

StucCoat™ One-Coat Securock® ExoAir® 430 System

A Factory Prepared, Fiber-Reinforced Modified Portland Cement Exterior Plaster System Assembly over a Coated Fiberglass Mat Gypsum Sheathing Panel with Pre-applied Weather-Resistant Barrier and Air Barrier, Accessory Materials, Crack Isolation Membrane, Elastomeric Textured Finish Coating and Silicone Sealant Components Including an Option for Continuous Insulation for Commercial Construction.

StucCoat™ One-Coat Securock ExoAir 430 System Specifications CSI Format Section 09 24 23

INTRODUCTION

This manufacturer's guide specification is intended for use by design and construction professionals in the development of project specifications. By referring to the manufacturer's ("**Notes to Specifier**" in parentheses and bolded), the specifier may easily select the portions of the comprehensive guide specification which are pertinent to his or her project. "Notes to Specifier" should then be deleted from the final specification document. This guide specification follows the Construction Specification Institute's MasterFormat and Section Format protocols.

It will be prudent to place certain parts of the StucCoat™ One-Coat Securock® ExoAir® 430 System Specification in other parts of the project's total specification. The project design professionals are responsible for verifying that the project specifications are suitable for the project. For assistance in preparing your specification, please contact your Dryvit Distributor or Dryvit Technical Services.

WARNING

Specifications should be followed, and proper details adhered to, in order to prevent water intrusion, resulting in possible damage to the System or other building elements. Care should be taken to ensure that all building envelope elements, including without limitations, roofs, windows, flashings, sealants, etc., are compatible with this StucCoat One-Coat Securock ExoAir 430 System.

The StucCoat™ One-Coat Securock ExoAir 430 System is an engineered assembly of multiple compatible components: A fiber-reinforced modified Portland cement exterior plaster applied over a coated fiberglass mat gypsum sheathing panel with pre-applied weather-resistant barrier and air barrier, accessory materials, crack isolation membrane, Elastomeric textured finish coating and silicone sealant components including an option for continuous insulation for residential and commercial construction.

DISCLAIMER

It is the responsibility of both the specifier and the purchaser to determine if a product is suitable for its intended use. The designer selected by the purchaser is responsible for all decisions pertaining to design, detail, structural capability, attachment details, shop drawings and the like. The StucCoat One-Coat Securock ExoAir 430 System Manufacturer / Supplier has prepared guidelines in the form of specifications, installation details, and product data sheets to facilitate the design process only. The Manufacturer / Supplier is not liable for any errors or omissions in design, detail, structural capability, attachment, shop drawings, or the like, whether based upon the information prepared by the Manufacturer / Supplier or otherwise, or for any changes which purchasers, specifiers, designers, or their appointed representatives may make to the Manufacturer's / Supplier's published comments.

Information contained in this specification conforms to standard detail and product recommendations for the installation of the StucCoat™ One-Coat Securock ExoAir 430 System 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 installation of any project. To ensure that you are using the latest, most complete information, visit our website at www.dryvit.com or contact Dryvit at:

**3735 Green Road
Beachwood, OH 44122
800-556-7752
www.dryvit.com**

* The Trained Contractors referenced in Sections, 1.06.B, 1.06.C of this guide specification indicates certain employees of the StucCoat One-Coat System and Securock ExoAir 430 Sheathing and Accessory Materials sub-contractor company have been instructed in the proper application of Dryvit products and have received copies of Dryvit's Application Instructions and Specifications. The Trained Contractor Program is not an apprenticeship or endorsement. Each trained contractor is an independent company experienced in the trade and bears responsibility for its own quality. Dryvit assumes no liability for the performance of a trained contractor.

**DRYVIT / TREMCO CPG INC.
MANUFACTURER'S SPECIFICATION
CSI MASTERFORMAT SECTION 09 24 23
StucCoat™ One-Coat Securock® ExoAir® 430 System**

PART 1 GENERAL**1.01 SUMMARY**

A. Section Includes:

1. This document is to be used in preparing specifications describing the minimum requirements for the application of an exterior Fiber-Reinforced Modified Portland Cement Exterior Plaster System ("Cement Plaster System") assembly including:
 - a. A coated fiberglass mat gypsum sheathing panel with pre-applied weather-resistant barrier and air barrier and accessory materials, metal plaster base and fasteners, cement plaster base, crack isolation membrane, an elastomeric textured finish coating and silicone sealants.
 - b. Optional materials include rigid continuous insulation and primer.

B. Related Requirements:

(Note to Specifier: Delete any Related Requirements below not relevant to this project and add others as required.)

1. 03 30 00 Cast-in Place Concrete
2. 03 40 00 Precast Concrete
3. 04 22 00 Concrete Masonry Unit
4. 05 41 00 Structural Metal Stud Framing
5. 06 11 00 Wood Framing
6. 06 11 13 Engineered Framing Systems

(Note to Specifier: Engineered framing system components such as parapet cap nailer are available from Prebuck LLC, a division of Tremco CPG Inc. Coordinated specification of this item can be incorporated into the overall Tremco CPG Inc. limited warranty.)

7. 06 16 00 Sheathing
8. 07 21 13 Board Insulation
9. 07 26 00 Vapor Retarders
10. 07 27 26 Factory Fluid Applied Membrane Air Barrier
11. 07 60 00 Sheet Metal Flashing and Sheet Metal
12. 07 92 00 Joint Sealants
13. 08 40 00 Entrances, Store Fronts, and Curtain Walls
14. 08 50 00 Windows

1.02 REFERENCES

(Note to Specifier: Delete any standards below not relevant to this project and add others as required.)

