"Timeless by nature. Versatile by Design."

Guide Specification: 092523.29 Lime Plaster, Interior, Gypsum Board

This guide specification specifies ecostucco® lime plaster finish system for interior application over a gypsum board substrate, along with accessories. Related guide specifications are available for other interior applications and for exterior applications over a variety of other common substrates.

ecostucco® is a collection of pre-mixed architectural lime plasters made with minimal, yet expert preparation. The natural properties of lime make ecostucco® a resilient and aesthetically pleasing finish solution to buildings of all styles and ages.

ecostucco® products are formulated for a full range of interior and exterior plaster applications, including:
- Masonry.
- Sheathing.
- Concrete.
- Wet Areas.

ecostucco® products also can be applied to specialty substrates such as hempcrete, adobe, and strawbale. Consult with ecostucco's technical department for specific guidelines for these and other innovative applications.

For more information, contact Mediterranean Colors, LLC at 3060 Kerner Blvd. Suite S, San Rafael CA. 94901; (415) 455-9896; www.ecostucco.com.

SECTION 092523.29

LIME-BASED PLASTER (INTERIOR, GYPSUM BOARD)

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes plaster systems for interior application installed over a gypsum board panel substrate.

Specifier: Edit the following list of sections applicable to the scope of the Project.

B. Related Requirements

1. Section 092100 – Plaster and Gypsum Board Assemblies
2. Section 099123 – Interior Painting
3. Section 0929 – Abrasion Resistant Coatings
4. Section 092900 -Gypsum Board Assemblies
5. Section 099643 - Fire Retardant Coatings

1.2 REFERENCES

Specifier: If retaining this optional Article, edit list below to correspond to those references retained in edited specification section.

A. ASTM International (ASTM)

1. ASTM E96 - Standard Specification for Water Vapor Transmission of Materials.
2. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.
3. ASTM C979 - Standard Specification for Pigments for Integrally Colored Concrete.
4. ASTM C1047 Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
5. ASTM C1396 - Standard Specification for Gypsum Board.
6. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
7. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
8. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
9. ASTM D2369 - Standard Test Method for Volatile Content of Coatings.

B. Fire Standards

1. CE Fire Classification 1A: Non-combustible

C. Thickness Standard

Specifier: Verify system thickness based on chosen finish system and finish type. The thickness specified below is an example.

1. Minimum nominal thickness: 1/8 - inch (3 mm).

1.3 ACTION SUBMITTALS

A. Product Data: Submit data on plaster materials, characteristics and limitations of products specified.

B. Shop Drawings: Provide shop drawings. Include full elevations showing openings and penetrations and details of each condition of installation and attachment.

1. Include details drawn at 1-1/2 inches per 12 inches (1:10) scale, showing thickness and dimensions of the system components, including but not limited to the following:

a. Details of edge, corner, and termination conditions.
b. Fastening and anchoring methods.
c. Locations of joints, including movement joints and control joints.
d. Trim and flashings.

C. Samples for Selection: Submit two sets of sealant manufacturer's sealant color charts showing the full range of available selections.

D. Samples for Verification: Submit two samples, manufacturer's standard size but not less than 8 by 10-inches in size, of each specified plaster finish color and texture.

1.4 CLOSEOUT SUBMITTALS

A. Manufacturer's Instructions for preventative maintenance of plaster systems.

B. Manufacturer's warranties: Sample warranties demonstrating compliance with the specified warranty terms.

1.5 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer: A company specializing in the manufacture and distribution of lime plaster with a minimum of twenty years of experience with a record of successful in-service performance and which has the production and distribution capacity to service the Project.
2. Installer: A company specializing in performing plaster/stucco work with minimum of five years of experience in the application of lime plaster systems with a record of successful in-service performance and which employs installers and supervisors trained and certified by the Manufacturer.

1.6 MOCK-UPS

A. Construct mockups in sizes necessary to fully represent the workmanship and critical details of construction. Include, as applicable, a representative edge condition, a representative opening condition, a representative corner condition, joint treatments, and other components necessary for evaluation of the workmanship and compliance with the design intent.

1. Construct mock-ups, in sizes sufficient for evaluation of material qualities in locations approved by the [Architect] [Owner's Representative] for each specified color and texture.
2. Accepted mock-ups may be incorporated into the Work.

1.7 PRE-INSTALLATION MEETING

A. Convene a meeting at the Project site to review site conditions and coordinate plaster work with affected trades, to review mock-ups, and to review the Construction Schedule.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Maintain conditions at the Project site to allow plaster to be properly installed and cured according to the Manufacturer's recommendations.

