

SPEC NOTE: This guide specification covers installation of a textured finish system over building code compliant ICF (Insulating Concrete Form) 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 vapour 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.

SPEC NOTE: 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.

PART 1 GENERAL

1.1 SUMMARY

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

1.2 SUBMITTALS

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

1.3 REFERENCES

- .1 Underwriters Laboratories of Canada (ULC)
 - .1 ULC S701 Annex A, Standard for Thermal Insulation, Polystyrene Boards and Pipe Covering
- .2 Other Referenced Documents
 - .1 Sto Tech Hotline No. 0900-EC, EIFS Finishes for Insulating Concrete Forms (ICFs)

1.4 QUALITY ASSURANCE

- .1 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.
- .2 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.

- .3 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.
- .4 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

- .1 Deliver products in original packaging, labeled with product identification, manufacturer, and batch number.
- .2 Store products in a dry area with temperature maintained between 10 and 29 degrees C (50 and 80 degrees F). Protect from direct sunlight. Protect from freezing. Protect from extreme heat (> 32 degrees C [90 degrees F]).
- .3 Handle products in accordance with manufacturer's printed instructions.

1.6 WARRANTY

- .1 Provide manufacturer's standard limited warranty.

PART 2 PRODUCTS

2.1 MATERIALS

SPEC NOTE: Select one of the following textured finish options, and delete the finishes not required on the project.

- .1 Textured Finishes
 - .1 Stolit Lotusan – high performance decorative and protective textured wall finish with integral colour and Lotus-Effect™ technology
 - .2 Stolit – high performance decorative and protective acrylic-based textured wall finish with integral colour
 - .3 Sto Essence DPR – high performance decorative and protective textured wall finish with integral colour

SPEC NOTE: The primer is an optional component. Priming is recommended to provide uniform substrate absorption and finish colour, to improve adhesion and water resistance, and to retard efflorescence. Delete this section if a primer will not be used.

- .2 Primer
 - .1 Sto Primer – acrylic-based sanded primer

SPEC NOTE: Select one of the following base coat options, and delete the base coat not required on the project.

.3 Base Coat

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

SPEC 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. If these conditions do not exist delete this section.

SPEC NOTE: Select one of the following waterproof base coat options, and delete the waterproof base coat not required on the project.

.4 Waterproof Base Coat

- .1 Sto Flexyl – one component acrylic-based additive combined with portland cement
- .2 Sto Watertight Coat – two component acrylic-based additive with dry ingredient.

.5 Surface Reinforcement

- .1 Sto Mesh – nominal 153 g/m² (4.5 oz/yd²) glass fibre reinforcing mesh treated for compatibility with Sto materials

.6 ICF

- .1 Building code compliant ICF made with EPS (expanded polystyrene) in conformance with ULC S701 Annex A, with embedded form ties (no plates, discs, or ribs on the surface of the EPS).

PART 3 EXECUTION

3.1 INSTALLATION

SPEC NOTE: Coarse texture finishes (equal to or greater than 1.5 mm texturing aggregate) are recommended to hide trowel marks and other minor surface imperfections in the base coat surface. Fine or smooth textured finishes require tighter tolerances than coarse textures. Where fine or smooth texture finishes are used a second application of base coat and/or a skim coat of Stolit Milano may be necessary to provide a smooth enough surface for an acceptable finished wall surface. The approved mock up shall be the basis for acceptable tolerances, finished appearance, and the number of layers of base coat or skim coat needed to achieve the finished appearance, as determined by the design professional, owner, or owner's representative/quality assurance agent. Where the ICF wall surface is highly irregular or out of plane or fails to conform dimensionally with the requirements of Section 3.1.1 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.

- .1 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 0.6 x 1.2 m (2 x 4 feet.) in dimension with the long dimension oriented horizontally on the wall surface. ICF joints shall be 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 3 mm in 3 m (1/8 inch in 10 feet). ICF must be clean, dry, and free of surface contamination with tightly abutted joints.

.2 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.

.3 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 3 mm (1/8 inch) base coat by trowel to the wall surface. Work horizontally or vertically in strips of 40 inches (1000 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 65 mm (2-1/2 inches) at mesh seams and feather at seams. Double wrap all inside and outside corners with minimum 200 mm (8 inch) overlap in each direction. Avoid wrinkles in the mesh. The mesh must be fully embedded so that no mesh colour shows through. Re-skim with additional base coat if mesh colour is visible.

SPEC NOTE: Delete step 3 if the optional primer is not used.

- .3 When the base coat application is dry apply the primer by brush or roller to the entire base coat surface.
- .4 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 Do not install base coat, reinforcing mesh or finish coat over joint sealants. Install over continuous EPS insulation board surface (and edges at EPS board returns) only. Refer to Sto Guide details.

.4 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.

END OF SECTION 09 25 13.13

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.