

STUCCOAT™ THREE-COAT SYSTEM

Three-Coat Portland Cement Plaster Applied to Metal Framed Walls

StucCoat™ Three-Coat System Specifications

**DRYVIT MANUFACTURER'S
SPECIFICATION CSI MASTERFORMAT
SECTION 09 24 23 STUCCOAT™THREE-
COAT SYSTEM**

PART I - GENERAL

1.01 SUMMARY:

This document is intended to be used in preparing specifications for projects utilizing StucCoat Three-Coat System by Dryvit applied to properly framed and sheathed exterior wall assemblies. For complete product description and usage refer to:

- A. StucCoat Three-Coat System Data Sheet [DS1030](#)
- B. StucCoat Three-Coat System Installation Details [DS1031, DS1032](#)
- C. StucCoat™ Base – Sanded [DS997](#)
- D. StucCoat™ Base – Concentrate [DS1027](#)

1.02 RELATED SECTIONS

- A. Project Meetings - Section 01 31 19
- B. Concrete - Section 03 30 00
- C. Unit Masonry - Section 04 20 00
- D. Cold-Formed Metal Framing - Section 05 40 00
- E. Wood Framing - Section 06 11 00
- F. Flashing - Section 07 60 00
- G. Joint Protection - Section 07 90 00
- H. Gypsum Sheathing - Section 06 16 43
- I. High Performance Coatings – Section 09 96 00

1.03 REFERENCES

- A. International Building Codes (IBC and IRC)
- B. American Concrete Institute ACI 524R: Guide to Portland Cement Plastering
- C. Portland Cement Association: Portland Cement Plaster (Stucco) Manual
- D. ASTM A 526: Steel Sheet, Hot-Dip Galvanized, Commercial Quality
- E. ASTM C 150: Standard Specification for Portland Cement
- F. ASTM C 754: Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products
- G. ASTM C 847: Standard Specification for Metal Lath
- H. ASTM C 897: Standard Specification for Aggregate for Job Mixed Portland Cement Based Plasters
- I. ASTM C 920 Standard Specification for Elastomeric Joint Sealants
- J. ASTM C 926: Standard Specification for Application of Portland Cement-Based Plaster
- K. ASTM C 933: Standard Specification for Welded Wire Lath
- L. ASTM C 1007: Standard Specification for Installation of Load Bearing (Transverse and axial) Steel Studs and Related Accessories.
- M. ASTM C 1032: Standard Specification for Woven Wire Plaster Base
- N. ASTM C 1063: Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster
- O. ASTM C 1328: Standard Specification for Plastic (Stucco) Cement
- P. ASTM D 226: Standard Specification for Asphalt Saturated Organic Felt Used in Roofing and Waterproofing
- Q. ASTM D 4258: Standard Practice for Surface Cleaning Concrete for Coating
- R. ASTM D 4259: Standard Practice for Preparation of Concrete by Abrasion Prior to Coating Application
- S. ASTM D 4260: Standard Practice for Liquid and Gelled Acid Etching of Concrete
- T. ASTM D 4261: Standard Practice for Surface Cleaning Concrete Masonry Units for Coating
- U. ASTM D 1784: Standard Classification System and Basis for Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
- V. ICC-ES AC11: Cementitious Exterior Wall Coatings

1.04 SUBMITTALS

- A. Submittal requirements by the contractor are to be indicated in the construction documents as required, including:
 - 1. Product literature, samples or mockup.
 - 2. Finish sample indicating color and texture for approval by architect/owner.