A. Reference Standards:

1. ASTM Standards:
 - a. ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
 - b. ASTM A 653 Specifications for Sheet Steel Zinc (Galvanized) by Hot-Dip Process, Commercial Quality
 - c. ASTM C 150 Standard Specification for Portland Cement
 - d. ASTM C 297 Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
 - e. ASTM C 473 Standard Test Methods for Physical Testing of Gypsum Panel Products
 - f. ASTM C 510 Standard Test Method for Staining and Color Change of Single- or Multicomponent Joint Sealants
 - g. ASTM C 518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

h.	ASTM C 578	Specifications for Preformed, Cellular Polystyrene Thermal Insulation
i.	ASTM C 639	Standard Test Method for Rheological (Flow) Properties of Elastomeric Sealants
j.	ASTM C 661	Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer
k.	ASTM C 679	Standard Test Method for Tack-Free Time of Elastomeric Sealants
l.	ASTM C 719	Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle) ^{1, 2}
m.	ASTM C 754	Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products
n.	ASTM C 793	Standard Test Method for Effects of Laboratory Accelerated Weathering on Elastomeric Joint Sealants
o.	ASTM C 794	Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
p.	ASTM C 834	Standard Specification for Latex Sealants
q.	ASTM C 847	Standard Specification for Metal Lath
r.	ASTM C 897	Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plaster
s.	ASTM C 920	Standard Specification for Elastomeric Joint Sealants
t.	ASTM C 926	Standard Specification for Application of Portland Cement-Based Plasters
u.	ASTM C 933	Standard Specification for Woven Wire Lath
v.	ASTM C 1007	Standard Specification for Installation of Load Bearing (Transverse and axial) Steel Studs and Related Accessories
w.	ASTM C 1032	Standard Specification for Woven Wire Fabric
x.	ASTM C 1063	Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement Plaster.
y.	ASTM C 1177	Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
z.	ASTM C 1246	Standard Test Method for Effects of Heat Aging on Weight Loss, Cracking, and Chalking of Elastomeric Sealants After Cure
aa.	ASTM C 1248	Standard Test Method for Staining of Porous Substrate by Joint Sealants
bb.	ASTM C 1305	Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane
cc.	ASTM C 1328	Standard Specification for Plastic (Stucco) Cement
dd.	ASTM C 1396	Standard Specification for Gypsum Board
ee.	ASTM C1513	Standard Specification for Steel Tapping Screws for Cold-Formed Steel Framing Connections
ff.	ASTM D 226	Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
gg.	ASTM D 412	Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension
hh.	ASTM D 624	Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
ii.	ASTM D 1784	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
jj.	ASTM D 1970	Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
kk.	ASTM D 2247	Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
ll.	ASTM D 2898	Standard Test Method for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing
mm.		ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
nn.	ASTM D 3330	Standard Test Method for Peel Adhesion of Pressure-Sensitive Tape
oo.	ASTM D 4060	Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
pp.	ASTM D 4541	Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers
qq.	ASTM E 72	Standard Methods of Conducting Strength Tests of Panels for Building Construction
rr.	ASTM E 84	Standard Test Method for Surface Burning Characteristics of Building Materials

- ss. ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials
 - tt. ASTM E 119 Standard Method for Fire Tests of Building Construction and Materials
 - uu. ASTM E 283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
 - vv. ASTM E 330 Test Method for Structural Performance of Exterior Windows, Doors and Curtain Walls by Uniform Static Air Pressure Difference
 - ww. ASTM E 331 Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference
 - xx. ASTM E 831 Standard Test Method for Linear Thermal Expansion of Solid Materials by Thermomechanical Analysis
 - yy. ASTM E 1233 Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Cyclic Air Pressure Differential
 - zz. ASTM E 2178 Standard Test Method for Air Permeance of Building Materials
 - aaa. ASTM E 2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
 - bbb. ASTM E 2485 Standard Test Method for Freeze-Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water-Resistive Barrier Coatings
 - ccc. ASTM G 154 Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials
 - ddd. ASTM G 155 Standard Practice for Operating-Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials
2. National Fire Protection Association (NFPA) Standards:
 - a. NFPA 268 Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Source
 - b. NFPA 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies Containing Combustible Components
 3. The American Association of Textile Chemists and Colorists:
 - a. AATCC 127-08 Water Resistance: Hydrostatic Pressure Test
 4. US Federal Specifications
 - a. TT-S-001543A Sealing Compound: Silicone Rubber Base (for Calking, Sealing, and Glazing in Buildings and Other Structures)
 - b. TT-S-00230 Sealing Compound: Elastomeric Type, Single Component (for Calking, Sealing, and Glazing in Buildings and Other Structures)
 - c. FS UUB 790 Building Paper
 5. International Building Code: 2018, 2015, 2012, 2009
 6. International Residential Code: 2018, 2015, 2012, 2009
 7. ICC ES (International Code Council Evaluation Services)
 - a. AC 11 Acceptance Criteria for Cementitious Exterior Wall Coatings
 8. IAMPO Evaluation Report: Western 1-Kote / IAPMO Exterior Stucco System #382
 9. Northwest Walls and Ceilings Bureau: Portland Cement Plaster Resource Guide – Latest Revision
 10. PCA Portland Cement Plaster Stucco Manual: Latest Revision

1.03 ADMINISTRATIVE REQUIREMENTS

A. Pre-Construction Meetings

(Note to Specifier: The warranty shall require a pre-construction meeting including representatives of the Manufacturer, the Applicator, the Owner, and the Consultant (if

applicable) prior to installation of the Products. Work in this section requires coordination with related sections and trades.)

