

StoTherm[®] ci Essence

Decorative cladding with continuous air/moisture barrier and continuous insulation for heat, air and moisture control



Substrate: Glass Mat Gypsum sheathing in compliance with ASTM C 1177, Exterior or Exposure I wood-based sheathing (plywood or OSB), code compliant concrete, concrete masonry or portland cement plaster, existing structurally sound, uncoated brick or other masonry wall construction.

1)	StoGuard [®] Air and Moisture Barrier
2)	Three adhesive options: Sto TurboStick™, Sto Primer/Adhesive, Sto Primer/Adhesive-B
3)	Sto EPS Insulation Board
4)	Sto Mesh (embedded in Sto base coat)
5)	Two base coat options: Sto Primer/Adhesive, or Sto Primer/Adhesive-B
6)	Sto Primer Sand (optional)
7)	Sto Textured Finish: Sto Essence DPR

System Description

StoTherm ci Essence is a decorative and protective exterior wall cladding that combines superior air and weather tightness with excellent thermal performance and durability. It incorporates continuous exterior insulation and a continuous air/moisture barrier with Sto's high performance finishes in a fully tested wall cladding assembly.

Uses

StoTherm ci Essence can be used in residential or commercial wall construction where energy efficiency, superior aesthetics, and air and moisture control are essential in the climate extremes of North America

Features	Benefits
Design versatility	Aesthetic and curb appeal easy to achieve
Continuous exterior insulation, no mechanical fasteners	Energy efficient, reduced heating and cooling costs
Lightweight	Reduced structural costs
Continuous air and moisture barrier	Protects against mold and moisture problems
ICC-ES listed and evaluated	Fully tested building code compliant assembly

Properties

Weight (not including sheathing and frame)	< 2 psf (10 kg/m ²)
Thickness (insulation)	1 to 12 inches (25 – 305 mm)
R-value (not including sheathing and frame)	3.6 – 43.2 ft ² ·h·°F / Btu (0.63 – 7.60 m ² ·K / W)
Wind Load Resistance	Tested up to ± 188 psf (9.00 kPa)
Compliance	<ul style="list-style-type: none"> IBC and IRC (2006, 2009, 2012) ASHRAE 90.1-2010
Construction Types and Fire Resistance	<ul style="list-style-type: none"> I-V, NFPA 285 tested for types I-IV ASTM E 119 tested for 1&2 hour walls

Warranty,

10 year Limited Warranty

Maintenance

Requires periodic cleaning to maintain appearance, repair to cracks and impact damage if they occur, recoating to enhance appearance of weathered finish. Sealants and other façade components must be maintained to prevent water infiltration.

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Limitations
Minimum insulation board thickness 1 inch (25 mm). Maximum insulation board thickness 12 inches (305 mm).
Fire resistance rated assemblies limited to 4 inch (102 mm) maximum insulation board thickness and non-load bearing steel frame.
Wind load resistance: \pm 188 psf (9.00 kPa) ultimate loads achieved. Ultimate wind load resistance also depends on sheathing, sheathing attachment, and stiffness of supporting construction. Design for maximum allowable deflection of L/240.
Impact resistance: supplemental reinforcing mesh layers, cement board overlay or other design adjustments may be prudent for areas adjacent to heavy pedestrian traffic or other areas of high impact or abuse. Refer to Sto Guide Details.
For use on vertical above grade walls only. Do not use below grade or on roofs or roof-like surfaces.
Insulation material is flammable. Keep away from flame, ignition sources, high heat, and temperatures in excess of 165°F [74° C]).
Dark finish colors with LRV (Light Reflectance Value) < 20 are not recommended.
Air Barrier, insulation board, and base coat materials are not intended for prolonged weather exposure. Allow 30 days maximum between application of air barrier and insulation board.
Refer to specific component product bulletins and packaging for other limitations that may apply involving use, handling and storage of component materials.

Sustainable Design												
Air Quality and VOC Compliance												
All finish coatings, adhesives, air barrier joint treatments and coatings meet US EPA (40 CFR 59) and SCAQMD (Rule 1113) emission standards for architectural coatings.												
LEED Credit Eligibility												
<ul style="list-style-type: none"> • Energy and Atmosphere (EA) • Materials and Resources (MR) • Innovation in Design (IA) 												
Regulatory Compliance and Standards Testing												
<table border="1"> <tr> <td>ICC ESR No. 1748 covering StoTherm NExT Systems</td> <td>Complies with 2009, 2012 IBC and IRC</td> </tr> <tr> <td>ICC ESR No. 1233 covering StoGuard Air & Moisture Barrier</td> <td>Complies with 2006, 2009, 2012 IBC, IRC and IECC</td> </tr> <tr> <td>ASHRAE 90.1-2010¹</td> <td>Complies with Section 5, Building Envelope, air barrier and continuous insulation requirements</td> </tr> <tr> <td>ASTM E 2357²</td> <td>Air/Moisture barrier meets air leakage resistance criteria of \leq 0.04 cfm/ft² at 1.57 psf (0.2 L/s•m² at 75 Pa)</td> </tr> <tr> <td>NFPA 285³</td> <td>Meets flame propagation criteria for use on Types I, II, III, IV construction with up to 12 inches (305 mm) of Sto EPS insulation board</td> </tr> <tr> <td>ASTM E 119⁴</td> <td>Meets requirements for 1 or 2 hour rating over non load-bearing fire-resistance-rated steel frame construction, does not change the rating over selected combustible exterior fire-resistance-rated assemblies (refer to ICC ESR 1748)</td> </tr> </table>	ICC ESR No. 1748 covering StoTherm NExT Systems	Complies with 2009, 2012 IBC and IRC	ICC ESR No. 1233 covering StoGuard Air & Moisture Barrier	Complies with 2006, 2009, 2012 IBC, IRC and IECC	ASHRAE 90.1-2010 ¹	Complies with Section 5, Building Envelope, air barrier and continuous insulation requirements	ASTM E 2357 ²	Air/Moisture barrier meets air leakage resistance criteria of \leq 0.04 cfm/ft ² at 1.57 psf (0.2 L/s•m ² at 75 Pa)	NFPA 285 ³	Meets flame propagation criteria for use on Types I, II, III, IV construction with up to 12 inches (305 mm) of Sto EPS insulation board	ASTM E 119 ⁴	Meets requirements for 1 or 2 hour rating over non load-bearing fire-resistance-rated steel frame construction, does not change the rating over selected combustible exterior fire-resistance-rated assemblies (refer to ICC ESR 1748)
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1. Energy Standard for Buildings Except Low-Rise Residential Buildings
2. Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
3. Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components
4. Standard Test Methods for Fire Test of Building Construction and Materials

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	SB-E100G Revision: 001 Date: 10/2014	<p style="text-align: center;">Attention</p> <p>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 this product, 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.</p>
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