

SECTION 09950

ArcusStone Finish over Gypsum-Durock Sheathing, and Ceramic and Stone Tile

1 **9950.10** **GENERAL**

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3 **9950.11** **Description and Scope**

- 4 1. Provide all labor, material and equipment necessary to install the field applied
5 ArcusStone Coat and ArcusStone Plaster over Gypsum-Durock Sheathing,
6 Ceramic Tile, and Stone Tile.
7 2. Description of Application: The Application consists of a vertical or horizontal
8 coating applicaton consisting of a re-emulsifying boding agent, fiberglass
9 mesh tape, EIFS parge coat, and ArcusStone finish.

10 **9950.12** **Design and Detail**

- 11 1. Gypsum board substrates must be minimum ½” thick (5/8” recommended),
12 secured per Code requirements to framing spaced at a maximum of 16” on
13 center. Gypsum board may be standard type, water-resistant type, tile
14 underlayment, or fire rated type. The framing should be designed to limit
15 deflection to 1/240 under code specified loading conditions.
16 2. All joints and inside corners must be reinforced with paper or plastic mesh
17 tape and set with gypsum board compound. Outside corners and exposed
18 gypsum board edges must be reinforced with metal corner or edge beads set
19 with gypsum board compound. The level of finish should be similar to “fire
20 taping” (A smooth sanded finish is not required but all tape and metal trim
21 must be fully embedded in compound).
22 3. Where use of gypsum board is difficult (such as at the curved underside of
23 arches) or where entirely non-combustible materials are required (near
24 fireplace openings, for instance), galvanized diamond mesh lath, secured at
25 4” on center minimum, with minimum 3/8” thick cement plaster brown coat
26 can be used as a substrate. The cement plaster must completely cover the
27 lath.
28 4. When applying ArcusStone Coat or ArcusStone Plaster to vertical or
29 overhead surfaces, adding sand or non-skid aggregate to the primer/bonding
30 agent will greatly reduce any potential for the wet ArcusStone material to
31 slide. Alternately, a slurry coat (very thin brown coat) can be applied to the
32 wall board and allowed to dry before applying the ArcusStone finish. This will
33 help insure a more uniform and consistent drying of the ArcusStone finish
34 over the entire surface.
35 5. As part of proposal specs: In new or remodel construction, the painting or
36 priming of new gypsum wallboard is not needed nor recommended prior to
37 the ArcusStone application. Taping and finishing is not needed nor
38 recommended prior to the ArcusStone application. Taping and finishing
39 wallboard joints is recommended, however, to achieve a uniform, flat
40 substrate that is absent of any gaps or cracks that may telegraph through to
41 the ArcusStone finish.
42 6. Before applying the Stone Mix, you should have a concept rendering and or a
43 grout line diagram. Slight changes in line patterns can be made at the time of

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- 44 application, but major design decisions should be made before beginning. A
45 clear understanding of grout line style and width is also important.
- 46 7. Check all surfaces for level, plumb and square. If substantial deviations are
47 noted, more mix can be applied to compensate; however, adding more
48 material will decrease the amount of coverage per mix and increase the
49 material cost.
 - 50 8. Protect surrounding surfaces not receiving ArcusStone Coat or ArcusStone
51 Plaster with masking tape and plastic.
 - 52 9. Abrade or roughen any glossy painted surfaces with 80 grit sandpaper.
 - 53 10. Clean all surfaces of dust, loose paint film, other debris. Secure painted
54 surfaces are acceptable substrates.
 - 55 11. Apply a re-emulsifying type bonding primer (e.g. ArcusBond) to all surfaces
56 that are to receive the ArcusStone coating. If additional adhesion is desired,
57 any small grain sand can be broadcast onto the wet bonding primer after it is
58 applied to the substrate. The rougher texture will help prevent the wet
59 ArcusStone mix from sliding before setting up.
 - 60 12. Allow bonding primer to dry (approx. 1 hour) before applying the ArcusStone
61 coating.
 - 62 13. On large areas and at outside corners, a straight edge and long level should
63 be used to ensure a straight and plumb surface, especially when using the
64 Stone material.
 - 65 14. For the Stone, after the wet mix is applied and screeded or rodded, the entire
66 surface can be rubbed in a circular motion with a polyurethane float. Doing
67 this will remove the highs and lows as well as let the surface dry with a slight
68 texture. The slight texture is also beneficial when you begin to create the final
69 texture.

