Building with conscience.

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Sto Guide Specification No. 1700
StoQuik Finish System for ICF (Insulating Concrete Forms)

Section 09 25 13.13
ACRYLIC PLASTER FINISH
or
Section 09 77 00
SPECIAL WALL SURFACING

Notes in italics, such as this one, are explanatory and intended to guide the design/construction professional and user in the proper selection and use of materials. This specification should be modified where necessary to accommodate individual project conditions.

The applicable CSI Section number depends on the finish selected: Sto Textured Finishes and Sto Signature Finishes are Acrylic Plaster Finish. Sto Specialty Finishes and StoCast Finishes are Special Wall Surfacing

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PART 1 GENERAL

1.1 SUMMARY

A. Provide finish system for vertical above grade exterior ICF wall surfaces.

IMPORTANT: This guide specification covers installation of a Class A finish system over building code compliant ICF wall construction. It does not address air sealing, construction detailing, flashing and other important aspects of design and construction that must be taken into consideration to prevent water infiltration, to prevent condensation caused by air leakage or water vapor diffusion, and to comply with applicable fire safety requirements. Consult with a qualified design professional for overall design of the wall assembly. Compliance of the completed wall assembly with the applicable building code is the responsibility of the design professional in consultation with the ICF manufacturer. Refer to Sto Tech Hotline No. 0900-EC, EIFS Finishes for Insulating Concrete Forms, for other information related to the direct application of finishes to ICFs.

1.2 SUBMITTALS

A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Material Safety Data Sheets.

1.3 REFERENCES

A. ASTM Standards

1. C578, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
2. C920, Standard Specification for Elastomeric Joint Sealants
3. C1382, Standard Method for Determining Tensile Adhesion Properties of Sealants When Use in Exterior Insulation and Finish Systems
4. E84, Standard Test Method for Surface Burning Characteristics of Building Materials

B. South Coast Air Quality Management District (South Coast AQMD)

1. Rule 1113, Architectural Coatings

C. Other Referenced Documents

1. Sto Tech Hotline No. 0900-EC, EIFS Finishes for Insulating Concrete Forms (ICFs)

1.4 QUALITY ASSURANCE

A. Manufacturer's Qualifications: The finish system manufacturer shall be a company with at least thirty five years of experience in manufacturing specialty finishes and regularly engaged in the manufacture and marketing of products specified herein. The manufacturer shall have an ISO 9001:2008 certified quality system and ISO 14001:2004 certified environmental management system.

B. Installer's Qualifications: The contractor shall be qualified to perform the work specified by reason of experience. Contractor shall have at least 5 years of experience in commercial textured or specialty finish application, and shall have completed at least 3 projects of similar size and complexity. Contractor shall provide proof before commencement of work that he/she will maintain and supervise a qualified crew of applicators through the

duration of the work. When requested Contractor shall provide a list of the last three comparable jobs including the name, location, and start and finish dates for the work.

C. Mock-ups: The contractor shall install a mock-up of the system for evaluation and approval by the design professional, building owner, or owner's representative/quality assurance agent.

D. Testing: Testing shall be conducted as directed by the design professional, building owner, or owner's representative/quality assurance agent to verify wall assembly performance and to verify adhesion to prepared substrates before and during construction.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver products in original packaging, labeled with product identification, manufacturer, and batch number.

B. Store products in a dry area with temperature maintained between 50 and 85 degrees F (10 and 29 degrees C). Protect from direct sunlight. Protect from freezing. Protect from extreme heat (>90 degrees F [32 degrees C]).

C. Handle products in accordance with manufacturer's printed instructions.

1.6 WARRANTY

A. Provide manufacturer's standard limited warranty.

PART 2 PRODUCTS

2.1 MATERIALS

Select finish system based on approved sample or mock-up

A. Finishes, primers, adhesives, stains and any other associated materials for the finish system shall be Class A building materials based on testing in accordance with ASTM E84. VOC (Volatile Organic Content) shall be less than 50g/L and shall comply with South Coast AQMD Rule 1113 requirements.

B. Textured Finishes

1. Stolit® Lotusan®– factory blended decorative and protective textured wall finish with integral color and Lotus-Effect® Technology
2. Stolit® HDP™ - factory blended, decorative and protective, hydrophobic, acrylic textured wall finish with integral color
3. Stolit® – factory blended, decorative and protective acrylic textured wall finish with integral color
4. Stolit® X – factory blended, decorative and protective, acrylic textured wall finish with integral color, and enhanced polymer technology for easy spread and float application
5. Sto Essence DPR – factory blended, decorative and protective textured wall finish with integral color

C. Sto Specialty Finishes

1. StoCreativ® Granite, StoCreativ® Lux, Sto GraniTex®, or Sto Decocoat® factory blended, decorative and protective clear acrylic textured wall finishes with blended aggregate colo

D. Sto Smooth Finishes

1. Stolit® Milano – decorative and protective acrylic-based smooth wall finish
2. Stolit® Freeform – decorative and protective acrylic-based wall finish (can applied to create a smooth wall finish)

E. Sto Signature™ Series Finishes – combinations of Sto factory prepared acrylic finishes that create special effect architectural surfaces with trowel techniques