1. Provide temporary protections to isolate work areas from other areas of the building and to maintain optimum control over application curing conditions.

B. Interior Environmental Conditions: Maintain temperatures in areas receiving plaster work at not less than 55 deg F (13 deg C) or greater than 80 deg F (27 deg C) for at least 24 hours prior to application and for 48 hours following the application. Maintain normal ambient temperatures during the application.

C. Protect plaster from drying too rapidly.

1. Distribute heat uniformly throughout work areas.
2. Maintain humidity levels for optimal application, curing, and drying of plaster.
3. Ventilate building spaces properly while maintaining controls so that plaster work is not adversely affected by drafts.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver all materials to the construction site in their original, unopened packaging with labels intact, and in undamaged condition.

B. Inspection: Inspect and inventory the materials upon delivery. Report defects or discrepancies to the responsible party according to the Contract Documents. Remove substandard materials from the site and replace them with complying materials.

C. Storage:

1. Store cementitious materials off the ground, under cover, and in a dry location.
2. Store aggregates where grading and other required characteristics can be maintained and contamination prevented. Prevent site run-off and other water sources from saturating sand piles.
3. Store panel products so they are uniformly supported to prevent deformation and protected from adverse weather conditions. Keep stacks covered, dry, and ventilated to prevent condensation.
4. Store plaster accessories including metal items to prevent corrosion and accumulation of dirt and oil.

1.10 COORDINATION

A. Coordinate installation of substrate to ensure work meets tolerance requirements for subsequent application of plaster. Review requirements for joint treatments in the substrate.

1.11 MAINTENANCE

A. Extra Materials: Provide a sample pack of dry material of each installed finish coat color sealed in a moisture-proof container.

1. Source extra materials from the same runs as those manufactured for the Project.
2. Deliver extra materials to the Owner's Representative in protective packaging and label to clearly identify the contents.
3. Deliver extra materials to a location identified by the Owner's Representative upon closeout of the Project and obtain a signed receipt.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

Specifier: Retain optional sealer, if desired.

A. A lime plaster finish system for installation for interior over a gypsum board panel substrate, as follows:

1. Gypsum board (level 3 or better).
2. Water base primer.
3. Lime plaster base coat.
4. Lime plaster finish coat.
5. Protective sealer coat (optional).
6. Minimum nominal thickness: 1/8-inch (3 mm).

2.2 MANUFACTURER AND PRODUCTS

A. Basis of Design Manufacturer: ecostucco® lime plaster finish system by Mediterranean Colors, LLC – 3060 Kerner Blvd. San Rafael, CA 94901; (415) 455-9896; info@ecostucco.com

2.3 SYSTEM PERFORMANCE REQUIREMENTS

A. Deflection Limits. Design system to comply with the following:

1. Design for maximum allowable deflection, normal to the plane of the wall, of L/360.

Specifier: Retain the following system fire performance requirements when required by Authorities Having Jurisdiction.

B. Fire Performance Characteristics: Provide plaster systems with the following fire-test characteristics determined by indicated test standard as applied by UL or other testing and inspection agency acceptable to authorities having jurisdiction.

Specifier: Retain "Surface-Burning Characteristics" Paragraph if required for Project.

C. Fire-Resistance Ratings: Where indicated, provide gypsum plaster assemblies identical to those of assemblies tested for fire resistance according to ASTM E119 by a qualified testing agency.

Specifier Retain paragraph below if STC-rated assemblies are required for the Project. Design of specific STC-rated assemblies should be detailed on the Drawings.

A. Sound-Transmission Characteristics: Where indicated, provide plaster assemblies identical to those of assemblies tested for STC ratings according to ASTM E90 and classified according to ASTM E413 by a qualified testing agency.

2.4 BASE COAT PLASTER *(select one)*

Specifier: **ecostucco® DECOLIME** is an architectural lime plaster essentially composed of hydrated lime, specific minerals, and fine aggregates - all factory-blended to control compliance with specified performance requirements.

A. ecostucco® DECOLIME: Proprietary architectural lime plaster ready to mix with water to achieve a mineral, vapor-permeable base coat over the specified substrate.

1. Basis of Design Product: ecostucco® DECOLIME
2. Mixing: Mixed at the site in accordance with manufacturer's written instructions.
3. Coat: [Base Coat] [Key Coat]

Specifier: **ecostucco® UNILIME** is an architectural lime plaster consisting of hydrated lime, specific minerals, and slightly coarse aggregates - all factory-blended to control compliance with specified performance requirements.

