



ICC-ES Listing Report ESL-1629

Issued July 2024

This listing is subject to renewal July 2025

CSI: DIVISION: 07 00 00 – MOISTURE AND MOISTURE PROTECTION
Section: 07 24 00 – Exterior Insulation and Finish Systems

Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

Product: STOTHERM® ci®, STOTHERM® ci MVES, AND STOTHERM® ci WITH STOCAS FINISHES

Listee: STO CORP.

Evaluation: StoTherm® ci, StoTherm® ci MVES, and StoTherm® ci with StoCast Finishes are the exterior insulation and finish systems (EIFS) fully described in the ICC-ES evaluation report [ESR-1748](#). The systems have been evaluated based on exterior wall assemblies described in the Assembly Section tested to the following standard:

- NFPA 285 (-19 and -12), Standard Fire Test Method for the Evaluation of Fire Propagation Characteristics of Exterior Non-load-bearing Wall Assemblies Containing Combustible Components, National Fire Protection Association.
- NFPA 268 (-19, -17, and -12), Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source, National Fire Protection Association.

Findings: The assemblies described in the Assembly Section, constructed with with StoTherm® ci, StoTherm® ci MVES, and StoTherm® ci with StoCast Finishes, are exterior wall assemblies for use in buildings of Construction Types I through IV, based on testing in accordance with NFPA 285 and NFPA 268, as referenced in the applicable sections of the following code editions:

- 2021, 2018, and 2015 *International Building Code*®
Applicable Section: 2603.5.5, 2603.5.7
- 2021, 2018, and 2015 *International Residential Code*®
Applicable Section: R302

Assembly: The exterior wall assemblies consists of the following components:

StoTherm® ci®, StoTherm® ci MVES, and StoTherm® ci with StoCast Finishes consist of a water-resistive barrier, adhesively applied flat insulation board, reinforcing mesh (See Table 2), base coat, and finish. The finish in StoTherm® ci is a textured plaster finish. The finish in StoTherm® ci MVES is an adhered masonry veneer with grout. The finish in StoTherm® ci with StoCast Finishes is a factory prefabricated finish that simulates the look of wood, brick, stone, and other architectural finishes. See [Table 1](#), Table 2 and the following for system components.

Insulation Board:

The insulation boards must be one of the following:

- a. Expanded polystyrene (EPS) complying with ASTM C578, Type I, and ASTM E2430, produced by a molder with a current ICC-ES evaluation report.
- b. EPS insulation board produced by a molder who participates in an approved third-party quality-assurance program. EPS must comply with ASTM C578, Type I, and ASTM E2430.

- c. Sto EPS Insulation Board, EPS complying with ASTM C578, Type I, and ASTM E2430.
- d. Owens Corning® Foamular® CI-C, or NGX™ CI-C Extruded Polystyrene Type X (for use with the StoTherm® ci with XPS Insulation system as noted in [Table 1](#)).
- e. Dupont™ Styrofoam™ Brand Panel Core ST-100 Type X recognized in [ESR-2142](#) and [ESR-4755](#) (for use with the StoTherm® ci with XPS Insulation system noted in [Table 1](#)).
- f. Sto GPS Board, graphite enhanced polystyrene insulation board complying with ASTM C578, Type I, and ASTM E2430.

The insulation boards must have a flame spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL 723.

Substrates:

Substrates must be one of the following:

- a. Gypsum sheathing board complying with ASTM C1396 or ASTM C1177. When used as part of a fire-resistance-rated assembly, the gypsum board must be Type X with a minimum thickness of $\frac{5}{8}$ inch (15.9 mm).
- b. Concrete masonry complying with the code.
- c. Concrete complying with the code.
- d. Exterior plaster complying with the code.
- e. Exterior or Exposure 1 wood structural panels complying with DOC PS-1 or PS-2.

Sealants:

Sealants must comply with ASTM C920, Type S or M, minimum Grade NS, minimum Class 25, and Use O.

Identification:

1. The ICC-ES mark of conformity, electronic labeling, ICC-ES evaluation report number ([ESR-1748](#)) and/or the ICC-ES listing report number (ESL-1629) and when applicable, the ICC-ES listing mark, along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
2. In addition, each container or package of the coating or reinforcing mesh used as part of the StoTherm® ci, StoTherm® ci MVES, and StoTherm® ci with StoCast Finishes systems must be labeled with the manufacturer's name (Sto Corp.) and address; the product name; lot or batch number; quantity of material; storage instructions; pot life; and the expiration date.