- A. StucCoat Three-Coat consists of StucCoat Base - Sanded or Concentrate*, Dryvit acrylic primer and Dryvit acrylic coating or finish. StucCoat Base is applied directly to the properly installed metal lath (as specified).
1. Design Requirements:
- a. Substrates shall comply with local code requirements and practices for use under cement plaster and shall be wood or metal framed wall assemblies sheathed with approved substrates as follows:
 - 1) Exterior grade gypsum sheathing meeting ASTM C 1396 requirements for water resistant core or Type X core at the time of application of the StucCoat 3 Coat System.
 - 2) Exterior sheathing having a water-resistant core with fiberglass mat facers meeting ASTM C 1177.
 - 3) Exterior fiber reinforced cement or calcium silicate boards.
 - 4) APA Exterior or Exposure 1 Rated Plywood, Grade C-D or better, nominal 1/2 in (12.7mm), minimum, installed with the C face out.
 - 5) APA Exterior or Exposure 1 Fire Retardant Treated (FRT) Plywood, Grade C-D or better, nominal 1/2 in (12.7 mm), minimum, installed with the C face out.
 - 6) APA Exposure 1 Rated Oriented Strand Board (OSB) nominal 1/2 in (12.7 mm), minimum. **Note: Applications over OSB sheathing requires a minimum of 2 coats of Backstop NTX – Smooth. Backstop NTX – Texture is not recommended for the field of wall application over OSB.**
 - b. The roofing materials shall be loaded onto the roof and interior wallboard stocked in the building prior to the installation of the StucCoat 3 Coat System.
 - c. Deflection of substrate systems shall not exceed L/360.
 - d. The slope of inclined surfaces shall not be less than 6:12 (27°) and the length shall not exceed 12 in (305 mm).
 - e. Slopes on windowsills projecting 4 in (102 mm) or less, shall not be less than 3:12.
 - f. Expansion joints:
 - 1) Design and location of expansion joints shall be determined by the project design professional and indicated on the contract documents. As a minimum, expansion joints in StucCoat 3 Coat System are required at the following locations:
 - a) Where expansion joints occur in the substrate system.
 - b) Where building expansion joints occur.
 - c) At floor lines in wood frame construction.
 - d) Where StucCoat 3 Coat System abuts dissimilar materials.
 - e) Where the substrate changes.
 - f) Where significant structural movement occurs such as changes in roofline, building shape or structural system.
 - g. Control joints:
 - 1) Design and location of control joints shall be determined by the project design professional in accordance with ASTM C 1063 and indicated on the contract drawings. As a minimum, control joints shall be located at the following locations:
 - a) Corners of openings
 - b) Such that monolithic wall areas do not exceed 144 ft² (13.4 m²)
 - c) Length to width ratios of wall areas shall not exceed 2.5:1
 - d) Maximum spacing of control joints shall not exceed 18 ft (5.5 m)
 - h. Sealants
 - 1) Refer to Section 07 92 00
 - 2) Shall meet ASTM C 920
 - 3) Use, type and location of sealants is the responsibility of the project designer and shall be indicated on the contract documents.
 - 4) Refer to [Tremco Sealant Selection Guide](#) for a list of sealants that have been tested for compatibility with Dryvit products.
 - i. Vapor Retarders
 - 1) Use and location of vapor retarders within a wall assembly is the responsibility of the project designer and shall comply with local building code requirements. Type and location shall be noted on the contract documents. Vapor retarders may be inappropriate in certain areas and can result in condensation within the wall assembly when incorrectly used. Refer to Dryvit publication [DS159](#) for additional information.
 - j. Flashing shall be provided at all roof-wall intersections, windows, doors, chimneys, decks, balconies, and other areas as necessary to prevent water penetration behind the StucCoat Three-Coat System.

- k. Site Coated EPS Shapes: Shall be coated on site utilizing the same materials (EPS, base material mixture, reinforcing mesh, and finish) as specified for the project.
 - l. Machine-Coated EPS Shapes: Shall be supplied by a manufacturer that subscribes to the Dryvit third party certification and quality assurance program.
2. Performance Requirements: As a minimum, StucCoat Three-Coat System products shall meet:
- a. ASTM C 1328: Standard Specification for Plastic (Stucco) Cement

1.06 QUALITY ASSURANCE

A. Qualifications:

- 1. Manufacturer: Shall be Dryvit or approved suppliers. All materials shall be obtained from Dryvit or its authorized distributors.
- 2. Plastering Contractor:
 - a. Shall be knowledgeable in the proper installation of exterior lathing and cement plaster products.
 - b. Shall have qualified and properly trained people to perform work.
 - c. Shall be licensed, bonded and insured.
 - d. Shall have experience in application of cement plaster products on projects of comparable scope.
- 3. Machine Coated EPS Shapes and Starter Boards: Shall be supplied by a manufacturer that subscribes to the Dryvit third party certification and quality assurance program.

B. Mock-Up

- 1. The contractor shall, before the project commences, provide the owner/architect with a mock-up for approval.
- 2. The mock-up shall be of suitable size as required to accurately represent each color and texture to be utilized on the project.
- 3. The mock-up shall be prepared with the same products, tools, equipment and techniques required for the actual applications. The finish used shall be from the same batch as that being used for the project.
- 4. The approved mock-up shall be available and maintained at the job site.

