

StoTherm® ci Essence

Decorative cladding with continuous insulation and continuous air/moisture barrier 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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Precautions and 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.	
Structural back-up wall must be level to within ¼ inch in 10 ft (6 mm in 3.0 m)	
Wind load resistance: ± 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 180 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	
System has high potential for LEED and other sustainability program credits based on efficient and effective use of continuous exterior insulation and resulting reductions in greenhouse gas emissions	
Regulatory Compliance and Standards Testing	
ICC ESR No. 1748 covering StoTherm NExT Systems	Complies with 2009, 2012, 2015 IBC and IRC
ICC ESR No. 1233 covering StoGuard Air & Moisture Barrier	Complies with 2009, 2012, 2015 IBC, IRC and IECC
ASHRAE 90.1-2016¹	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 12 inches (305 mm) of Sto EPS insulation board
ASTM E 119⁴	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)

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*

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