Monobase BC- Colored Cement Finish Stucco Assemblies Specification

CSI SECTION 09 24 00

CSI SECTION 09 24 00 – PORTLAND CEMENT PLASTER

Sider-Crete- Monobase BC (Concentrated fiber reinforced base coat)

Cement Finishes – Monosideral, Marble Stone or Sider Tuscan Finish and optional Powerbase ICF (crack resistant system)

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Supply and Installation of Sider-Crete stucco system with colored cement finish stucco assemblies

(Monobase BC/Monosideral, Marble Stone or Sider Tuscan Finish with option for Powerbase ICF (crack resistant system)

1.2 RELATED SECTIONS

A. Section 03 30 00 - Cast-in-Place Concrete
B. Section 04 20 00 - Unit Masonry
C. Section 06 16 00 - Sheathing
D. Section 07 25 00 - Weather Barriers
E. Section 07 62 00 - Sheet Metal Flashing and Trim
F. Section 07 90 00 - Joint Protection
G. Section 08 50 00 - Windows
H. Section 09 21 16 - Gypsum Board Assemblies

1.3 REFERENCES

A. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar
B. ASTM C578 - Specification for Preformed, Cellular Polystyrene Thermal Insulation
C. ASTM C847 - Standard Specification for Metal Lath
D. ASTM C897 - Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plaster
E. ASTM C926 - Standard Specification for Application of Portland Cement-Based

Plaster

F. ASTM C933 - Standard Specification for Welded Wire Lath

G. ASTM C1032 - Standard Specification for Woven Wire Plaster Base

H. ASTM C1063 - Standard Specification for Installation of Lathing and Furring for Portland Cement Based Plaster

I. ASTM C1177 - Specification for Glass Mat Gypsum for Use as Sheathing

ASSEMBLY DESCRIPTION

A. Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco System: A code complying water resistive barrier, wire fabric or metal lath, Monobase BC Stucco scratch and brown coat and Sider-Crete cement finish coat (Monosideral or Marble Stone).

-OR-

B. Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco System: A code complying water resistive barrier, wire fabric or metal lath, Monobase BC (Sider-Crete Stucco scratch and brown coat), Sider-Crete 4.5 oz. reinforcing standard mesh embedded in Powerbase ICF, Sider-Crete Bonding agent (Sider Resin M50) and Monosideral, Marble Kote or Sider Tuscan Finish cement finish coat.

1.1 SUBMITTALS

A. General: Submit Samples and manufacturer’s product datasheets in accordance with Division 1 General Requirements Submittal Section.

B. Samples: Submit samples for approval. Samples shall be of materials specified and of suitable size as required to accurately represent each color and texture used on project. Prepare each sample using same tools and techniques for actual project application. Maintain and make available, at job site, approved samples.

C. Manufacturer's Warranty: Submit sample copies of Manufacturer's Warranty.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer: Shall have marketed stucco assemblies in United States for at least five years and shall have completed projects of same general scope.

2. Applicator: Shall be experienced and competent in installation of stucco materials, and shall provide evidence of a minimum of 5 years experience in work similar to that required by this section.

B. Sider-Crete Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Functional Criteria:

1. General: Stucco application shall be to vertical substrates or to substrates sloped for positive drainage. Substrates sloped for drainage shall have additional protection from weather exposure that might be harmful to coating performance.

2. Product Standards

   - Portland Cement C-150, Type 1. Federal SS-C-1960/3 – Base coat

   - Portland Cement C-150, Type 1. Federal SS-C-1960/3, White Cement- Finish Coat

   - Polypropylene ½ “fibers, alkaline-resistant – Base Coat

   - Type S Hydrated Lime: ASTM C-206 & ASTM C-207, Type S

   - Sider-Crete products complies to ASTM C-926

C. Substrate Conditions:
   1. Substrate materials and construction shall conform to the building code having jurisdiction.
   2. Substrates shall be sound, dry and free of dust, dirt, laitance, efflorescence and other harmful contaminants.
   3. Substrate Dimensional Tolerances: Flat with ¼ in (6.4 mm) within any 4 ft (1.22 m) radius.
   4. Maximum deflection of substrate system under positive or negative design loads shall not exceed L/360 of span.

