

**SECTION 09 24 00
PORTLAND CEMENT PLASTERING**

SPEC WRITER NOTES:

1. Use this section only for NCA projects.
2. Delete between //_____ // if not applicable to project.
3. Delete any other item or paragraph not applicable in the section and renumber the paragraphs. Coordinate and show on Room Finish Schedule cement plaster finish to clearly defined locations.
4. Use cement plaster in showers and similar wet areas. Coordinate with Section 09 06 00, SCHEDULE FOR FINISHES and VA criteria for finishes. Do not use over open frame construction on exterior walls.

PART 1 GENERAL

1.1 DESCRIPTION

- A. This section specifies lathing and Portland cement based plaster // (stucco)//.

1.2 RELATED WORK

- A. Steel framing members for attachment of plaster bases: Section 05 40 00, COLD-FORMED METAL FRAMING, and Section 09 22 16, NON-STRUCTURAL METAL FRAMING.
- B. Room finish schedule and color: Section 09 06 00, SCHEDULE FOR FINISHES.

1.3 TERMINOLOGY

- A. Definitions and description of terms to be in accordance with ASTM C11, C841, and C926 and as specified.
- B. Underside of Structure Overhead: In spaces where steel trusses or bar joists are shown, the underside of structure overhead to be the underside of the floor or roof construction supported by beams, trusses, and bar joists.
- C. Self-furring Lath: Metal plastering bases having dimples or crimps designed to hold the plane of the back of the lath 6 to 10 mm (1/4 to 3/8 inch) away from the plane of the solid backing.
- D. Solid Backing or Solid Bases: Concrete, masonry, sheathing, rigid insulation, and similar materials to which plaster is directly applied.
- E. Wet Areas: Areas of a building where cyclic or continuous exposure to very humid or wet conditions, or in which a dew point condition may

occur in the plaster. Dew point conditions occur frequently in such areas as laundries, bathing or shower rooms and similar areas.

1.4 SUSTAINABILITY REQUIREMENTS

- A. Materials in this section may contribute towards contract compliance with sustainability requirements. See Section 01 81 11, SUSTAINABLE DESIGN REQUIREMENTS, for project // local/regional materials, // low-emitting materials, // recycled content, // _____// requirements.

1.5 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data:
1. Accessories for plaster, each type.
 2. Metal plastering bases, each type.
 3. Fasteners.
 4. Bonding compounds, including application instructions.
 5. Admixtures, including mixing and application instructions.
- C. Samples:
1. Accessories for plaster, each type, not less than 150 mm (6 inches) long.

SPEC WRITER NOTES:

1. Request plaster sample where color is specified or special finish is required, and where required to match existing special finish conditions. Specify a size to suit requirements, 150 to 300 mm (6 by 12 inches) minimum.
2. Panel showing finish coat _____ by _____ mm (inches).

1.6 PROJECT CONDITIONS

- A. Comply with ASTM C926.
- B. Maintain work areas for interior work at a temperature of not less than 4°C (40°F) for not less than 48 hours prior to application of plaster, during application of plaster and until plaster is completely dry.
- C. Exterior plaster must not be applied when the ambient temperature is less than 4°C (40°F).
- D. Plaster must not be applied to frozen surfaces or surfaces containing frost.
- E. Frozen materials must not be used in the mix.
- F. Plaster coats must be protected against freezing for a period of not less than 24 hours after application.

1.7 APPLICABLE PUBLICATIONS

A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by the basic designation only. Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.

SPEC WRITER NOTES:

1. Remove reference citations that do not remain in Part 2 or Part 3 of edited specification.
2. Verify and make dates indicated for remaining citations the most current at date of submittal; determine changes from date indicated on the TIL download of the section and modify requirements impacted by the changes.