9950.13 Mixing of ArcusStone Coat and ArcusStone Plaster Finishes

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72 Mixing is a very important part of the system. Improper mixing may compromise
73 the strength of the material and may result in extensive cracking of the finishes
74 surfaces. The mixing can be accomplished using a heavy-duty drill with mixing
75 rod, or powered drum mixers (a tumble drum mixer is preferred over the stucco
76 paddle mixer because it injects less air into the mix, but both are acceptable).
77 Important! Store the materials in a cool area and use cool water for mixing.
78 Failure to do so may result in premature curing of the applied mix, resulting in
79 extensive cracking. Also, it is very important to mix the material thoroughly for a
80 minimum of 3 to 4 minutes and let the material set up for 15 minutes before
81 breaking the set by briefly remixing for 1 to 2 minutes before applying the
82 material. Failure to do so may result in material cracking and lessened strength
83 due to poor polymer emulsion from lack of set time.

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Bucket Method:

You will need to have a number of clean 5 or 6 gallon plastic buckets, a heavy duty ½” drill, and an appropriate mixing rod on hand for this procedure.

1. Blend pigment with water or ad-mix solution – Pour 14 cups (3-1/2 quarts) of clean, potable water or ad-mix solution into a bucket; open and discard the pigment outer protective bag, removing the inner soluble bag of pigment. Drop the bag into the water, letting the bag become completely wet. Mix the solution with a mixing rod or paint paddle to completely disperse the pigment in the water. One pigment bag per 50 lbs of material is required for the standard colors.
2. Mix dry ArcusStone material with water – Slowly pour the Stone or Plaster material into the water while mixing with a mixing rod, making sure to completely and thoroughly blend the dry material without lumping. If adding micro-fibers, blend them in gradually at this time, continuing to mix for 1-2 minutes after all materials are wet. Add small amounts of water as needed while mixing to achieve a working consistency.
3. Allow Material to Set – After finishing Step 2, let the material set up for a minimum of 10-15 minutes, or as long as necessary until the exposed material is firm. Break the set by remixing the material for 1 to 2 minutes. It is now ready to be applied.

Mixer:

For one-bag mixing,

4. Add 13 cups of clean, potable water to the mixer (no hot water).
5. Add (1) soluble pigment bag and let dissolve completely before mixing. Start mixer.
6. Allow (1) 50 lb. Bag Stone or Plaster to mixer while machine is mixing.
7. Allow to mix for 3-5 minutes, adding small amounts of water as necessary until the mix reaches a consistency where firm peaks are formed. If adding micro-fibers, gradually blend until all materials are wet, then continue to mix for an additional 1-2 minutes to disburse the fibers.
8. Pour mix into trough or buckets and allow to set for approximately 10-15 minutes.
9. Break the set by remixing with a drill and mixing rod for 1 to 2 minutes. Mix is now ready to be applied.

9950.14 ArcusStone Coat and Plaster finishing techniques

ArcusStone Coat finishing techniques

The unique properties of the ArcusStone Coat material allow you to produce various finishes. The following is a summary of guidelines to be used in achieving those finishes. By varying the finishing methods, many different custom styles can be created.

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ArcusStone Plaster finishing techniques

The unique properties of the ArcusStone Plaster allow the applicator to produce a variety of finishes. The following guidelines are offered to create three distinct finishes. By implementing various techniques, many custom styles can be created. The main objective of the plaster finishing process is to replicate the look of weathered European or Tuscan plaster. The exposed aggregates and blemishes add to the authentic look of ArcusStone Plaster. As plaster erodes, both the color and texture are affected. ArcusStone Plaster can make new construction appear antiqued, with a patina acquired over time.