D. Expansion and Control Joints: Continuous expansion and control joints shall be installed at locations in accordance with ASTM C1063 and ASTM C926.
   1. Substrate movement, and expansion and contraction of Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco and adjacent materials shall be taken into account in design of expansion joints, with proper consideration given to sealant properties, installation conditions, temperature range, coefficients of expansion of materials, joint width to depth ratios, and other material factors. Minimum width of expansion joints shall be as specified by the designer or shown on the project drawings.
   2. In accordance with ASTM C1063, expansion or control joints shall be installed in walls not more than 144 ft² (13.4 m²) in area, and not more than 100 ft² (9.3 m²) in area for all non-vertical applications. The distance between joints shall not exceed 18 ft (5.5 m) in either direction or a length-to-width ratio of 2-½ to 1.
   3. For direct application to concrete or masonry, stucco joints are required only at control/expansion joints in the underlying concrete or masonry

1.3 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Assembly products in original packaging with Sider-Crete’s labeling..

B. Storage: Store Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Assembly products in a dry location, out of direct sunlight, off the ground, and protected from moisture.

1.4 SITE / ENVIRONMENTAL CONDITIONS

A. Substrate Temperature: Do not apply Sider-Crete’s products to substrates whose

temperature are below 40°F (4.4°C) or contain frost or ice.

B. Inclement Weather: Do not apply Sider-Crete's products during inclement weather, unless appropriate protection is employed.

C. Sunlight Exposure: Avoid, when possible, installation of Sider-Crete's products in direct sunlight. Application of Sider-Crete's Finishes in direct sunlight in hot weather may adversely affect aesthetics.

D. Do not apply stucco base coats or finishes if ambient temperature falls below 40ºF (4ºC) within 24 hours of application. Protect stucco from uneven and excessive evaporation during dry weather and strong blasts of dry air.

E. Prior to installation, the wall shall be inspected for surface contamination, or other conditions that may adversely affect the performance of Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Assembly, and shall be free of residual moisture.

1.5 COORDINATION AND SCHEDULING:

A. Coordination: Coordinate Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Assembly installation with other construction operations.

1.6 WARRANTY

A. Warranty: Upon request, at completion of installation, provide Standard Limited for Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Assembly Warranty.

EDITOR'S NOTE: PLEASE SEE SIDER-CRETE'S WARRANTY FOR DETAILS.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturer: Sider-Crete, Inc. 153 Regur Road, Hawkinsville, GA 31036 -(888) 743-3750

B. Components: Obtain products manufactured by Sider-Crete of Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Assembly from authorized source. No substitutions or additions of other materials are permitted without prior written consent by Sider-Crete for this project.

2.2 MATERIALS

A. Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Assembly Materials:

1. Monobase BC Stucco Base for scratch and brown coat application (⅜ in – ¾ in)

a. Monobase BC Concentrate: Proprietary mixture of portland cement, fiber reinforced and proprietary ingredients mixed with clean, cool, potable water, and ASTM C897 or ASTM C144 sand added in the field.

EDITOR'S NOTE: MODIFY BELOW TO SUIT REQUIREMENTS. CHOOSE OPTIONAL SIDER-CRETE BONDING AGENT FOR ENHANCED PERFORMANCE

B. Sider Resin M50 bonding agent portland cement based products, an acrylic polymer bonding agent for between a cementitious base and stucco finish coats.

*EDITOR'S NOTE: MODIFY BELOW TO SUIT REQUIREMENTS. CHOOSE **POWERBASE ICF** REINFORCING COAT FOR ENHANCED CRACK RESISTANCE PERFORMANCE.*

C. Reinforcing Coat (Required for Sider-Crete Crack Resistant Stucco Assembly): NOT SUITABLE FOR USE ON EPS FOAM SHAPES.

1. Powerbase ICF: Copolymer based, factory blend of cement and proprietary ingredients only requiring addition of water.
2. Sider-Crete Reinforcing Mesh:

   Sider-Crete Standard Mesh: Weight 4.5 oz/yd^2 (153 g/m^2) reinforcing mesh.

POWERBASE ICF SHALL NOT BE USED AS AN ADHESIVE OR BASE COAT FOR EXPANDED POLYSTYRENE INSULATION BOARD SHAPES OR FEATURES

D. Sider-Crete Colored cement finishes:

1. Monosideral:A blend of portland cement, pigments, hydrated lime, sand and additives available in fine (Monosideral F) and medium sand (Monosideral SM). Standard and custom colors available
2. Marble Kote or Sider Tuscan Finish: A smooth or mission finish stucco finish coat. A blend A blend of portland cement, pigments, hydrated lime, marble and additives. Standard and custom colors available.

