



**Sto Corp.**  
3800 Camp Creek Parkway  
Building 1400, Suite 120  
Atlanta, GA 30331  
Tel: 404-346-3666  
Toll Free: 1-800-221-2397  
Fax: 404-346-3119  
[www.stocorp.com](http://www.stocorp.com)

**Sto Guide Specification No. F610  
Sto Finish System for ICFs (Insulating Concrete Forms)**

**Section 09 25 13.13  
ACRYLIC PLASTER FINISH**

*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.*



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## PART 1 GENERAL

### 1.1 SUMMARY

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

**IMPORTANT:** *This guide specification covers installation of a Class A textured 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. Refer to Sto Tech Hotline No. 0900-EC, EIFS Finishes for Insulating Concrete Forms, for other information related to the direct application of textured finish systems 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  
ASTM C 578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
- B. South Coast Air Quality Management District (SCAQMD)  
Rule 1113 Architectural Coatings
- C. Other Referenced Documents  
Sto Tech Hotline No. 0900-EC EIFS Finishes for Insulating Concrete Forms (ICFs)

### 1.4 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: The textured 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 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

- A. Textured Finishes (*select one*)
  - 1. Stolit Lotusan – high performance decorative and protective textured wall finish with integral color and Lotus-Effect™ technology, complies with SCAQMD Rule 1113 for architectural finishes.
  - 2. Stolit – high performance decorative and protective acrylic-based textured wall finish with integral color, complies with SCAQMD Rule 1113 for architectural finishes.
  - 3. Sto Essence DPR – high performance decorative and protective textured wall finish with integral color, complies with SCAQMD Rule 1113 for architectural finishes.
- B. StoSignature Finishes – Stolit acrylic based textured wall finish applied over Sto Crack Defense with specialized techniques to achieve unique textures, impressions or effects. Refer to [www.stocorp.com](http://www.stocorp.com) for StoSignature Finishes Brochure and Installation Guides.
- C. StoCast Finishes – Sto custom cast pre-formed decorative and protective finish and adhesive
  - 1. StoCast Wood
  - 2. StoCast Brick
- D. Primer (*optional component*)
  - 1. Sto Primer – acrylic-based sanded primer, complies with SCAQMD Rule 1113 for primers.
- E. 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

F. Waterproof Base Coat (*select one*)

1. Sto Flexyl – one component acrylic-based additive combined with portland cement, complies with SCAQMD Rule 1113 for waterproofing sealers.
2. Sto Watertight Coat – two component acrylic-based additive with dry ingredient, complies with SCAQMD Rule 1113 for waterproofing sealers.

*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.*

## G. 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

## H. 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).

## PART 3 EXECUTION

### 3.1 INSTALLATION

## A. General Surface Preparation

- B. 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 with the requirements of Section 3.02A1 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*

## C. 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.

## D. 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 8-inch (203 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.
  3. When the base coat application is dry apply the primer by brush or roller to the entire base coat surface.
  4. Sto Textured Finish Application - when the primer application is dry apply the textured finish by trowel. Apply finish in a continuous application, and work to a wet edge. Float the finish to achieve the desired texture.
  5. StoSignature Finish Application – refer to StoSignature Application Guide
  6. Sto Custom Cast Finish Application – refer to applicable Application Guide and/or Product Bulletin for selected finish
  7. 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. Refer to Sto Guide details.
- E. 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

Sto products are intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. They should be installed in accordance with those specifications and Sto's instructions. Sto Corp. disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, or for other construction activities beyond Sto's control. Improper use of Sto products or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to Sto products, and to the structure of the building or its components. **STO CORP. DISCLAIMS ALL WARRANTIES EXPRESS OR IMPLIED EXCEPT FOR EXPLICIT LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCEPTED BY BUILDING OWNERS IN ACCORDANCE WITH STO'S WARRANTY PROGRAMS WHICH ARE SUBJECT TO CHANGE FROM TIME TO TIME.** For the fullest, most current information on proper application, clean-up, mixing and other specifications and warranties, cautions and disclaimers, please refer to the Sto Corp. website, [www.stocorp.com](http://www.stocorp.com).