keystones
Utility Stones	Stone Veneer Accessories
Brick Accessories	

Sizes and Shapes

Heritage Stone will vary in size and shape based on type:

Type	Width varies	Height varies	Thickness
Ledge Stone	6" – 21 ½"	1 ¼" – 6 ½"	1" – 2 ¼"
Dry Stack	5" – 21 ½"	1" – 5 ½"	1" – 2"
Limestone	5" – 21 ½"	2" – 12 ½"	1" – 1 ¾"
Field Stone	3" – 16 ¼"	3" – 16 ¼"	1" – 1 ½"
River Rock	3" – 16 ½"	3" – 16 ½"	1 ½" – 2"

Stone Accessories	Measurement and Thickness	
Hearth Stone	19 ½" x 19 ½"" x 1 ¾"	
Water table Sills	23 ¾" x 3" x 3"	
Large Wall Caps	15 1/8" x 19 ¾" *(Large)*	11 ¼ "x 19 ¾" *(Small)*
Keystone	11" high *(Large)*	8" high *(Small)*
Hydrant Stone	6 5/8" x 7 ½" x 1 ¾"	
Receptacle Stone	6 5/8" x 7 ½" x 1 ¾"	
Light Base Stone	7 ½" x 10 5/8" x 1 ¾"	
Row Locks	5½" x 7½" *(Large)*	4½"x 5 ½" *(Small)*

Brick Accessories	Measurement
Headers	3 1/2" x 2" x 2"
Stretchers (soldiers)	7 1/2" x 2" x 2"
Brick Sills	24" x 3 1/2" x 3"

Styles and Textures

Ledge Stone: a collection of stone with eroded surfaces and jagged edges

Dry Stack: collection of carefully selected stone of varying thickness, designed to fit tight together

Limestone: a collection of stone with brusquely chiseled, square and rectangular surfaces

Field Stone: a collection of deeply textured, irregularly-shaped stone

River Rock: a collection of randomly-shaped rounded stone

Stone Accessories: a collection of accent pieces to compliment the stone veneer

Brick Accessories: a collection of accent pieces that replicate the unique characteristics of hand made brick

Colors

See manufacturer's brochure for current color selections or view their product gallery on www.heritagestone.com Since permanent iron oxide pigments are used in Heritage Stone® products, colorfast is assured. Mortar color greatly affects and/or enhances the appearance of the finished installation. Regular mortars can be tinted to complement Heritage Stone® veneer products.

Limitations

Stone veneer products do not add to the load bearing capacity of a wall and should not be used in areas that may come in contact with harsh chemicals such as chlorine or de-icing materials. Hearth stones are not recommended for foot traffic. Consult a construction engineer prior to usage.

4. Technical Data

Applicable Standards

ASTM C39 Standard Test method for Compressive Strength
ASTM C67 Standard Test method for Sampling and Testing Brick and Structural Clay Tile
ASTM C91 Standard Specification for Masonry Cement
ASTM C150 Standard Specification for Portland Cement
ASTM C190 Standard Test method for tensile strength of hydraulic cement mortar
ASTM C192 Standard Practice for Making and Curing Concrete Test Specimens in a Lab
ASTM C270 Standard Specification for Mortar for Unit Masonry
ASTM C348 Standard Test method for flexural strength of hydraulic cement mortar
ASTM C482 Standard Test method for shear bond strength
ASTM C518 Standard Test method for steady-state thermal transmission properties
ASTM C567 Standard Test method for Unit Weight of Structural Lightweight Concrete
ASTM D226 Standard Spec for Asphalt-Saturated Organic Felt for Roofing/Waterproofing

Approvals

ICC Evaluation Service, Inc. ESR #2593 verifies that Heritage Stone® is code compliant

Physical / Chemical Properties

Color retention:
After years of weathering, no objectionable color change can be observed.

Freeze Thaw:
Tested in accordance with ASTM C67. Results: Less then 3% weight loss

Shear Bond:
Tested in accordance with ASTM C482. Results: 87.4 psi shear bond

Absorption:
Tested in accordance with ICC-ES AC51 Sec 4.6 Results: 11.8%

Density:
Tested in accordance with ASTM C567. Results: Shipping weight is 9-11 lbs per sq ft.