2.3 RELATED MATERIALS AND ACCESSORIES

A. General: Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Assembly and its related materials shall conform to the requirements of this specification.

B. Substrate Materials- Substrate materials and construction shall conform to the building code having jurisdiction:

1. Gypsum Sheathing: Minimum ½ in (13 mm) thick, core-treated, weather-resistant, exterior gypsum sheathing complying with ASTM C79 or ASTM C1177.
2. Cement Board Sheathing, Minimum ½ in (13 mm) thick, conforming to ASTM C1186.
3. Fiberboard: Minimum ½ in (13 mm) thick fiberboard complying with ANSI/AHA A194.1 as a regular density sheathing.
4. Plywood: Minimum $^5/_{16}$ in (8 mm) thick exterior grade or Exposure I plywood for studs spaced 16 in (406 mm) o.c. and ⅜ in (9.5 mm) thick exterior type plywood minimum for studs spaced 24 in (610 mm) o.c. Plywood shall comply be exterior grade or Exposure 1 and comply with DOC PS-1
5. Oriented Strand Board (OSB): $^7/_{16}$ - ½ in Wall-16 or Wall-24, approved by the

APA, TECO, or PSI/PTL. Stamped as Exposure 1 or Exterior Sheathing with a PS2 or PRP-108 rating.

6. Concrete Masonry Construction: Painted (coated) and non-painted (uncoated). Shall be in conformance with the building code.
7. Any other substrate must be approved by Sider-Crete in writing.

C. Water-Resistive Barriers:

1. For non-wood based sheathing shall be either:
   a. 1 layer asphalt-saturated felt complying with ASTM D 226 Type I.
   b. Lath with appropriate paper backing
   c. Other recognized equivalent
2. For wood based sheathing shall be either:
   a. 2 layers of Grade D asphalt saturated Kraft building paper, or 1 layer of the Kraft building paper plus paper backed lath
   b. Grade D paper with a water resistance equal to or greater than 60 minutes, with an intervening nonwater-absorbing layer or drainage space.
   c. Other recognized equivalent
3. Open Framing:
   a. 1 layer Grade D asphalt saturated Kraft building paper.
   b. 1 layer asphalt-saturated felt complying with ASTM D 226 Type I.
   c. Other recognized equivalent

EDITOR'S NOTE: THE SELECTION OF AN APPROPRIATE TYPE OF MATERIAL FOR ACCESSORIES SHALL BE DETERMINED BY APPLICABLE SURROUNDING CLIMATIC AND ENVIRONMENTAL CONDITIONS SPECIFIC TO THE PROJECT LOCATION, SUCH AS SALT AIR, INDUSTRIAL POLLUTION, HIGH MOISTURE, OR HUMIDITY.

D. Lath and Accessories: Conform to ASTM C847, ASTM C933, ASTM C1032, ASTM C1063 and Appendix

1. Accessories: Manufacturer's standard steel products with minimum G60 galvanizing unless otherwise indicated as rigid polyvinyl chloride (PVC plastic) or zinc alloy

EDITOR NOTE: SELECT LATH TYPE AND WEIGHT.

2. Metal Plaster Bases: Minimum 17 gauge self-furred stucco netting, minimum 2.5 lb/yd^2 (1.4 kg/m^2) or 3.4 lb/yd^2 (1.8 kg/m^2) expanded metal diamond lath, or welded wire lath in accordance with applicable codes and standards.
3. Weep Screeds: Foundation weep screed with minimum 3-½ inch vertical attachment flange.

EDITOR NOTE: THE SELECTION AND USE OF AN APPROPRIATE TYPE OF SEALANT SHALL BE DETERMINED BY APPLICABLE SURROUNDING CLIMATIC AND ENVIRONMENTAL CONDITIONS SPECIFIC TO THE PROJECT LOCATION.

E. Expanded Polystyrene Features over Sider-Crete Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco:

1. Adhesive and base coat:

a. Sider Mortar AAC: Modified portland cement adhesive for exterior foam shapes, such as pop-outs, plant-ons, cornices and reveals mixed with water.

b. Powerbase ICF: Modified portland cement base coat for exterior foam shapes, such as pop-outs, plant-ons, cornices and reveals mixed with water.