1.07 DELIVERY, STORAGE AND HANDLING

- A. All StucCoat Three-Coat System materials shall be delivered to the job site in the original, unopened packages with labels intact. Questionable materials shall not be used.
- B. Materials shall be stored at the job site, and at all times, in a cool, dry location, out of direct sunlight, protected from weather and other sources of damage. Minimum storage temperature shall be as follows:
 - 1. DPR, PMR™, HDP™, Weatherlastic® and E™ Finishes, Color Prime™, StucCoat™ Base, Crack Isolation Base and NCB™: 40 °F (4 °C).
- C. For other products, refer to specific product data sheets.
- D. Protect all products from weather and direct sunlight. Bagged and pail products must be kept in the shade or covered with a tarp/ tenting until it is applied. Avoid applying products in direct sunlight as this can cause accelerated curing/drying of liquid-applied products which can lead to minor color variation.
- E. Maximum storage temperature shall not exceed 100 °F (38 °C). **NOTE: Minimize exposure of materials to temperatures over 90 °F (32 °C). Finishes exposed to temperatures over 110 °F (43 °C) for even short periods may exhibit skinning, increased viscosity and should be inspected prior to use.**

1.08 PROJECT CONDITIONS

- A. Application of wet materials shall not take place during inclement weather unless appropriate protection is provided. Protect materials from inclement weather until they are dry.
- B. StucCoat Base shall not be applied when wall or ambient temperatures are below 40 °F (4 °C).
- C. At the time of Dryvit product application, the air and wall surface temperatures shall be from 40 °F (4 °C) minimum to 100 °F (38 °C) maximum for the following products:
- D. DPR, PMR, HDP, Weatherlastic and E Finishes™, Color Prime, StucCoat™ Base, Crack Isolation Base and NCB.
- E. For other products, refer to specific product data sheets.
- F. These temperatures shall be maintained with adequate air ventilation and circulation for a minimum of 24 hours (48 hours for Weatherlastic Finishes, Ameristone, and TerraNeo) thereafter, or until the products are completely dry. Refer to published product data sheets for more specific information.
- G. StucCoat Plaster Materials shall be completely dry and properly cured for a minimum of 7 days prior to primer application.
- H. If necessary, tenting, heating and ventilation may be utilized to maintain required conditions. Heaters shall be vented to the outside. Avoid use of Kerosene heaters as they are known to leave oily residues on nearby walls.

- I. Protect the StucCoat 3 Coat System materials from uneven and excessive evaporation in dry, warm, or windy weather. Always work on the shady side of the wall. Refer to section 3.03.B and 3.03.C for Base curing requirements.

1.09 SEQUENCING AND SCHEDULING

- A. Installation of the StucCoat Three-Coat System shall be coordinated with other construction trades.

1.10 WARRANTY

- A. Dryvit shall provide a limited warranty against defective material upon written request. Dryvit shall make no other warranties, expressed or implied. Dryvit does not warrant workmanship. Full details are available from Dryvit.

1.11 DESIGN RESPONSIBILITY

- A. It is the responsibility of both the specifier and the purchaser to determine if a product is suitable for their intended use. The designer selected by the purchaser shall be responsible for all decisions pertaining to design, detail, structural capability, attachment details, shop drawings and the like. Dryvit has prepared guidelines in the form of specifications, installation details, and product data sheets to facilitate the design process only. Dryvit is not liable for any errors or omissions in design, detail, structural capability, attachment details, shop drawings, or the like, whether based upon the information prepared by Dryvit or otherwise, or for any changes which purchasers, specifiers, designers, or their appointed representatives may make to Dryvit's published comments.

1.12 MAINTENANCE

- A. All Dryvit products are designed to require minimal maintenance. However, as with all building products, depending on location, some cleaning and minimal maintenance may be required. See Dryvit publication [DS152](#) on Cleaning and Recoating.
- B. Sealants and flashings shall be inspected by the owner or their agent on a regular basis and repairs made as necessary to maintain a watertight building enclosure.

PART II - PRODUCTS**2.01 MANUFACTURER:**

- A. All components of StucCoat Three-Coat System shall be obtained from Dryvit or its authorized distributors.