Thermal Resistance:
Tested in accordance with ASTM C518. Results: 2.06 at 1.038 in thick

Compressive Strength:
Tested in accordance with ASTM C39. Results: 5,970 psi

Tensile Strength:
Tested in accordance with ASTM C190. Results: 297.4 psi

Flexural Strength:
Tested in accordance with ASTM C348. Results: 584.2 psi

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5. Installation

Installation of Heritage Stone shall be in strict accordance with the manufacturer's instructions and local building code requirements. A copy of Heritage Stone's most current and complete installation instructions can be found at www.HeritageStone.com

Calculating amount of product needed

First, calculate the entire area to be covered with Heritage Stone® veneer by measuring the length times the height. This measurement represents the flat veneer required. Then subtract the square footage for window and door openings. Calculate the amount of corner veneer needed by measuring the linear foot of outside corners. Coverage provided by corner veneers is approximately .66 of a square foot for every one linear foot. This coverage provided by corner veneer can be subtracted from the total flat veneer required. Lastly, allow 5% waste factor for cutting and trimming.

Flashing

Install flashing in accordance with local building code requirements. All flashing and flashing accessories must be made of corrosion resistant material and integrated with the WRB materials. Approved flashing must be installed around all terminations and penetrations of the stone veneer applications.

Building Codes

Installation must comply with requirements of local, state and national code jurisdictions.

Determining and preparing the surface

Heritage Stone may be applied to any structurally sound bearing wall surface. Non-bearing walls may require alterations and we recommend you consult with a construction engineer. Heritage Stone may be applied directly to clean untreated porous concrete and masonry surfaces. All other surfaces must be covered with a 2.5# self furred metal lath meeting the requirements of ASTM C 847. If applying over open studs use 3.4# self furred metal lath meeting the requirements of ASTM C 847. For exterior applications (with concrete and masonry surfaces being an exception) use two separate layers of water resistive barrier (WRB). The WRB must meet the requirements of ICC-ES AC 38: Acceptance Criteria for Water Resistive Barriers. When using felt paper it must meet the requirements of ASTM D 226 for Type 1 #15 felt (grade D building paper) or #30 asphalt saturated felt paper. One layer of house-wrap covered by 1 layer of WRB meeting the above criteria is acceptable. One layer of WRB for interior applications is acceptable. Local building code requirements supersede this instruction. Lath should be applied horizontally across the wall, with the small cups pointing upward. This can be determined by running your hand across the lath. Starting at the top, the lath should feel smooth. In the opposite direction it should feel rough. Apply lath as tight to surface as possible with a 2" inch overlap on horizontal seams and a 6" overlap on vertical joints. Inside and outside corners should be wrapped a minimum of 16". Lath fasteners should not penetrate exterior sheathing between the studs.

Applying the Bed Coat over Lath

Mix thoroughly 1 part Type N or S mortar meeting ASTM C 91 (or 1 bag cement with 10% lime) to 2 part clean mason sand (12 gallons) in a 6 cubic ft. wheelbarrow using your pointed shovel. Add clean potable water (approximately 2 ½ gallons) to achieve a trowelable mixture. Use a 12" trowel and spread mixture evenly over metal lath approximately 1/2" to 5/8" thick. After mortar is thumbprint dry, scratch or score the surface horizontally to create a rough scratch coat that ensures a good bond when the stone veneer is applied.

Applying the Stone

Blend stone from several boxes during the application process as well as select stones so small stones are next to large stones, thick stones next to thinner stones and textures of stones vary throughout the application. This procedure will assure a desirable result.

Applying the Stone (continued)

During warm weather, the bed coat & the back of the stone may need to be moistened to prevent water from being drawn to rapidly from the applying mortar. Refer to section 2104.4 of the International Building Code for additional warm weather requirements. During cold weather (Below 40 degrees F), use only non-chloride accelerators, Reference section 2104.4 of the International Building Code for additional cold weather requirements. If a bonding agent is desired ensure that it meets the requirements of ASTM C 932 or ASTM C 1059 Type II.

Use nippers, hatchet, brick hammer, brick trowel, or a dry concrete blade in an electric circular saw to trim stone. If corner pieces are required, set them first by alternating the short and long leg of the corners on the wall. Start at the top and work sideways and down to keep stones clean. *For all grout less application, start at the bottom and work sideways and up when installing stone veneer.* Horizontal lines should be broken approximately every 6'. Use a 4' level to keep lines and stone level. Using your pointed trowel and the same mixture as the bed coat, apply approximately ½" of mortar, covering the entire back of the stone. By using gentle pressure and a slight wiggling action while applying the stone to the bed coat, you will assure a good bond. The stone installation must achieve a minimum of 50 lbs per sq inch shear bond. Check with the mortar manufacturer to ensure their mortar meets or exceeds ASTM C 91 requirements and meets minimum bond code requirements. To achieve a standard joint, space stone ½" apart. For dry stacked applications the stone should fit tight against each other, the entire back of each stone should be encapsulated with mortar to ensure future durability. The stone should be installed no closer than 4" to the final grade or 2" to a hard surface (sidewalk, driveway etc…). The use of a weep screed or other code compliant base flashing product is recommended.