1. The Cement Plaster System installer shall coordinate with the General Contractor to schedule, invite and administer a pre-construction meeting including but not limited to the architect of record, owner, consultant(s) and representatives of the framing, sheathing, wall penetration components, sealant and Cement Plaster System manufacturer to assure required integration of materials as selected and specified herein for proper sequencing and installation detailing.

B. Sequencing

1. The General Contractor shall coordinate communications between the trades and scheduling of the work prior to project commencement and while the work is in progress.
2. Consult in advance with related trades that may need to penetrate building envelope and make provisions for their work to avoid cutting and patching.
3. Installing contractor for the Cement Plaster System shall schedule all inspections required by local authorities or product manufacturers, at each required stage, before continuing with the next stage of the system installation.
4. All wall penetrations shall incorporate proper flashing detailing and be installed by the respective trades before lathing and trim shall begin. Accessory Materials shall be compatible with air/water-resistive barrier, paper backing, flashings by others and sealant.
5. Attachment of drywall or other materials to the interior sides of walls receiving Cement Plaster System shall be completed before the installation of the exterior Cement Stucco System.
6. Tile, stone, or other roofing materials of significant weight shall be loaded onto the roof before application of exterior Cement Stucco System.
7. Adequately moist cure Cement Plaster Materials

1.04 ACTION SUBMITTALS / INFORMATIONAL SUBMITTALS

- A. Submit product data as required by Section 01 33 00, Administrative Requirements.
- B. Submit manufacturer reference documentation for Cement Stucco System, connections, details, expansion joints, and installation sequence.
- C. Submit two (2) samples of the Cement Plaster System for each finish texture and color to be used on the project. Use the same tools and techniques proposed for the actual installation. Make the samples of sufficient size to accurately represent each color and texture being utilized on the project.
- D. Submit Owner/Architect-requested test results verifying the performance of the Cement Stucco System.
- E. Submit a copy of the manufacturer's data sheet, reference installation details and application instructions.

1.05 CLOSEOUT SUBMITTALS

- A. Submit a copy of the manufacturer's recommended maintenance and repair manual.
- B. Submit a copy of the Cement Stucco System manufacturer's comprehensive single source limited warranty.

1.06 QUALITY ASSURANCE

(Note to Specifier: Please delete any qualification below not relevant to this project and add others as required.)

A. Manufacturer's Qualifications:

1. Cement Plaster materials blended by a manufacturer approved by Cement Stucco System manufacturer or equal approved in writing.

B. Cement Plaster System Installing Contractor Qualifications:

1. Shall be trained and approved by Cement Plaster System manufacturer / supplier.
2. Shall have experience and provide trained personnel qualified to properly install their respective scope of work as specified herein and in accordance with Contract Documents.
3. Shall coordinate with related installing contractor(s) and trades for Framing, Sheathing, Air and Water-Resistive Barrier and Accessory Materials, Cement Plaster, and Sealants as required to provide for a complete Cement Plaster System as specified herein and in accordance with Contract Documents.
4. Obtain components of the Cement Plaster System such as but not limited to Metal Plaster Base, Accessory Trims, Fasteners, Cement Plaster, Crack Isolation Membrane, Textured Finish and Insulation Board where specified that are compatible with the Cement Plaster System, comply with all Reference Standards, building code requirements, manufacturer's requirements and in accordance with Contract Documents.
5. Shall be licensed, bonded, and insured.

C. Gypsum Sheathing with Pre-Applied AWRB and Accessory Materials Installing Contractor Qualifications:

1. Shall be trained and approved by Gypsum Sheathing with Pre-Applied AWRB and Accessory Materials manufacturer / supplier.
2. Shall have experience and provide trained personnel qualified to properly install their respective scope of work as specified herein and in accordance with Contract Documents.
3. Shall coordinate with related installing contractor(s) and trades for Framing, Cement Plaster System, and Sealants as required to provide for a complete Cement Plaster as specified herein and in accordance with Contract Documents.
4. Obtain Gypsum Sheathing with Pre-Applied AWRB and Accessory Material components as specified that are compatible with the Cement Plaster System, comply with all Reference Standards, building code requirements, manufacturer's requirements and in accordance with Contract Documents.
5. Shall be licensed, bonded, and insured.

D. Mock-Up:

1. Provide the owner/architect with a mock-up for approval.
 - a. Of suitable size as required to accurately represent the products being installed, as well as each color and texture to be utilized on the project.
 - b. Prepared with the same products, materials, tools, equipment, and techniques required for the actual applications.
 - c. Available and maintained at the jobsite.

D. Regulatory Requirements:

1. Separate the EPS insulation board from the interior of the building by a minimum 15-minute thermal barrier as required by governing building code.

E. Inspections:

1. Cooperate with independent, third-party inspectors when required by governing building code or in accordance with Contract Documents.

1.07 DELIVERY, STORAGE AND HANDLING

1. Deliver, store, handle, and protect products for use on the project.
2. Deliver product to job site:
 - a. Without exposure to weather or other sources of moisture.
 - b. In manufacturer's unopened container, packages, or bundles, clearly identified.
3. Store in a protected, dry, ventilated space and off the ground.
4. Protect materials from soiling, rusting, and damage.