F. StoCast Finishes – Sto factory cast decorative and protective finishes

1. StoCast Wood
2. StoCast Brick

G. Primer

1. StoPrime® Sand – acrylic-based sanded primer for use with Sto Textured Finishes, Sto Specialty Finishes, Sto Signature Finishes, and StoCast Finishes
2. StoPrime® Smooth – acrylic-based smooth primer for use with Sto Smooth Finishes (Stolit Milano or Stolit Freeform applied to create a smooth wall finish)

H. Base Coat *(select one)*

1. Sto BTS Plus – one component polymer modified portland cement high build base coat
2. Sto Primer/Adhesive-B – one component polymer modified portland cement base coat

I. Waterproof Base Coat *(select one)*

1. Sto Flexyl – one component acrylic-based additive combined with portland cement in the field
2. Sto Watertight Coat – two component acrylic-based additive with pre-proportioned portland cement

NOTE: Use waterproof base coat with Sto Mesh embedded for special conditions such as projecting foam trim or similar features over the standard base coat and mesh application to waterproof these surfaces.

J. Surface Reinforcement

1. Sto Mesh – nominal 4.5 oz/sq.yd. (153 g/sq.m.) glass fiber reinforcing mesh treated for compatibility with Sto materials

K. ICF

1. Building code compliant ICF made with EPS (expanded polystyrene) in conformance with ASTM C 578 Type I, II, or IV requirements, with embedded form ties (no plates, discs, or ribs on the surface of the EPS).

L. Accessories

1. StoSeal STPE Sealant - high-movement, medium modulus, non-sag one-component silyl-terminated polyether joint sealant in compliance with ASTM C920 and tested in accordance with ASTM C1382

2.2 FINISH PERFORMANCE REQUIREMENTS

1. Waterproofing, primers, and applicable finish components: ASTM E84, flame Spread less than 25, smoke developed less than 75, Class A building material

2. Waterproofing, primers, and applicable finish components: South Coast AQMD Rule 1113, Volatile Organic Content (VOC), comply with applicable requirement of coating category

PART 3 EXECUTION

3.1 INSTALLATION

A. The ICF must be constructed in conformance with the applicable building code, manufacturer's written installation instructions, and installed in courses with a running bond pattern and inside and outside corners interlocked. ICF units shall not exceed 2 x 4 ft. (1.6 x 3.2 m) in dimension with the long dimension oriented horizontally on the wall surface. ICF joints shall be tightly abutted without concrete in the joints or concrete protrusions. ICF wall surface shall be free of blow-outs, or other surface defects and shall not have planar irregularities in excess of 1/16 inch (1.6 mm). ICF must be clean, dry, and free of surface contamination.

NOTE: Where the ICF wall surface is highly irregular or out of plane or fails to conform dimensionally witt the requirements of Section 3.1A the application of StoTherm® ci may be an acceptable means of correcting the ICF wall surface condition, as determined by the design professional, owner, or owner's representative/quality assurance agent. Refer to Sto Tech Hotline No. 0900-EC.

B. Mixing

1. Mix Sto products in accordance with published literature. Refer to applicable Product Bulletins for specific information on use, handling, application, precautions, and limitations of specific products.

C. Application

1. Rasp the entire ICF wall surface to remove any UV degradation on the surface, to make abutting joints flush, and to minimize any planar irregularities in the surface. Ensure form ties are not exposed on the ICF surface.
2. Install nominal 1/8 inch (3 mm) base coat by trowel to the wall surface. Work horizontally or vertically in strips of 40 inches (1016 mm), and immediately embed the mesh into the wet base coat by troweling from the center to the edges of the mesh. Overlap mesh not less than 2-½ inches (64 mm) at mesh seams and feather at seams. Double wrap all inside and outside corners with minimum 6-inch (152 mm) overlap in each direction. Avoid wrinkles in the mesh. The mesh must be fully embedded so that no mesh color shows through. Re-skim with additional base coat if mesh color is visible.

   Note: priming is generally recommended for best results when installing Sto Textured Finishes. Priming is required for Sto Specialty finishes. Select one primer as applicable.
3. When the base coat application is dry apply the primer by brush or roller to the entire base coat surface.

   Note: Refer to www.stocorp.com for the applicable finish and associated products for more complete information on aesthetics, use, application, handling, and limitations of Sto materials
4. When the primer application is dry apply the Sto finish
   a. Sto Textured Finish Installation: Refer to applicable Product Bulletin
   b. Sto Specialty Finish Installation: Refer to applicable Product Bulletin
   c. Signature Finish Installation: Refer to applicable Sto Signature Finish Application Guide
   d. StoCast Finish Installation: Refer to applicable StoCast Product Bulletin and Application Guide
5. Do not install base coat, reinforcing mesh or finish over joint sealants. Install over continuous EPS insulation board surface (and edges at EPS board returns) only.

D. Protection

1. Provide protection of installed materials from water infiltration into or behind them during and after construction.
2. Provide protection of installed materials from dust, dirt, precipitation, freezing and continuous high humidity until they are fully dry.
3. Provide coping and/or flashing at sills, projecting features, deck attachments, roof/wall intersections, parapets and similar construction details to prevent water entry into wall assembly or into and behind the finish system. Seal penetrations through the finished wall surface with backer rod and sealant or other appropriate means to provide a watertight condition.

ATTENTION

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