B. American Society for Testing and Materials (ASTM):

A653/A653M-11	Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
C11-13	Terminology Relating to Gypsum and Related Building Materials and Systems
C150/C150M-12	Portland Cement
C206-03(2009)	Finishing Hydrated Lime
C841-03(2008)e1	Installation of Interior Lathing and Furring
C847-12	Metal Lath
C897-05(2009)	Aggregate for Job-Mixed Portland Cement Based Plasters
C926-12a	Application of Portland Cement-Based Plaster
C932-06	Surface-Applied Bonding Compounds for Exterior Plastering
C933-13	Welded Wire Lath
C979-05	Pigments for Integrally Colored Concrete
C1063-12c	Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster

PART 2 - PRODUCTS

SPEC WRITER NOTES:

1. Make material requirements agree with applicable requirements specified in the referenced Applicable Publications. Update and specify only that which applies to the project.

2.1 METAL PLASTERING BASES

- A. Expanded Metal Lath:
 1. ASTM C847, with ASTM A653 G60, Hot Dipped Galvanized Coating.
 2. Weight: 1.8 kg/m² (3.4 pounds per square yard).
- B. Building Paper Backing for Metal Plastering Bases:
 1. Backing attached to lath as specified in ASTM C933.
 2. Vapor Permeable Backing: //_____//.
 3. Water Resistant Backing: //_____//.

2.2 ACCESSORIES FOR CEMENT PLASTER (STUCCO)

- A. Provide products fabricated to compliance with ASTM C1063.
- B. Accessories include, but not limited to:
 1. Control Joints: ASTM C841, zinc.
 2. Corner Bead.
 3. Casing Bead.
- C. Finish: Zinc-coated (galvanized) steel.

2.3 FASTENERS

- A. Comply with ASTM C1063.

SPEC WRITER NOTES:

1. Where colored or white stucco finish is required, the gray Portland cement will be omitted.
2. Select type of cement to provide the required characteristics; Type I cement should normally be specified when stucco requires no special characteristics.
3. Type II cement should be specified when stucco will be exposed to moderate sulphate (alkali) action.
4. Type III cement should be specified when high early strength is needed.

2.4 CEMENT

- A. Portland Cement: ASTM C150, Type I; //gray// //white//.

2.5 LIME

- A. ASTM C206, Type S.

2.6 AGGREGATES (SAND)

- A. ASTM C897, graded as required to suit texture of finish specified.

2.7 BONDING AGENT

- A. ASTM C932.

2.8 FACTORY PREPARED FINISH COAT FOR CEMENT PLASTER (STUCCO)

- A. Factory prepared dry blend of materials, integrally colored, designed for exterior finish coat application.

- B. Pigments: ASTM C979, lime proof mineral oxide.
- C. Mix: Not more than 35 percent, by weight of all ingredients (cement, aggregate, hydrated lime, admixture and coloring pigment) can pass a number 100 sieve.

SPEC WRITER NOTES:

1. Existing solid bases to be plastered may require extensive surface preparation or application of lath to provide positive anchorage. Use of lath is required over sheathing. Conform to IBC for seismic conditions on exterior walls.

PART 3 - EXECUTION**3.1 APPLYING METAL PLASTERING BASES**

- A. In accordance with ASTM C1063, except as otherwise specified or shown.

3.2 INSTALLING PLASTERING ACCESSORIES

- A. Install accessories in accordance with ASTM C1063, except as otherwise specified.
- B. Corner Beads: Install at all vertical and horizontal external plaster corners, as required to establish grounds, and where shown.
- C. Casing Beads: Install where shown and at transitions to dissimilar materials.
- D. Control Joints:

SPEC WRITER NOTES:

1. Show and clearly define on drawings location of control joints.
2. Install control joints to create panels no larger than 10 m² (100 square feet) with no dimension exceeding 3.2 m (10 feet).
3. Install control joints at all locations where panel size or dimensions change.
4. Detail control joints.
 1. Where control joints are placed parallel to framing members, install joints within 100 mm (4 inches) of the framing member.
 2. Install control joints only to the edges of abutting sheets of lath so that the lath is not continuous or tied across the joint.
 3. Extend joints the full width and height of the wall or length of soffit/ceiling plaster membrane.