1.08 SITE AND ENVIRONMENTAL CONDITIONS

- A. Contractor shall have reasonable and safe access to the jobsite for delivery, staging, storing, mixing, and application of materials required as specified and in accordance with Contract Documents.
- B. Cold-Weather Requirements: Provide heat and protection, temporary or permanent, as required to protect approved substrate and each coating layer of the Cement Plaster System application from surface or material temperatures falling below acceptable limitations, surface condensation and freezing – during or at least 24 hours after application or longer as necessary – to ensure proper curing of each wet component layer of the Cement Plaster System without proper curing interference and/or freezing. Distribute heat uniformly to prevent concentration of heat on approved substrate surface and each coating layer of the Cement Plaster System near heat sources; provide deflection or protective screens. USE OF ACCELERANTS OR ADDITIVES OF ANY KIND IS NOT PERMISSABLE.
- C. Warm Weather Requirements: Protect cement plaster coat(s) against uneven and excessive evaporation and from strong flows of dry air, both natural and artificial. Apply and moist cure plaster to prevent dry out during the first 48 hours or longer as required by climatic conditions. Provide suitable coverings, moisture curing, barriers to deflect sunlight and wind, or combinations of these as required.
- D. Application Requirements: Apply each coating layer of the Cement Plaster System application when substrate or ambient air temperature is 40 °F and rising (unless sand and mixing water are heated to 70 °F and temporary protection is provided to keep minimum 40 °F or above) in plastered areas for 24 hours minimum after set has occurred in accordance with PCA Portland Cement Plaster Stucco Manual. Do not use frozen materials in mixes and do not apply materials to frozen substrates or coating layers.
- E. Protection: Protect application surface installed prior to plastering by covering with suitable drop cloths. When application of cement plasters is to interior spaces, screen openings with plastic film when building is subject to dry, hot winds, or when temperature differentials between interior and exterior spaces of more than 20 °F are present.

1.09 WARRANTY

- A. Manufacturers' Limited Cement Plaster System Warranty
 1. Manufacturer shall offer a limited material defect and labor to repair or replace defective material warranty stating the Products will be free from manufacturing defect and will perform as warranted in the manner specified for the stated term measured from the Date of Project Substantial Completion.
 - a. A pre-construction meeting, including representatives of the Manufacturer, the Applicator, the Owner, and the Consultant (if applicable), shall be required prior to installation of the Products.
 - b. The term of this warranty may be extended for an additional 2 years with involvement on the project of a Manufacturer-approved, third-party consultant ("Consultant") engaged by the Owner or its authorized representative, at the Owner's sole expense. Inspection reports generated by the Consultant shall be made available to the Manufacturer and the Owner.
 - c. Warranty excludes Materials designated herein as 'by others'.

- d. The warranty is available upon written request.
2. The Cement Plaster System warranty shall additionally include the following for the term of the warranty or as specifically noted hereunder.
 - a. The Cement Plaster System warranty term shall be 18 years.
 - b. The Cement Plaster System will remain in a watertight condition when the Cement Plaster System is used in conjunction with approved Company Joinery and Sealants.
 - c. Textured Finish will be UV fade resistant for 10 years, except for specially produced colors.
 - 1) Specially produced colors will be UV fade resistant for 5 years when high-performance colorants are used to formulate.
- B. Cement Plaster System Installing Contractor(s) Warranty
 1. Cement Plaster System Installing Contractor(s) shall provide a separate minimum 1-year warranty for all workmanship related to the proper installation and performance of the Cement Plaster System application. Manufacturer(s) shall not be responsible for workmanship associated with the installation of Cement Plaster System.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturer:

1. Cement Plaster System: Shall be "StucCoat One-Coat Securock ExoAir 430 System materials and components as manufactured and/or supplied by Dryvit / Tremco CPG Inc., 3735 Green Road, Beachwood, OH 44122, 800-556-7752, www.dryvit.com, www.tremcosealants.com.

2.02 DESCRIPTION

A. System Description:

1. The StucCoat One-Coat Securock ExoAir 430 System ("Cement Plaster System") is a code compliant cement plaster stucco cladding which may be installed as a 1-coat application at a minimum 3/8 inch thickness or a 2-coat scratch and brown conventional application at a minimum 7/8 inch thickness complying with ASTM C926, including additional material options consisting of the following Materials:
 - a. A Coated Fiberglass Mat Gypsum Sheathing Panel with Pre-Applied Weather-Resistant Barrier and Air Barrier and Accessory Materials
 - b. Continuous Insulation Boards (as specified and by others)
 - c. Metal Plaster Base - Expanded Metal, Welded Wire, Woven Wire or Rib Lath with Paper Backing (by others)
 - d. Accessory Trim (by others)
 - e. Fasteners (by others)
 - f. Cement Plaster
 - g. Crack Isolation Membrane with Reinforced Cementitious Base Coat
 - h. Primer Coating (as specified)
 - i. Textured Finish Coat – Elastomeric Type
2. Design Requirements
 - a. Fire Resistance Rated Construction:
 - 1) Fire resistance rated assemblies recognized for use with the Cement Plaster are described in IAMPO Evaluation Report #382, Section 3.3.2 and Table 5 including assemblies complying with ASTM E119 testing for 1-hour fire resistance and UL 263.
 - 2) Exterior Walls on Buildings of Type I, II, III and IV Construction: Exterior wall assemblies constructed entirely of noncombustible components with directly applied Cement Plaster are permitted as described in IAMPO Evaluation Report #382, Section 3.2.2.4 and 3.3.3.1.
 - 3) Assemblies Based on NFPA 285 Testing: Exterior wall assemblies containing noncombustible components and combustible alternatives for use on building of Types I through IV construction of any height based on NFPA 285 testing and analysis are described in IAMPO Evaluation

Report #382, Section 3.3.3.2 and Tables 6 and 7. Use of components other than the allowable alternatives described are not permitted.