General Principles:

The main objective of the finishing process is to replicate the texture and patina of quarried stone. The chips and flaws that occur in natural stone are what give stone its individual character. When the elements wear on a stone surface, the rate of erosion varies. If the density of a stone varies from one place to another, it will erode differently, thus creating a non-uniform surface. The same principals should be applied when creating ArcusStone Coat textures. It's important to remember that if every stone looks exactly alike, the result will not have the random characteristics of natural stone. Variations in color and patina should be in a random fashion.

Timing and Finishing Tips:

1. Drying – depending upon ambient conditions such as temperature, sun exposure, wind, and relative humidity, allow ½ to 2 hours at 70° in the shade before scratching. Avoid working in direct sun, if possible, especially on hot, dry days.
2. Scratching – test the material in various places using light finger pressure. If the material gives readily, leaving fingerprints, it is too wet to start scratching. Material should be firm but damp, and should crumble when scratched with strong pressure. If it tears when scratched, it is too wet. If it chatters, it is too dry. Mist any dry areas with water (not to the point of run-down), allowing the water to soak in, and then continue.
3. Stoning – allow to dry ½ to 2 hours as above. Material is ready to be stoned when a very slight paste is created using light to medium pressure with the rubbing stone.
4. Wet Grinding – the material must be slightly drier if you are going to grind it (no paste). Use a flexible, worn (dressed) pad (Makita Type 27 flex wheel, 120 grit, 7"x1/8"x7/8"). Angle slightly, and rotate grinder in circular motion, using light pressure.
5. Dry Grinding – After 2 days, any type of grinder or sander can be used. A random orbital or oscillating type sander works best.

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- 170 6. Pot Life – In the bucket, the material can be re-mixed for up to 1-1/2 hours,
171 under good conditions. Adding a small amount of water is acceptable, but
172 the material should not be re-tempered more than once.
- 173 7. Cure Rate – After the Stone material has been applied, it can be slightly
174 misted with cool water to slow the curing process and allow more time for
175 finishing. After finishing, it is never advised to we the surface as it may
176 cause discoloration.

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178 **9950.15 ArcusStone Coat and Plaster Finish Selections**

- 179 1. [ArcusStone Coat] [and] [ArcusStone Plaster] finish materials, including
180 basic finish, accent coloring, grouting, accessory products, and sealers
181 shall be as manufactured or recommended by ARCUSSTONE
182 PRODUCTS, INC.
- 183 2. Basic finish shall be a polymer-modified cement plaster with integral color
184 composed of Portland cement, natural minerals, special additives and
185 proprietary ingredients. It shall be non-combustible, with a minimum
186 compressive strength of 4650 PSI at 3/8" thickness after 28 days.
- 187 3. ArcusStone Coat and ArcusStone Plaster materials, (cementitious), must
188 be used in their pure form without any additional additives, other than
189 color pigments, unless approved by the manufacturer.
- 190 4. ArcusStone Coat color and texture shall be selected from Standard
191 ArcusStone color chart. Color-Texture and Coursing patterns shall be
192 indicated on prints.
- 193 5. ArcusStone Coat Finish (3/8" Thickness) Textures:
 - 194 a. Chateau Polished
 - 195 b. Chateau Stone
 - 196 c. Dune
 - 197 d. Tuscan
 - 198 e. Sandstone
 - 199 f. Weathered
- 200 1. ArcusStone Plaster Finish (3/16" Thickness) Textures
 - 201 a. Sanded
 - 202 b. Dune
 - 203 c. Tuscan
 - 204 d. Skip Trowel
- 205 1. ArcusStone Plaster color and texture shall be _____ and _____,
206 respectively. Patterns shall be _____ as indicated on prints.
207 Present 8.5"x11" Color/Texture samples for final approval by
208 architect/owner.
- 209 2. Grouts used in [ArcusStone] finish [es] shall be Weatherall 1010
210 Chinking® grout with integral color _____, or approved equal.
211 Refer to CS205 Installation and Maintenance Guide.
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3. Sealers with water repelling properties used over ArcusStone Finishes should be used in cold climates and all exterior applications. Refer to CS205 Installation and Maintenance Guide.
4. Protect the ArcusStone finished surfaces for the first 24 hours until the initial curing is complete.