Grouting joints

The grouting mixture shall consist of one part Type N or S mortar meeting the requirements of ASTM C 91 to 2 parts sand and clean potable water. This mixture is to be thoroughly mixed to provide a heavy cream-like consistency. Place the mixture in a plastic grout bag (somewhat like a cake decorating bag). Snip the pointed end to create a hole about the size of penny and no larger than a quarter. Fill the bag to within 8" from the top, twist the top and hold tight. With slight pressure from the other hand and twisting from the top, place opening in joint somewhat like using a caulking gun, and fill the joint flush with the stone. Do not get mortar on the finished faces of the stone. Let mortar set until it is firm yet workable.

Finish joint procedure

When mortar joints become firm, the use of a wooden striking tool carved just a little smaller than the joint width or metal margin trowel may be used. The goal is to press gently and smoothly as to fill grout voids and remove excess mortar to desired depth. When using a metal margin trowel, the joint must be scratched after striking to roughen joint surface. This can be achieved by turning metal striking tool over and using the tip to scratch the joint.

Note: The mortar should be firm enough not to stain stone. If the mortar is struck prematurely, the joint will look like toothpaste or appear creamy, wait for the mortar to dry more.

Brushing joints

This should be done within 2 hours after tooling the joints. The best way is with a clean whiskbroom or any plastic bristled brush. Do not use a metal bristled brush. Do not let mortar set overnight before tooling or brushing and do not brush wet mortar, as it will smear and look unsightly.

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6. Availability and Cost

Heritage Stone® is available for purchase through an established dealer network. Contact Heritage Stone® for information of local distributors. Stone veneer is priced on a square foot basis. Variables of installation cost are by region, by type of stone to install and necessary preparations required. Contact a local distributor of Heritage Stone® for budget total installed cost information.

7. Warranty

Heritage Stone® LLC warrants, subject to the terms and conditions of the full written warranty, that its manufactured concrete veneer products shall be free from defects in materials manufacturing and workmanship for a period of 50 years from the date of purchase. The manufacturer will not be liable for any cracked or damaged product due to mishandling, building settlement, improper installation, discoloration due to airborne containments or acts of God beyond the control of the manufacturer. The warranty is limited to the original purchaser and may not be transferred. Complete manufacturer's warranty is available upon request.

8. Maintenance

Most applications require little to no maintenance. Exterior applications where excessive dust or dirt accumulates should be washed down occasionally.

Sealers

Sealers are not necessary with Heritage Stone® products. However, consideration can be given to prevent staining when vulnerable to smoke, soot, dirt or water splashing. If a sealer is to be used, ensure the sealer is a silane based, breathable sealer. Once a sealer is applied, it must be reapplied regularly or an increase of efflorescence could occur. And lastly, keep in mind a sealer may darken the color of the stone.

Cleaning

Do not pressure wash, sandblast, use wire brushes or acids for cleaning. If mortar dripping occurs, use a clean wet sponge within 4 hours of grouting. After 48 hours, it may be cleaned with a mild solution of warm water and tri-sodium phosphate. First, wet the wall thoroughly with water. Second, scrub the wall with T.S.P. solution using a stiff plastic bristled brush. Finally, rinse the wall thoroughly. If you need further assistance, contact your dealer or call Heritage Stone.

Efflorescence

Efflorescence is a white residue that sometimes appears on masonry surfaces. As moisture makes its way through concrete, from the inside out, it may bring with it any soluble salts residing in the concrete or mortar. When the moisture evaporates it leaves the soluble salts on the masonry surface.

To clean efflorescence off of a masonry surface, mix 1 part white vinegar to 5 parts clean water. With a soft bristled brush lightly scrub the masonry surface with the water/vinegar mixture. Do not use acids, power washing equipment or other cleaning agents to remove efflorescence.

9. Technical Services

A staff of factory trained service personnel offers design assistance and technical support. For technical assistance, contact Heritage Stone®.

10. Filing Systems

3 Part Spec Form is available online at www.HeritageStone.com Additional product information is available from the manufacturer upon request.

- 4specs.com

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