- b. Wind Load Design: Maximum allowable wind pressures for the Cement Plaster applied over various substrates shall comply as listed in Table 3 of the IAMPO Evaluation Report #382. The Sheathing Panel and Fasteners for the Sheathing Panel and the Metal Plaster Base shall be engineered to be capable of withstanding the design wind loads and installation shall comply with the applicable building code.
- c. Structural Design: Wall framing, sheathing and fastener assemblies shall be structurally engineered to comply with applicable building code and limit deflection to a maximum 1/360 of the span.

B. Materials:

1. Coated Fiberglass Mat Gypsum Sheathing Panel with Pre-applied Weather-Resistant Barrier and Air Barrier and Accessory Materials:
 - a. Shall be Securock® ExoAir® 430 Panel as manufactured by USG Corporation, supplied by Tremco CPG Inc. and as further specified in Related Section 07 27 26.
 - b. Provide in **[1/2 inch]** or **[5/8 inch Type X]** as specified and/or required.
 - c. Accessory Materials: Provide compatible accessory materials for treating sheathing board joints, fastener heads, penetrations, rough openings, material transitions and flashing integration to produce a complete air barrier assembly.
 - 1) Dymonic® 100 - A high-performance, high-movement, single-component, medium-modulus, low-VOC, UV-stable, non-sag polyurethane sealant as manufactured by Tremco CPG Inc.
2. Insulation Board (by others): Expanded (EPS), or extruded (XPS) polystyrene foam plastic insulation boards minimum 1/2 inch-thick (12.5 mm) to maximum 1.0 inch-thick (25 mm) and comply with requirements of IAMPO Evaluation Report #382.

(Note to Specifier: Select either EPS or XPS insulation type. Delete Insulation Board Option item 2. below completely if continuous insulation is not required.)

 - a. **[EPS foam plastic insulation boards shall be Type II in accordance with ASTM C578.]**
 - b. **[XPS foam plastic insulation boards shall be Type IV or Type V in accordance with ASTM C578.]**
 - c. Provide Insulation Board with minimum 1/4 inch-wide x 1/8 inch-deep grooves spaced 12" on center. Grooves shall be oriented vertically when installed.
 - d. Fasten per Section 3.2.1.3 of IAMPO Evaluation Report #382.
 - e. Insulation Board joints shall be 1/8 inch or less and closed on the exterior side using minimum 2-3/8 inch-wide fiberglass mesh tape.
 - f. Coordinate additional requirements for Insulation Board minimum nominal density and maximum Total Heat Contribution where wall assemblies requiring fire resistive construction and/or NFPA 285 fire testing compliance are required and in strict accordance with IAMPO Evaluation Report #382.
3. Paper Backing (by others): Type 1, Grade D, Style 2, asphalt saturated felt paper, complying with Federal Specification UUB790A.
4. Metal Plaster Base (by others): Complying with ASTM C847, G60 galvanized coating complying with and installed in accordance with ASTM C1063 and IAMPO Evaluation Report #382. Provide with Paper Backing. Provide self-furring when attached direct to substrate. Select type based on specific project requirements.

(Note to Specifier: There are multiple Metal Plaster Base options. Select the [Metal Plaster Base] that applies to the project and Delete those that do not apply.)

 - a. **[Expanded Metal Lath]:** Diamond mesh, minimum 2.5 lbs./sq. yd. (1.4 kg/m²).]
 - b. **[Strip Mesh]:** Expanded metal lath, minimum 2.5 pounds per square foot; 2 inch wide by 24 inches long.]
 - c. **[Ribbed Metal Lath]:** Minimum 3/8" (10 mm).]
 - d. **[Welded Wire Lath]:** Minimum 16 gauge, with openings not exceeding 2 inch x 2 inch (51 mm x 51 mm) additionally complying with ASTM C 933.]
 - e. **[Woven Wire Lath]:** Minimum 17 gauge, with openings not exceeding 1-1/2 in x 1-1/2 in (38 mm x 38 mm) and complying with ASTM C 1032.]