B. ecostucco® UNILIME: Proprietary architectural lime plaster ready to mix with water to achieve a mineral, vapor-permeable base coat over the specified substrate.

1. Basis of Design Product: ecostucco® UNILIME
2. Mixing: Mixed at the site in accordance with manufacturer's written instructions.
3. Coat: [Base Coat] [Mesh Coat] [Levelling Coat]

Specifier: Modify below to suit requirements by choosing one product and one finish.

2.5 FINISH COAT PLASTER *(select one)*

Specifier: **ecostucco® DECOLIME** is an architectural lime plaster essentially composed of hydrated lime, specific minerals, and fine aggregates - all factory-blended to control compliance with specified performance requirements.

A. ecostucco® DECOLIME: Proprietary architectural lime plaster ready to mix with water to achieve a mineral vapor-permeable finish coat over the specified substrate.

1. Basis of Design Product: ecostucco® DECOLIME.
2. Mixing: Mixed at the site in accordance with manufacturer's written instructions.
3. Color: Selected by the [Architect] [Owner's Representative].
4. Finish: [fossil] [sand float] [custom].

Specifier: **ecostucco® MURALIME** is a true Venetian plaster essentially composed of hydrated lime, specific minerals, and very fine aggregates - all factory-blended to control compliance with specified performance requirements. MURALIME requires DECOLIME as a base/key coat.

B. ecostucco® MURALIME: Proprietary architectural lime plaster ready to mix with water to achieve a mineral, vapor-permeable finish coat over the specified substrate.

1. Basis of Design Product: ecostucco® MURALIME.

2. Mixing: Mixed at the site according to the Manufacturer's instructions.
3. Color: Selected by the [Architect] [Owner's Representative].
4. Finish: [marble] [sand float] [custom].

Specifier: **ecostucco® MURALIME S** is natural mineral paint essentially composed of hydrated lime and specific minerals – no aggregates - all factory-blended to control compliance with specified performance requirements. Note: Requires DECOLIME as a key coat.

C. ecostucco® MURALIME S: Proprietary architectural lime paint ready to mix with water to achieve a mineral, vapor-permeable finish coat over the specified substrate.

1. Basis of Design Product: ecostucco® MURALIME.
2. Mixing: Mixed at the site according to the Manufacturer's instructions.
3. Color: Selected by the [Architect] [Owner's Representative].
4. Finish: [lime paint] [lime wash] [patina].

Specifier: **ecostucco® TRADILAKT** is an architectural lime plaster essentially composed of hydrated lime, specific minerals, and fine aggregates - all factory-blended to control compliance with specified performance requirements.

D. ecostucco® TRADILAKT: Proprietary architectural lime plaster ready to mix with water to achieve a mineral, vapor-permeable finish coat over the specified substrate.

1. Basis of Design Product: ecostucco® TRADILAKT.
2. Mixing: Mixed at the site in accordance with manufacturer's written instructions.
3. Color: Selected by the [Architect] [Owner's Representative].
4. Finish: [tadelakt] [sand float] [custom]

Specifier: **ecostucco® UNILIME** is an architectural lime plaster consisting of hydrated lime, specific minerals, and slightly coarse aggregates - all factory-blended to control compliance with specified performance requirements.

E. ecostucco® UNILIME: Proprietary architectural lime plaster ready to mix with water to achieve a mineral, vapor-permeable finish coat over the specified substrate.

1. Basis of Design Product: ecostucco® UNILIME.
2. Mixing: Mixed at the site in accordance with manufacturer's written instructions.
3. Color: Selected by the [Architect] [Owner's Representative].
4. Finish: [limestone] [travertine] [sand float] [custom]

Specifier: **ecostucco's UNILIME LG** is an architectural lime plaster consisting of hydrated lime, specific minerals, and coarse aggregates - all factory-blended to control compliance with specified performance requirements.

F. ecostucco® UNILIME LG: Proprietary architectural lime plaster ready to mix with water to achieve a mineral, vapor-permeable finish coat over the specified substrate.

1. Basis of Design Product: ecostucco® UNILIME LG.
2. Mixing: Mixed at the site in accordance with manufacturer's written instructions.
3. Color: Selected by the [Architect] [Owner's Representative].
4. Finish: [coarse limestone] [terrazzo] [sand float] [custom]

Specifier: Modify below to suit requirements by choosing one sealer.