2.02 MATERIALS

- A. Water-Resistive Barrier:
 1. Shall comply with all local building code requirements. Minimum 2 layers are required over wood-based substrates.
 2. Primary Water Resistive Barrier shall be one of the following:
 - a. Tremco ExoAir 230
 - b. Tremco ExoAir 130
 - c. Tremco ExoAir 110 AT
 - d. Tremco ExoAir 210 AT
 - e. Tremco Securock ExoAir 430
 - f. Dryvit Backstop NTX
 - g. Dryvit Backstop NT-VB
 - h. Tremco EnviroDri
 - i. Other code approved water-resistive barrier for use in Stucco systems
 3. In dry climates, the secondary layer shall be one layer of 10-minute grade D paper.
 4. In moist or marine climates, in addition to complying with 2.02.3 in the Dryvit specification, a space or drainage material not less than 3/16 of an inch (4.8 mm) in depth shall be applied to the exterior side of the water-resistive barrier. Drainage on the exterior side of the water-resistive barrier shall have a minimum drainage efficiency of 90% as measured in accordance with ASTM E2273 or Annex A2 of ASTM E2925.
- B. Lath (by others): Shall be one of the following. Specific type to be selected by designer based on specific project requirements.
 1. Self-Furring Diamond Mesh metal lath shall be galvanized, minimum 2.5 lbs/sq yd (1.4 kg/m²) or 3.4 lbs/yd² (1.9 kg/m²) and comply with ASTM C 847.
 2. Self-furring welded wire lath, minimum 16 gauge, shall be galvanized with openings not exceeding 2 in x 2 in (51 mm x 51 mm), and comply with ASTM C 933.
 3. 3/8 in (9.5 mm) galvanized rib lath shall comply with ASTM C 847.
 4. Self-furring woven wire lath, minimum 17 gauge, shall be galvanized with openings not exceeding

1 1/2 in x 1 1/2 in (38 mm x 38 mm) meeting ASTM C 1032.

C. Accessories (by others).

1. Type, style and manufacturer shall be indicated on construction documents.
2. Depth of accessories (grounds) shall be sized for the plaster thickness.
3. In corrosive environments, accessories manufactured of PVC or zinc are recommended.
4. Steel accessories shall meet ASTM C 841.
5. PVC accessories shall meet ASTM D 1784 and ASTM C 1063.

D. Cement Plaster:

1. StucCoat Base - Sanded: A factory pre-mixed, fiber reinforced, cementitious coating for one-coat and conventional Stucco Systems and is packaged in 80 lb (36.3 kg) bags.
2. StucCoat Base - Concentrate: A factory pre-mixed, fiber reinforced, cementitious coating for one-coat and conventional Stucco systems and is packaged in 80 lb (36.3 kg) bags.

E. Machine Coated EPS Shapes: Shall be supplied by a manufacturer that subscribes to the Dryvit third party certification and quality assurance program.

F. Primer:

1. Dryvit Color Prime™, Color Prime-W™ or Primer with Sand™: A water-based, pigmented acrylic primer applied over the cured StucCoat base coat to improve adhesion and provide a more uniform appearance of the finish.

G. Dryvit Coating:

1. Demandit® Smooth - integrally colored smooth exterior wall coating enhanced with proven mildew resistance. A minimum of 2 coats are required.
2. Weatherlastic® Smooth - integrally colored, elastomeric, smooth exterior wall coating enhanced with proven mildew resistance. A minimum of 2 coats are required.

H. Dryvit Finish(es): 100% acrylic finishes with integral color and texture. Shall be the type, color and texture as selected by the architect/owner and shall be of the following types:

1. Standard DPR (Dirt Pickup Resistance): Water-based, acrylic coating with integral color and texture and formulated with DPR chemistry:
 - a. Quarzputz® DPR: Open-texture
 - b. Sandblast® DPR: Medium texture
 - c. Freestyle® DPR: Fine texture
 - d. Sandpebble® DPR: Pebble texture
 - e. Sandpebble® Fine DPR: Fine pebble texture
2. Hydrophobic (HDP™) Finishes: 100% acrylic coating with integral color and texture and formulated with hydrophobic properties:
 - a. Quarzputz® HDP
 - b. Sandblast® HDP
 - c. Sandpebble® HDP
 - d. Sandpebble® Fine HDP
3. **E™**: Water-based, lightweight acrylic coating with integral color and texture and formulated with DPR chemistry:
 - a. Quarzputz® **E**
 - b. Sandpebble® **E**
 - c. Sandpebble® Fine **E**
4. Specialty Finishes and Veneers:
 - a. Ameristone: Multi-colored quartz aggregate with a flamed granite appearance.
 - b. Stone Mist®: Ceramically colored quartz aggregate.
 - c. Custom Brick: Acrylic polymer-based finish used in conjunction with a proprietary template system to create the look of brick.
 - d. TerraNeo®: 100% acrylic-based finish with large mica chips and multi-colored quartz aggregates.
 - e. NewBrick®: A lightweight insulated brick veneer for use on exterior walls.
5. Elastomeric DPR (Dirt Pickup Resistance): Water-based, elastomeric acrylic coating with integral color and texture and formulated with DPR chemistry:
 - a. Weatherlastic® Quarzputz
 - b. Weatherlastic® Sandpebble
 - c. Weatherlastic® Sandpebble Fine
 - d. Weatherlastic® Adobe
6. Medallion Series PMR™ (Proven Mildew Resistance): Water-based, acrylic coating with integral color and texture and formulated with PMR chemistry:
 - a. Quarzputz® PMR