5. Accessory Trim (by others): Casing Bead, Corner Bead, Control Joint or other formed from minimum 26-gauge G60 galvanized roll-formed sheet steel complying with ASTM C1063 and IAMPO Evaluation Report #382. Depth of accessories (grounds) shall be sized for the plaster thickness. Install in maximum lengths. Select type and style based on specific project requirements. Provide PVC complying with ASTM D1784 / D4216 or Zinc complying with ASTM B69 in corrosive environments.
 - a. Corner Bead, Weep Screed: Minimum 2-5/8 inch expanded metal flanges, 3-1/4 inch for reinforced flanges.
 - b. Control Joint: V or J profile, protected with plastic tape for removal after plastering.
 - c. PVC Nose: Corner aid as specifically directed.
 6. Fasteners (by others): Provide fasteners for Sheathing Panel, Insulation Board, Metal Plaster Base and Accessory Trims which are corrosion resistant / galvanized, appropriate for underlying framing type with proper size, type, style, length and penetration and complying with ASTM C1063 and IAMPO Evaluation Report #382.
 7. Cement Plaster: A factory prepared, dry blended, fiber-reinforced, modified Portland cement when mixed with proper type and amount of water forms a stucco plaster paste.
 - a. StucCoat One-Coat Base Coat – Sanded: A sanded blend mixed with clean potable water in accordance with IAMPO Evaluation Report #382 as supplied by Dryvit / Tremco CPG Inc.
 - 1) StucCoat One-Coat Base Coat – Sanded is packaged in 80 lb. (36.3 kg) bags.
 8. Crack Isolation Membrane: Provide fiberglass mesh reinforced base coat lamina layer applied over minimum 7-day cured Plaster Material surface.
 - a. Base Coat: Cementitious polymer-based material as manufactured by Dryvit / Tremco CPG Inc. and supplied by authorized distributor.
 - 1) Genesis®: A liquid polymer-based fiber reinforced base coat field mixed with Portland cement.
 - 2) Genesis® DM: A ready mixed dry blend cementitious, copolymer-based fiber reinforced base coat field mixed with water.
 - b. Reinforcing Mesh: Material approved and supplied by Dryvit / Tremco CPG authorized distributor.
 - 1) StucCoat Standard Reinforcing Mesh: An open-weave, glass fiber fabric treated for compatibility with Crack Isolation Membrane Base Coat. Available in a 38" roll in white color.
- (Note to Specifier: Primer Coating is recommended. Retain item 9. below where desired, Delete where not.)**
9. Primer Coating: A water-based, pigmented acrylic primer applied over fully cured reinforced Crack Isolation Membrane base coat to improve adhesion and provide a more uniform appearance.
 - a. Primer: Color Prime™ as manufactured by Dryvit / Tremco CPG Inc. and supplied by authorized distributor.
 10. Textured Finish Coating: Water-based, elastomeric, acrylic finish coating with integral color and texture and formulated with DPR chemistry. Select texture and color from manufacturer's standards.
 - a. Weatherlastic®: Elastomeric textured finish coating as manufactured by Dryvit / Tremco CPG Inc. and supplied by authorized distributor.
 - 1) Available textures: Quarzputz, Sandpebble, Sandpebble Fine, Adobe.
 11. Joinery and Sealant: A non-sag, non-staining, neutral-curing silicone joint sealant as manufactured by Tremco CPG Inc. and as further specified in Related Section 07 92 00.
 - a. Spectrem 1: An ultra-low modulus, high-performance, one-part, moisture-curing silicone joint sealant with physical properties making it an ideal sealant for sealing dynamic joints.
 - b. Spectrem 3: A general-purpose, low-modulus, high performance, one-part, neutral-cure, non-staining, low dirt pickup, construction-grade silicone sealant.
 - c. Spectrem 4-TS: A multi-component, neutral-curing, non-staining, low dirt pick up, low-modulus silicone sealant specially formulated for use in dynamically moving building joints. Spectrem 4-TS offers color flexibility with the opportunity to tint the material on site.
 - 1) Coordination for custom sealant colors as required.
 - d. Provide TREMprime Silicone Porous Primer as required by manufacturer.
 - e. Provide closed cell backer rod or bond breaker.

- f. Contact Tremco CPG Inc. for more information.

C. Jobsite Mixed Materials:

1. Portland Cement: For mixing with Base Coat, Type I or II, complying with ASTM C 150, white or gray in color, fresh and free of lumps:
2. Water: Clean, fresh, potable, and free of mineral or organic matter, which can affect plaster.

PART 3 EXECUTION**3.01 EXAMINATION****A. Verification of Conditions**

1. Verify that all materials selected and coordinated into the work shall comply with all applicable industry and ASTM standards; local building code and IAMPO Evaluation Report #382 requirements; respective manufacturer's data sheets, specifications, details, and application instructions; and be in accordance with Contract Documents.
2. Verify that all framed wall assemblies and site conditions are ready to receive work.
3. Verify supporting wall assembly has been designed and engineered to comply with Section 2.02.A.2 herein above.
4. Verify that for the proper installation of Coated Fiberglass Mat Gypsum Sheathing Panel with Pre-applied Weather-Resistant Barrier and Air Barrier and Accessory Materials including rough opening flashing preparation.
5. Verify substrate is flat within 6.4 mm (1/4 in) in 3.0 m (10 ft).
6. Verify all metal roof flashing has been installed in accordance with Asphalt Roofing Manufacturers Association (ARMA) and Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) Standards in a configuration and manner to properly divert water away from and/or flowing behind the Cement Plaster System and tie into air/water-resistive barrier surface.
7. Verify all metal accessory flashing by others have been installed in a configuration and manner to properly divert water away from or flowing behind the Cement Plaster System and tie into air/water-resistive barrier surface.
8. Verify substrate surfaces to receive Accessory Materials, Cement Plaster, Crack Isolation Membrane, Primer Coating (as specified), and Textured Finish Coating are free of dust, loose particles, oil and other conditions that would affect the adhesion, installation or performance of Cement Plaster System or individual layers.
9. Verify and coordinate for Continuous Insulation Board, as specified, to be integrated into the Cement Plaster System assembly.
10. Cement Plaster System Installation Contractor(s) 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. Protect property and surfaces near and adjacent to the work from damage or disfiguration. Protect fixtures, frames, inserts, and other adjacent work from rusting, soiling, or clogging due to application of any step or coating layer of the Cement Plaster System.