2.6 FINISH COAT SURFACE TREATMENTS *(select one)*

Specifier: Add **NEXSEAL** where 24-hour chemical and stain resistance to most common contaminants including oil, grease, water, salts, and most common food items are preferred. Finish to treat shall be smooth.

A. ecostucco® NEXSEAL: Two-component, water based, acrylic-modified polyurethane.

1. Basis of Design Product: ecostucco® NEXSEAL.
2. Mixing: Mixed at the site in accordance with manufacturer's written instructions.
3. Application: Apply in accordance with manufacturer's written instructions.
4. Finish: Clear, satin.
5. VOC: < 50g. / Lt.

Specifier: Add **NEXWAX** where added luster is preferred. Finish to treat shall be smooth.

B. ecostucco® NEXWAX: Water-based acrylic and wax co-polymer sealer.

1. Basis of Design Product: ecostucco® NEXWAX.
2. Application: Apply in accordance with manufacturer's written instructions.
3. Appearance: Clear, matte.
4. VOC: Zero

Specifier: Add **SILACRETE** where protection against the elements such as pollution and water-borne salts is required without altering the color and the appearance of the specified finish coat.

C. ecostucco® SILACRETE: Water base penetrating sealer, vapor-permeable and UV-resistant.

1. Basis of Design Product: ecostucco® SILACRETE.
2. Application: Apply in accordance with manufacturer's written instructions.
3. Finish: Invisible.
4. VOC: Zero

2.7 REINFORCING MESH

Specifier: Retain self-adhesive fiberglass mesh to reinforce repaired cracks, seams, and transitions to dissimilar substrates.

A. Reinforcing Mesh: Self-adhesive fiberglass mesh tape

1. Basis of Design: ecostucco® G-MESH TAPE
2. Weight: 2.8 oz. / yd^2
3. Width: 9”
4. Tensile Strength: 80 -120 lb. / in.
5. Color: White

Specifier: Retain reinforcing fiberglass mesh fabric where added compressive strength is preferred.

B. Reinforcing Mesh: Fiberglass mesh fabric

1. Basis of Design: ecostucco® G-MESH LTE

2. Weight: 4.5 oz. / yd^2
3. Width: 48”
4. Leno Weave: 4mm x 4mm
5. Tensile strength: 150-185 lb. / in.
6. Color: White

Specifier: Retain corner mesh bead fabric where further impact resistance at square corners is preferred.

C. Reinforcing Corner Mesh: 90° plastic bead integrated with reinforcing fiberglass mesh.

1. Basis of Design: ecostucco® COMBO 90
2. Length: 8 linear feet (2.5 m)
3. Mesh Flanges: 4.2 in and 5.1 in (11 x 3 cm)
4. Color: White.

2.8 ACCESSORIES

A. Mineral Color: ASTM C979 [_____] standard color; [_____] custom color.

B. Water Base Primer: ASTM C932 – Benjamin Moore® Fresh Start.

C. Water: Clean, potable.

2.9 GYPSUM BOARD

A. Provide gypsum board panels complying with ASTM C1396/1396M, Section 5, and as follows.

B. Panel Size: Provide panels in manufacturer’s standard face dimensions to minimize joints and to allow proper positioning of panel edges over supports.

C. Gypsum Panels for Non-Fire-Rated Construction: ASTM C1396/C1396M.

1. Thickness: [1/2 inch (12.7 mm)] [As indicated on Drawings].

Specifier: Retain the following Type X panel for fire-resistive assemblies when required by authorities having jurisdiction

D. Gypsum Panels for Fire-Resistive Construction: Type X, ASTM C1396/C1396M.

1. Thickness: [5/8 inch (15.9 mm)] [As indicated on Drawings].

Specifier: Retain the following Type C gypsum panel for fire-resistive assemblies when required by authorities having jurisdiction to have performance exceeding Type X.

E. Gypsum Panels for Enhanced Fire-Resistive Construction: Type C, ASTM C1396/C1396M.

1. Thickness: [1/2 inch (12.7 mm)] [As indicated on Drawings].

Specifier: Select trim accessories and materials from the following:

F. Standard Trim: ASTM C1047, and as recommended for use in plaster applications indicated.

1. Material: [Galvanized-steel sheet or paper-faced galvanized-steel sheet] [Plastic].
2. Shapes:

    a. Corner Bead.
    b. Bullnose bead.
    c. LC-Bead.
    d. L-Bead.
    e. U-Bead: J-shaped.
    f. Curved-Edge Corner Bead.
    g. Control joints.