2. Insulation Board

a. Produced and labeled under a third party quality program as required by applicable building code and produced by a manufacturer approved by Sider-Crete, Inc.

b. Shall conform to ASTM C578, ASTM E2430 Type I.

3. Reinforcing Mesh

a. Sider-Crete standard mesh: Weight 4.5 oz/yd^2 (153 g/m^2) reinforcing mesh.

F. Seals, Sealants and Bond Breakers: Sealants shall conform to ASTM C920, Grade NS, Class 25, Use NT. Backer rod shall be closed-cell polyethylene foam.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify project site conditions under provisions of Section 01 00 00.

Compliance: Comply with manufacturer's instructions for installation of Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Stucco Assembly products.

REMINDER: MONOBASE BC/MONOSIDERAL OR MARBLE STONE STUCCO ASSEMBLY MUST INSTALLED OVER A CODE COMPLYING WATER RESISTIVE BARRIER OR SOLID SURFACE OF MASONRY OR CONCRETE. WALL PERFORMANCE IS DEPENDENT UPON, AMONG OTHER FACTORS, PROPER FLASHING AND JOINT SEALING, AND ATTENTION TO PROPER FLASHING AND JOINT SEALANT DETAILS INDICATED ON DRAWINGS.

C. Substrate Examination: Examine prior to Monobase BC concentrate installation as follows:

4. Substrate shall be of a type approved by Sider-Crete. Plywood and OSB substrates shall be gapped ⅛ in (3.2 mm) at all edges.

5. Substrate shall be examined for soundness, and other harmful conditions.

6. Substrate shall be free of dust, dirt, laitance, efflorescence, and other harmful contaminants.

7. Substrate construction in accordance with substrate material manufacturer's specifications and applicable building codes.

D. Advise Contractor of discrepancies preventing installation of the Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Stucco Assembly. Do not proceed with the Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Assembly work until unsatisfactory conditions are corrected.

E. Ensure that flashing has been installed per Specification Section 07 60 00 - Flashing and Sheet Metal.

3.2 PREPARATION

A. Water Resistive Barrier:

1. The Water Resistive Barrier is placed over all substrates except concrete or unpainted masonry. Painted (coated) CMU is to use a bond breaker such as asphalt paper and lath if the paint or coating cannot be removed.
2. Installed according to manufacturer's instructions.

IMPORTANT: COORDINATE TERMINATIONS OF STUCCO ACCESSORIES WITH SEALANT SECTION OF THE SPECIFICATION IN ORDER TO LEAVE REQUIRED SPACINGS FOR SPECIFIED JOINT DIMENSIONS.

B. Wire Fabric Lath and Metal Lath: Install according to ICC Evaluation Report ESR 2564, ASTM C1063 and Appendix and the Building Code.

C. Concrete (Cast-in-Place): Provide a surface that is slightly scarified, water absorbent, straight and true to line and plane. Remove form ties and trim projecting concrete so it is even with the plane of the wall. Remove form release agents.

D. Concrete Masonry Units: Remove projecting joint mortar so it is even with the plane of the wall. Remove surface contaminants such as efflorescence, existing paint or any other bond inhibiting material by sandblasting, waterblasting, wire brushing, chipping or other appropriate means. Pre-moisten the surface with water just prior to placement of stucco, or apply Sider-Crete Bonding Agent (Sider Resin M50).

E. Ensure that metal flashing has been installed per Specification Section 07 60 00 - Flashing and Sheet Metal.

3.3 MIXING

A. Mix Sider-Crete proprietary products in accordance with manufacturer's instructions, including the applicable Product Data Sheets available for each product of this stucco system.

3.4 APPLICATION

A. General: Monobase BC / Monosideral, Marble Stone or Sider Tuscan Finish Stucco Assembly and its related materials shall conform to this specification.

B. Bonding Agent – Sider-Resin M50:

1. Apply at the approximate rate of 250 to 300 ft^2 per gallon using a low-pressure sprayer, brush or roller. (application in direct sunlight may cause the product to dry too quickly)
2. Cement products should be applied after Sider Resin M50 has dried for 5 minutes.