3.03 INSTALLATION – SHEATHING PANEL, INSULATION BOARD, FLASHING, LATHING AND TRIM

- A. Installation of all materials selected and coordinated into the work shall comply with all applicable industry and ASTM standards; local building code and IAMPO Evaluation Report #382 requirements; respective manufacturer's data sheets, specifications, details, application instructions and Contract Documents.
- B. Sheathing Panel with Pre-Applied Air/Water-Resistive Barrier, Accessory Materials, Insulation Board and Flashings
1. Install or coordinate with the proper install of Securock ExoAir 430 Coated Fiberglass Mat Gypsum Sheathing Panel with Pre-Applied Weather-Resistant Barrier (WRB) and Air Barrier Panel and Accessory Materials including rough opening flashing preparation as further specified in Related Section 07 27 26.
 - a. Reference Documentation for Sheathing Panel and Accessory Materials can be found at www.tremcosealants.com and www.dryvit.com:
 - 1) Data Sheet
 - 2) Installation Instructions
 - 3) Applicable Sections of Dryvit Outsulation Plus MD Securock ExoAir 430 EIF System Application Instructions – DS901 for Securock ExoAir 430 Panel and Accessory Materials
 2. Install or coordinate with the proper install for proper preparation and/or flashing of rough openings, doors, windows, louvers, decks, tie-in to WRB for flashings by others and any other openings and penetrations.
 3. Install or coordinate with the proper install of Continuous Insulation Board, where required, in type as selected or specified, with proper fastening and over Pre-Applied Air/Weather-Resistant Barrier and Accessory Materials on solid backing.
 - a. Coordinate and provide for additional Insulation Board requirements for wall assemblies requiring fire resistive construction and/or fire testing compliance.
 4. Install or coordinate with the proper install of metal head flashing by others with end dams over all door, window and louver penetrations and tie into air/water-resistive barrier surface.
 5. Install or coordinate with the proper install of all metal accessory and roof flashing by others in a configuration and manner to properly divert water away from or flowing behind the Cement Plaster System and tie into air/water-resistive barrier surface.
- C. Accessory Trim and Metal Plaster Base
1. Install corresponding Accessory Trim(s) including corner beads, corner aids, control and expansion joints, casing beads, weep screeds, etc. of proper type, size and material with proper Fasteners that are properly positioned including gaps at edge terminations for sealants and fastened as required in accordance with ASTM C1063 for Metal Plaster Base as selected.
 - a. Install casting beads as specified and where indicated on drawings or where plaster terminations are exposed. Align and butt ends. Install level, plumb, and true to line and secure firmly in place.
 - b. Control and expansion joints shall be installed at all areas where movement may be anticipated such as: wall penetrations, structural plate lines, between dissimilar materials, at columns, and cantilevered areas. Cement Plaster System wall panel areas shall be designed to be no longer than 20ft without the use of a control joint and shall not exceed a 3:1 ratio.
 - c. Control or expansion joints shall be specified by the designer, builder, or stucco manufacturer in that order. As a rule, stucco panels should be as square as possible and not more than 144 ft² as outlined in ASTM C1063.
 - d. Install 3/8" horizontal and vertical control joints as specified and where located on drawings. Install over continuous lath. Vertical joints shall be continuous. Abut horizontal joints to vertical joints. Intersections and end-to-end terminations shall be embedded in sealant. Install level, plumb, and true to line to secure firmly in place.
 - e. Fasten all Accessory Trims in strict accordance with ATM C1063. Attachment to gypsum Sheathing Panel is not permissible.
 2. Install Metal Plaster Base as selected with proper Fasteners that are properly positioned and fastened into underlying framing required in accordance with ASTM C1063.

- a. Soffits shall require metal lath complying with ASTM C1063 and IAMPO Evaluation Report #382.