- b. Sandblast® PMR
 - c. Freestyle® PMR
 - d. Sandpebble® PMR
 - e. Sandpebble® Fine PMR
7. Coatings, Primers and Sealers:
- a. Demandit® Smooth
 - b. Demandit® Sanded
 - c. Demandit® Advantage™
 - d. HDP Water-Repellent Coating
 - e. Weatherlastic Smooth
 - f. Weatherlastic HB
 - g. Tuscan Glaze™
 - h. Color Prime
 - i. Prymit®
 - j. SealClear™

PART III - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of StucCoat Three-Coat System, it is the contractor's responsibility to ensure that:
1. The surfaces to receive plaster are free of dust, loose particles, oil and other conditions that would affect the adhesion, installation or performance of StucCoat Three-Coat System materials.
 2. The lath is of the proper type, installed tight, properly fastened, and meets the requirements of ASTM C 1063, ASTM C 847 (expanded metal), ASTM C 933 (Welded Wire), or ASTM C 1032 (Woven Wire), and local building code requirements.
 3. All accessories including corner aids, control and expansion joints, casing beads, etc. are properly fastened and positioned according to contract drawings and local building code requirements.
 4. Doors, windows, decks, and other openings and penetrations have been properly flashed in accordance with building code and contract documents and StucCoat Three-Coat System Installation Details [DS1031](#).
 5. Metal roof flashing has been installed in accordance with the manufacturer's requirements, Asphalt Roofing Manufacturers Association (ARMA) Standards and StucCoat Three-Coat System Installation Details [DS1030](#), or as otherwise necessary to maintain a watertight envelope.
 6. The substrate is flat within 1/4 in (6.4 mm) in 10 ft (3.0 m).
 7. The contractor shall notify the general contractor and/or owner and/or architect of all discrepancies. Do not proceed until unsatisfactory conditions are resolved.

3.02 PREPARATION

- A. Protection
1. The StucCoat Three-Coat System materials shall be protected by permanent or temporary means from weather and other damage prior to, during, and following application, until dry.
 2. Protect adjoining work and property.
- B. Solid surfaces such as precast or cast-in-place concrete or masonry, shall have adequate suction and surface roughness to provide bond. Smooth or non-absorptive surfaces shall be prepared by the following methods:
1. Sandblasting, wire brushing, acid etching, chipping or any combination thereof. Refer to ASTM D 4258, ASTM D 4259, ASTM D 4260, or ASTM D 4261 as applicable.
 2. Application of an approved bonding agent.
 3. Where effective bond cannot be achieved, the entire surface shall be covered with furred metal lath in accordance with ASTM C 1063 and building code requirements.

3.03 INSTALLATION

- A. Mixing and Application Instructions – refer to the product literature for specific mixing and application instructions of each product – located on the Dryvit website [Products Page](#).
- B. StucCoat Base shall be moist cured for a minimum of 48 hours following application.
- C. StucCoat Base shall be completely dry and cured for a minimum of 7 days prior to application of primer and finish.
- D. The installation of Pre-Coated EPS Shapes and Starter Boards shall be in accordance with Dryvit Publication DS1038.

3.04 FIELD QUALITY CONTROL

- A. The lath and water-resistive barrier installation shall be inspected as required by the local building department prior to plaster materials being applied.
- B. The contractor shall be responsible for the proper application of the StucCoat Three-Coat System materials.
- C. Dryvit assumes no responsibility for on-site inspections or application of its products.

3.05 CLEANING

- A. All excess StucCoat Three-Coat System materials shall be removed from the job site by the contractor in accordance with contract provisions.
- B. All surrounding areas, where the StucCoat Three-Coat System has been applied, shall be left free of debris and foreign substances resulting from the contractor's work.

3.06 PROTECTION

- A. The StucCoat Three-Coat System materials shall be protected from weather and other damage until permanent protection in the form of flashings, sealants, etc. are installed PER THE Designer/ Contractor Schedule.

DISCLAIMER

Information contained in this specification conforms to standard detail and product recommendations for the installation of the StucCoat Three-Coat System products as of the date of publication of this document and is presented in good faith. Dryvit assumes no liability, expressed or implied, as to the architecture, engineering or workmanship of any project. To ensure that you are using the latest, most complete information, contact Dryvit at:

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