G. Joint Treatment Materials: Provide joint tape and embedding material that is compatible with and approved by the plaster system manufacturer for the applications indicated.

H. Gypsum Panel Fasteners: As recommended by the gypsum panel manufacturer for attaching to structural substrates indicated.

2.10 PLASTER MIXES

A. Mix materials in accordance with manufacturer's written instructions.

1. Mix only as much plaster as can be used prior to the initial set.
2. Blend color pigments with a fraction of the mixing water.
3. Mix materials to uniform color and consistency, adding water.
4. Protect mixtures from freezing, frost, contamination, and excessive evaporation.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine with Installer present to verify that substrate is sound and within tolerances appropriate for the application of plaster systems in accordance with the approved manufacturer's written recommendations.

1. Report all objectionable substrate conditions to the [Owner's Representative] [Architect], including but not limited to cracks, uneven corners, excessive defection, coatings, water repellents, exposed metal reinforcement, and other substandard conditions that would adversely affect system performance.

B. Proceed with work once the substrate is determined to be suitable.

3.2 PREPARATION

A. Remove foreign matter, dust, efflorescence, lime run, laitance, and other bond-inhibiting substances from substrates.

3.3 Use commercial cleaning solutions that are effective in preparing surfaces without damaging the substrate and adjacent portions of the building and site.

3.4 GYPSUM BOARD PANEL INSTALLATION

A. General: Comply with requirements of ASTM C840 and the panel manufacturer’s recommendations for installation of gypsum board panels.

Specifier: Retain waterproofing membrane application requirements if this product is retained in Part 2 above. Otherwise delete.

3.5 REINFORCING MESH APPLICATION

A. Apply mesh to the substrate according to the Manufacturer's instructions. Overlap mesh at least 2" (5 cm) at all transitions. Hold overlaps 8 inches (20 cm) from inside and outside corners.

B. Embed mesh into the specified base coat, troweling it from the center and outward to its edges, so that the fabric lays flat on the substrate and embedment is consistent, sand-floated, free of tool marks, and with no visible mesh pattern on the surface.

C. Allow a curing time of 48 hours or longer, until the base coat is set and bonded to the substrate.

D. If, after the base coat has dried, mesh is visible on the surface, apply a skim coat to cover all exposed mesh.

3.6 PLASTER APPLICATION, GENERAL

A. Apply plaster in accordance with the Manufacturer's instructions.

B. Complete plastering of ceilings, if any, prior to plastering walls. The plastering shall be started from the top and worked downwards towards the floor.

Specifier: Edit the paragraph below according to the system selected (one-coat or two-coat).

C. Thickness: Thickness shall be uniform throughout the areas being finished.

1. Apply base coat to thickness indicated.
2. Apply finish coat to thickness indicated.

D. After curing, dampen base coat prior to applying finish coat. Allow 12-24 hours between base coat and finish coat.

E. Apply finish coat to indicated color and texture.

F. Avoid excessive working of the surface. Delay troweling as long as possible to avoid drawing excess fines to surface.

Specifier: Retain the following Article if sealer is specified for the Project.

3.7 SURFACE TREATMENT APPLICATION

A. Preparation: Do not apply sealer below 50°F or above 100°F during the application and drying period. The plaster surface should dry at least 48 hours to ensure adequate penetration and adhesion of the sealer. Avoid exposure to water or moisture before, during, and 48 hours following the application.

B. Application: Apply 2 coats according to the sealer manufacturer's instructions. Comply with the sealer manufacturer's requirements for curing time of the first coat before application of the second coat.

3.8 CLEANING AND PROTECTION

A. Remove temporary protections. Clean finished surfaces as recommended by the approved manufacturer.

B. Replace damaged work.

3.9 FIELD QUALITY CONTROL

A. Schedule and attend a comparative inspection of mockups and installed system with the approved Manufacturer's technical representative to verify that the work of this Section complies with the specified requirements, the approved submittals, and the Manufacturer's recommendations. Make corrections recommended by the Manufacturer.

B. The Owner reserves the right to engage a qualified testing agency to conduct additional inspections and tests to verify compliance with the specified requirements. Work not complying with the specified requirements shall be corrected and retested to verify compliance at no additional cost to the Owner.

END OF SECTION

larger assembly or building that involves the ecostucco® products could also result in severe damage to the building components, structure, or to the ecostucco® products.
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