C. Sider-Crete Monobase BC Concentrate Stucco Base:

1. Either Monobase BC Concentate Stucco mixtures shall be applied in one or two coats to a minimum thickness of ⅜ in (9.5 mm) by hand troweling or machine spraying the mixture to the wire lath in accordance with Sider-Crete Stucco Product Data Sheets. The maximum thickness applied in one pass is ½ in (12.7 mm).

2. Rod surface to true plane and float with stucco float.
3. Trowel to smooth and uniform surface

EDITOR'S NOTE: MODIFY BELOW TO SUIT REQUIREMENTS. CHOOSE POWERBASE ICF LEVELING AND REINFORCING COAT FOR ENHANCED CRACK RESISTANCE

D. Reinforcing Coat (Sider-Crete Crack Resistant Stucco Assembly):
   1. After Moist Curing, allow Monobase BC Concentrate Stucco Base to air dry a minimum of 24 hours before applying the leveling and reinforcing coat.
   2. Using a stainless steel trowel, apply Powerbase ICF over Monobase BC stucco Base at a thickness of $^{1}/_{16}$ – $^{3}/_{32}$ in. (1.6 – 2.4 mm)
   3. Fully embed Sider-Crete Standard Mesh into the wet Powerbase ICF including diagonal strips at corners of openings and trowel smooth. When using Standard Mesh, seams are overlapped 2½ in (63 mm).

E. Sider-Crete Bonding Agent (Sider Resin M50):
   1. Recommended as a surface bonding agent when Monosideral, Marble Stone or Sider Tuscan Finish cement finishes are to be applied over Powerbase ICF.
   2. Apply according to product datasheets and application instructions using a low-pressure sprayer brush or roller (application in direct sunlight may cause the product to dry too quickly).
   3. Stucco finishes may be applied after Sider Resin M50 becomes tacky after application, but not dry. Allow 5 minutes to dry but do not exceed 20 minutes.

F. Cement Finish Coats Monosideral, Marble Stone or Sider Tuscan Finish:
   1. Apply Cement Stucco Finish Coats according to product datasheet and application instructions.
   2. Protect Sider-Crete Finish Coats from inclement weather until completely dry and cured.

G. Curing:
   1. Monobase BC Concentrate Stucco Base: Keep stucco moist for at least 48 hours (longer in dry weather) by lightly fogging walls. Start light fogging after initial set of 2 hours.

3.5 CLEAN-UP

A. Removal: Clean tools and equipment after use prior to drying with water. Clean up and remove all debris and materials from the site caused by the installation according to federal, state and local regulations and dispose of waste in an approved landfill.

3.6 PROTECTION

A. Provide protection of installed materials from water infiltration into or behind them.

B. Provide protection of installed stucco from dust, dirt, precipitation, and freezing during installation.

C. Provide protection of installed finish from dust, dirt, precipitation, freezing, and

continuous high humidity until fully dry.

D. Clean exposed surfaces using materials and methods recommended by the manufacturer of the material or product being cleaned. Remove and replace work that cannot be cleaned to the satisfaction of the Designer/Owner.

END OF SECTION

Disclaimer: This guide specification is intended for use by a qualified designer. The guide specification is not intended to be used verbatim as an actual specification without appropriate modifications for the specific use intended. The guide specification must be integrated into and coordinated with the procedures of each design firm, and the requirements of a specific project.

Sider-Crete, Inc. products shall be prepared, mixed and applied for its intended use, in strict accordance with Sider-Crete's recommended mixture and application procedures and specifications. Defects in materials caused by improper storage, misuse, mishandling or failure to strictly follow the specific application specifications and procedures of Sider-Crete, Inc. for its various products are not warranted under any circumstances. Sider-Crete, Inc. shall not be responsible for any damage or injury caused in whole or in part by force majeure, structural movement, insufficient, improper or defective waterproofing between Sider-Crete and non-Sider-Crete materials, nor any other damage or injury not solely and directly caused by a defect in Sider-Crete, Inc. products. Users and/or Purchasers agree that Sider-Crete, Inc. cannot accept any liability for omissions, errors, end-result of projects, or any cause or effects resulting from our recommendations. Users and/or Purchasers should contact their architect and/or engineer regarding the appropriate product to be specified and used for their project and acquire the latest products specifications, to ensure that any information used to make decisions about the product(s) is as up-to-date and complete as possible. All sales are subject to Sider-Crete, Inc.'s Terms and Conditions of Sales.