

## Product Evaluation

EC33 | 0521

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

**Evaluation ID:** EC-33

**Effective Date:** May 1, 2021

**Re-evaluation Date:** May 2025

**Product Name:** The STO Exterior Insulation and Finish (EIF) System (StoTherm® ci® and StoTherm® EIFS)

**Manufacturer:** Sto Corporation  
P.O. Box 44609  
Atlanta, GA 30336-5609  
(800) 221-2397

### General Description:

The StoTherm® ci® and StoTherm® EIFS may be used as an exterior wall finish on buildings. The system consists of five or more components that are applied to exterior walls sheathed with wood structural panels, glass mat faced gypsum sheathing, or CMU block masonry walls. Some of the components are: (1) expanded polystyrene (EPS) insulation board with a nominal density of 1 pcf and complying with ASTM C 578, (2) Primer/Adhesive-B "PAB", Sto BTS-Plus, or Sto BTS Xtra (3) Sto Glass Fiber Reinforcing Mesh, (4) Sto RFP, PAB, BTS-Plus or Sto BTS Xtra-Base Coat, and (5) Sto finishes.

The Sto EIF System with STO Guard moisture protection StoTherm® ci® may be used as an exterior wall finish on buildings. The system consists of the EIFS components described above and a secondary air/moisture barrier, Sto Guard, which is applied to sheathing before the EIFS is installed.

**Installation:****General Installation Requirements:**

- All fasteners must be corrosion resistant as required by the IRC and by the IBC.
- Do not use the Sto EIFS as wall bracing.

**Wind Resistant Assemblies:****Assembly No. 1**

StoTherm® ci® Essence over 3-5/8" Steel Studs

Design pressure: -46.6 psf

**Installation:** Wall framing must be minimum 3-5/8", 18-gauge steel studs. The steel studs must be spaced a maximum of 16" on center. Wall bracing must be installed as required. The wall studs must be sheathing with minimum 5/8" thick glass mat faced gypsum sheathing fastened with #8 x 1-1/4" wafer head self-tapping screws spaced at a maximum 6" on center.

The EIFS must be applied to the substrate as described in "Application of EIFS to Substrate" presented below.

**Assembly No. 2**

StoTherm® ci® Essence over 6" Steel Studs

Design pressure: -99.2 psf

**Installation:** Wall framing must be minimum 3-5/8", 18-gauge steel studs. The steel studs must be spaced a maximum of 16" on center. Wall bracing must be installed as required. The wall studs must be sheathed with minimum 5/8" thick glass mat faced gypsum sheathing fastened with #8 x 1-1/4" wafer head self-tapping screws spaced a maximum of 6" on center.

The EIFS must be applied to the substrate as described in "Application of EIFS to Substrate" presented below.

**Assembly No. 3**

StoTherm® ci® Essence over CMU Block Walls

Design pressure: - 72.1 psf

**Installation:** CMU Block wall construction must comply with applicable building code requirements and must be designed to support the loads specified for the construction. The design pressure rating of the CMU block wall substrate must not be less than the design pressure rating for Assembly No. 3.

The EIFS must be applied to the substrate as described in "Application of EIFS to Substrate" presented below.

### **Application of EIFS to Substrate**

All components of the EIF System must be applied over dry surfaces and out of direct sunlight. The EIF System should be installed only when the ambient air temperature is greater than or equal to 40 degrees Fahrenheit. Surfaces must be clean, dry, unpainted, and free from any residue that may affect the bonding process. Any surface contaminants must be removed without damaging the substrate surface.

Apply Sto insulation board to sheathed substrates which have been prepared by application of StoGuard. StoGuard may be applied to CMU block walls as an optional component.

Apply ribbons of adhesive, either Sto PAB, BTS-Plus, or Sto BTS Xtra, parallel with the short dimension of the board. Place the insulation boards in a running bond pattern on the walls with the long dimension horizontal, starting from a level base line. Apply firm pressure over the entire surface of the insulation board to ensure uniform contact. The insulation board joints must bridge sheathing joints by a minimum of 8". All joints must be butted together to eliminate any thermal breaks. Do not use nails, screws, or any other type of non-thermal mechanical fastener. Fill in any gaps wider than 1/16" in the insulation board layer with slivers of insulation board.

After installing the insulation board, apply either Sto RFP, PAB, or BTS-Plus Base Coat over the board using either spray equipment or a stainless-steel trowel to a uniform thickness of approximately 1/8". Work horizontally or vertically in strips of 40" and immediately embed the mesh into the wet base coat by troweling from the center to the edge of the mesh. The mesh must be double wrapped at all corners and overlapped not less than 2" at mesh seams and at overlaps of detail mesh. The mesh must be fully embedded so that no mesh color shows through the base coat when it is dry.

Note: If a primer coat is used, apply with a brush, roller, or proper spray equipment over the clean, dry base coat and allow to dry thoroughly before applying finish.

After the base coat has dried, apply the Sto Finish Coat directly over the base coat (or primer coat). Apply the finish by spraying or troweling with a stainless-steel trowel. Apply the finish in a continuous application, and work to a wet edge. The finish must be protected from the weather until dry.

**Note:** Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.