3.3 SURFACE PREPARATION OF SOLID BASES

- A. Prepare and condition surfaces that are to receive plaster in accordance with ASTM C926, except as otherwise specified.

SPEC WRITER NOTES:

1. Read ASTM C926 regarding Requirements for Bases to Receive Portland Cement-based plaster. Check concrete specification to see that finish specified will receive plaster. New concrete should not need preparation other than that specified in 3.4, A and B. Examine condition of existing surfaces to receive plaster and specify only one of following methods for each condition.

B. Existing surfaces of concrete and masonry:

1. Clean surface of dirt and other foreign matter which will prevent bond.
2. Apply dash bond coat or bonding agent as specified herein.
3. Where existing surfaces have a coating such as paint or bituminous waterproofing apply metal plastering base as specified herein.

3.4 PORTLAND CEMENT BASED PLASTER

- A. Apply stucco in three coats to a thickness of not less than 25 mm (1 inch) as measured from the back plane of metal reinforcement, exclusive of ribs or dimples or from the face of solid backing or support, with or without metal reinforcement, to the finished stucco surface, including moderate texture variations.
- B. Conform to the applicable requirements of ASTM C926 and the following:
 1. //Evenly dampen masonry surfaces to receive stucco immediately prior to application of stucco. //
 2. Apply each stucco coat continuously in one general direction, without allowing mortar to dry at edges. Where it is impossible to work the full dimension of a wall surface, in a continuous operation, jointing to be made at a break, opening, or other natural division of the surface.
 3. Dampen edges to be joined to produce a smooth confluence.
 4. Slightly round exterior corners.
 5. Pitch Portland cement plaster on soffit surfaces forward to form a drip.
 6. Scratch Coat:
 - a. Apply not less than 10 mm (3/8 inch) thick under sufficient pressure to form good keys and to completely embed the reinforcement.

- b. Lightly scratch before the scratch coat has set, in one direction; scratch vertical surfaces in the horizontal direction only.
 - c. Fog cure scratch coat for a minimum of 72 hours.
7. Brown Coat:
- a. Dampen the scratch coat evenly to obtain uniform suction before the brown coat is applied; there cannot be no visible water on the surface when the brown coat is applied.
 - b. Apply the brown coat to the scratch coat with sufficient pressure to force the stucco into the scratches and brought to a plumb, true, even plane with rod or straightedge.
 - c. Uniformly float brown coat with dry float when set sufficiently, to promote densification of the coat and to provide a surface receptive to bonding of the finish coat.
 - d. Fog cure brown coat for a minimum of 72 hours.
8. Finish Coat:
- a. Dampen surfaces of the brown coat not more than 1 hour before the finish coat is to be applied to a uniform wetness with no free-standing water on the surface.
 - b. The finish coat to have a // smooth trowel // float // trowel-textured // rough-textured // spray-textured // exposed aggregate // finish and matching the approved sample.
 - c. Fog cure finish coat for a minimum of 48 hours; take care to prevent staining.

3.5 CURING AND PROTECTION

- A. Perform fog curing by applying a fine mist of water to the Portland cement plaster.
- B. Exercise care during fog curing to avoid erosion damage of the stucco surfaces.
- C. Do not use a solid stream of water.
- D. Frequency of fogging cannot be not less than three times daily.
- E. Protect the stucco from the direct rays of the sun during severe drying conditions using canvas, cloth or other approved sheet material, when directed.

3.6 PATCHING AND POINTING

- A. Replace or patch loose, cracked, damaged or defective work as directed.
- B. Patching must match existing work in texture and color; finished flush.

3.7 TOLERANCES

- A. Do not deviate more than 6 mm in 3 m (1/4 inch in 10 feet) from true plane in finished plaster surfaces as measured with a 3 m (10 foot) straight edge.
- B. Finish plaster flush with metal accessory surfaces and other built-in items unless otherwise directed.

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