

StoTherm® ci XPS 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)	Sto TurboStick™ Spray Foam Adhesive
3)	Foamular® CI-C or Dow STYROFOAM™ Panel Core 20 Insulation Board
4)	Sto Mesh (embedded in Sto Base Coat)
5)	Sto BTS® Xtra Base Coat
6)	Sto Primer Sand (optional)
7)	Sto Textured Finish: Sto Essence DPR

System Description	
StoTherm ci XPS Essence is a decorative and protective exterior wall cladding that provides superior air and weather tightness with excellent thermal performance and durability. It incorporates continuous insulation and a continuous air/moisture barrier with Sto's high performance finishes in a fully tested wall cladding assembly.	
Uses	
StoTherm ci XPS Essence can be used in residential or commercial wall construction where energy efficiency, superior aesthetics, air and moisture control are essential. The superior compressive strength and low water absorption of XPS insulation make it appropriate for institutional, military or other construction where increased durability is desired.	
Features	Benefits
Design versatility	Aesthetic and curb appeal easy to achieve
Continuous XPS insulation, R-5 per inch	Increased durability, reduced heating and cooling costs, thinner wall sections
Quick set adhesive, no mechanical fasteners	Fast installation, no thermal bridging
Continuous air and moisture barrier	Protects against mold and moisture problems
Fully tested compatible components	No experimenting with untested designs
Properties	
Weight (not including sheathing and frame)	< 2 psf (10 kg/m ²)
Thickness (insulation)	1 - 6 inches (25-152 mm)
R-value (not including sheathing and frame)	5.0 – 30 ft ² ·h·°F / Btu (0.88 – 5.28 m ² ·K / W)
Wind Load Resistance	Tested up to ± 175 psf (8.37 kPA)
Construction Types	I-V, NFPA 285 tested for Types I-IV
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 6 inches (152 mm). Hourly rated walls: maximum thickness limited to 2.75 inches (70 mm) over CMU, concrete, and non-load bearing frame walls. Thickness in excess of 4 inches (102 mm) requires two layers of insulation.
Wind load resistance: ± 175 psf (8.37 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 thirty 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	
ICC ESR 1748 covering StoTherm ci Systems	Complies with 2009, 2012, 2015 IBC, IRC and IECC (ICC ESR revision pending)
ICC ESR No. 1233 covering StoGuard Air & Moisture Barrier	Complies with 2009, 2012, 2015 IBC, IRC and IECC
ICC AC 212	Complies with abbreviated format <i>Acceptance Criteria For Water-Resistive Barrier Coatings used as Water-Resistive Barriers over Exterior Sheathing</i>
ASHRAE 90.1-2013¹	Complies with Section 5, Building Envelope, air barrier and continuous insulation requirements
ASTM E 2357²	Air/Moisture barrier meets air leakage resistance criteria of ≤ 0.04 cfm/ft ² at 1.57 psf (0.2 L/s·m ² at 75 Pa)
NFPA 285³	Meets flame propagation criteria for use on Types I, II, III, IV construction with up to 6 inches (152 mm) of Foamular® CI-C or Dow STYROFOAM™ Panel Core 20 insulation board
ASTM E 119⁴	Meets requirements for 1-hour rated wall assembly

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*

<p>Sto Corp. 3800 Camp Creek Parkway Building 1400, Suite 120 Atlanta, GA 30331</p> <p>Tel: 404-346-3666 Toll Free: 1-800-221-2397 Fax: 404 346-3119</p> <p>www.stocorp.com</p>	<p>SB-E100X Revision: 003 Date: 12/2017</p>	<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 ST O ' S W A R R A N T Y P R O G R A M S W H I C H A R E S U B J E C T T O C H A N G E F R O M T I M E T O T I M E. 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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