3.04 MIXING, APPLICATION AND CURING – CEMENT PLASTER

- A. Mixing, Application and Curing of StucCoat One-Coat Base Coat – Sanded shall comply with all applicable industry standards and local building code requirements, respective manufacturer's specifications, details, application instructions and be in strict accordance with ASTM C926 and IAMPO Evaluation Report #382 and Contract Documents.
- B. Mixing
 1. StucCoat One-Coat Base Coat – Sanded shall be prepared in a mechanical mixer using sufficient water to produce a workable consistency and uniform color. Mixer and blade shall be rust free.
 2. Each bag of sanded blend product shall be mixed with no more than 1-1/2 gallons (5 L) of clean, potable water.
 - a. Place 1.25 gallons (4.7 L) of water shall be added to the mixer before the addition of each bag of sanded blend product.
 - b. With mixer running, add one (1) bag of sanded blend product.
 - c. Add the additional 0.25 gallon (0.3 L) as the sanded blend product is mixing.
 3. Mixing time shall be two (2) to three (3) minutes per bag.
 4. Care shall be taken when continuous batching, that each bag is allowed the minimum mixing time.
- C. Coverage
 1. For one-coat applications at minimum required 3/8 inch thickness will provide approximately 16.5 ft² (1.5 m²).
 2. For two-coat applications at minimum required 7/8 inch thickness will provide approximately 9.4 ft². (0.9 m²).
- D. Application
 1. Each Plaster coat shall be applied by hand or machine pump to an entire wall or ceiling panel area without interruptions to avoid cold joints and abrupt changes in the uniform appearance of succeeding coats. Wet Plaster shall abut set plaster at naturally occurring interruptions in the plane of the plaster, such as corner angles, rustifications, opening, and control joints where possible.
 2. For one-coat (brown coat) applications, properly mixed StucCoat One-Coat Base Coat – Sanded shall be applied to a 3/8" inch minimum thickness Plaster base coat without cold joints.
 - a. The brown coat shall be applied with sufficient material and pressure to form full keys through and into Metal Plaster Base and be hard floated to promote densification of the coat.
 - b. Cut brown coat through full depth with trowel at intersection of plastered walls and plastered soffit.
 - c. Brown coat shall be moist cured for a minimum of 48 hours following application.
 - d. Brown coat and/or Crack Isolation Membrane base coat surface shall be completely dry and cured for a minimum of 7 days and completely dry prior to application of Primer and Textured Finish Coatings.
 3. For two-coat applications, apply properly mixed StucCoat One-Coat Base Coat – Sanded as a first coat (scratch coat) followed by a second coat (brown coat) layers to a combined 7/8 inch minimum thickness total Plaster base coat or as specified in ASTM C926 and without cold joints.
 - a. The scratch coat shall be applied with sufficient material and pressure to form full keys through and into Metal Plaster Base as selected of sufficient thickness of material over the Metal Plaster Base to allow for scoring the surface.
 - b. Cut scratch coat through full depth with trowel at intersection of plastered walls and plastered soffit. and be hard floated to promote densification of the coat.
 - c. Once the scratch coat becomes firm, the entire surface shall be scored in one direction horizontally only.
 - d. Scratch coat shall become sufficiently rigid to support the application of the brown coat without damage to the monolithic continuity of the scratch coat or its keys.

- e. Brown coat shall be applied with sufficient material and pressure to ensure tight contact with the scratch coat and to bring the combined thickness of the Plaster base to a nominal thickness shown in Table
- f. Brown coat shall be brought to a true, even plane with a rod or straightedge, filling surface defects in plane with brown coat. Dry rodding the surface of the brown coat shall be permitted.
- g. Brown coat surface shall be floated uniformly to promote densification of the coat and to provide a surface receptive to bonding of the Primer and Textured Finish Coatings.

E. Curing

- 1. StucCoat One-Coat Base Coat – Sanded must be hydrated for the first 48 hours after application to ensure proper curing. Environmental conditions will determine the schedule and volume of hydration. Hot, windy, or dry conditions may dictate curing for an extended period.
- 2. Sufficient time between coats shall be allowed to permit each coat to cure or develop enough rigidity to resist cracking or other physical damage when the next coat is applied

3.05 APPLICATION – CRACK ISOLATION MEMBRANE, PRIMER, AND TEXTURED FINISH

- A. Application of Crack Isolation Membrane, Primer Coating and Textured Finish Coating selected and coordinated into the work shall be mixed and installed in strict accordance with manufacturer's data sheets, specifications, details for the respective products as they apply and Contract Documents.
 - 1. Reference Documentation for Crack Isolation Membrane, Primer Coating and Textured Finish Coating found at www.dryvit.com:
 - a. Crack Isolation Membrane Data Sheet – DS1015
 - b. Color Prime Data Sheet – DS410
 - c. Weatherlastic Textured Finish Data Sheet – DS418
 - d. Details – DS989
 - g. Applicable Sections of Dryvit Outsulation Plus MD Securock ExoAir 430 EIF System Application Instructions – DS901 for Reinforced Base Coat, Primer Coating and Textured Finish Coating

3.06 APPLICATION – SEALANTS

- A. Application of Joinery and Sealants as selected and coordinated into the work shall be installed in strict accordance with manufacturer's data sheets, specifications, application instructions for the respective products as they apply and Contract Documents.
- B. Sealant Joints: Joints formed where the Cement Plaster abuts dissimilar materials such as at windows, doors, and other penetrations shall be properly sealed with closed cell backer rod and silicone sealant to prevent water from penetrating behind the Cement Plaster System.
 - 1. Reference Documentation for Joinery and Sealants found at www.tremcosealants.com.
 - a. Data Sheet
 - b. Specifications
 - c. Application Instructions

3.07 SITE QUALITY CONTROL

- A. Cement Plaster System products and components manufacturers assume no responsibility for on-site inspections or application workmanship of its products.
- B. Cement Plaster System sub-contractor(s), if requested, shall certify in writing the quality of work performed relative to the Cement Plaster Systems products, components, details, installation procedures, and as to the specific products used.
- C. Insulation Board supplier, if requested, shall certify in writing that the Insulation Board meets the Cement Plaster System manufacturer's specifications.

- D. The Joinery and Sealant contractor, if requested, shall certify in writing that the Joinery and Sealant application is in accordance with the Joinery and Sealant and the Cement Plaster System manufacturer's recommendations.

3.05 CLEANING

- A. Remove all excess StucCoat One-Coat Securock ExoAir 430 System and Mortar materials, packaging, etc. from the job site by the contractor in accordance with contract provisions and as required by applicable law.
- B. Leave all surrounding areas, where the StucCoat One-Coat Securock ExoAir 430 System has been applied, free of debris and foreign substances resulting from the contractor's work.

END OF SECTION 09 24 23

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