Sto EPS insulation board must be labeled on the edge of each board with the Sto Corp. name, the plant identification number, and the evaluation report number ([ESR-1748](#)).

Sto TurboStick and Sto TurboStick Mini adhesive must be labeled with the Sto Corp. company name and product name designation.

Other foam plastic insulation must be labeled in accordance with the current ICC-ES evaluation report in which it is recognized, or in accordance with IBC Section 2603.2 or IRC Section R316.2, as applicable.

3. The report holder's contact information is the following:

STO CORP.
3800 CAMP CREEK PARKWAY
SUITE 1400
ATLANTA, GEORGIA 30331
www.stocorp.com

Installation: The products and systems must be installed in accordance with this report, ICC-ES evaluation report number ([ESR-1748](#)), the Sto Corp.'s published installation instructions and the applicable code.

Conditions of listing:

1. Additional attributes and their applications can be found in the ICC-ES evaluation report [ESR-1748](#).
2. The listing addresses only conformance with the standards and code sections noted above.
3. Approval of the product's use is the sole responsibility of the local code official.
4. The listing applies only to the materials tested and as submitted for review by ICC-ES.
5. Installation must be by contractors recognized by Sto Corp.
6. StoTherm® ci, StoTherm® ci MVES, and StoTherm® ci with StoCast Finishes are manufactured under a quality control program with inspections by ICC-ES.

TABLE 1—STOTHERM® ci® SYSTEM COMPONENTS^{1,2}

SYSTEM	WATER-RESISTIVE BARRIER	ASTM C578 INSULATION BOARD TYPE	ADHESIVES	BASE COATS	FINISH
1. StoTherm® ci	80265-81636 Sto Gold Coat 81210 Sto AirSeal 80263 Sto VaporSeal (see ESR-1233)	Type I ⁴	Sto BTS Plus Sto BTS Silo Sto BTS Xtra Sto TurboStick Sto TurboStick Mini	Sto BTS Plus Sto BTS Silo Sto BTS Xtra Sto RFP	Stolit Stolit Milano ³ Stolit X ³ Stolit Lotusan
2. StoTherm® ci with Stolit HDP Finish	80265-81636 Sto Gold Coat 81210 Sto AirSeal 80263 Sto VaporSeal (see ESR-1233)	Type I ⁴	Sto BTS Plus Sto BTS Silo Sto BTS Xtra Sto TurboStick Sto TurboStick Mini	Sto BTS Plus Sto Armat Classic Plus	Stolit HDP
3. StoTherm® ci with Sto Primer/Adhesive Base Coats	80265-81636 Sto Gold Coat 81210 Sto AirSeal 80263 Sto VaporSeal (see ESR-1233)	Type I ⁴	Sto Primer/Adhesive Sto Primer/Adhesive-B Sto TurboStick Sto TurboStick Mini	Sto Primer/Adhesive Sto Primer/Adhesive-B	Sto Essence DPR Finish Stolit Milano Stolit X
4. StoTherm® ci with XPS Insulation	80265-81636 Sto Gold Coat 81210 Sto AirSeal 80263 Sto VaporSeal (see ESR-1233)	Type X	Sto TurboStick Sto TurboStick Mini	Sto BTS Plus Sto BTS Xtra Sto Primer/Adhesive Sto Primer/Adhesive-B	Stolit Stolit Lotusan Stolit Milano Stolit X
5. StoTherm® ci MVES	80265-81636 Sto Gold Coat 81210 Sto AirSeal 80263 Sto VaporSeal (see ESR-1233)	Type I ⁴	Sto TurboStick Sto TurboStick Mini	Sto Primer/Adhesive ⁵	ASTM C1088 Thin Brick ⁶ or ASTM C1670 (AC 51) Compliant Manufactured Stone ⁷ adhered with StoColl Adhesive Mortar
6. StoTherm® ci with StoCast Finishes	80265-81636 Sto Gold Coat 81210 Sto AirSeal 80263 Sto VaporSeal (see ESR-1233)	Type I ⁴	Sto BTS Plus Sto BTS Silo Sto BTS Xtra Sto TurboStick Sto TurboStick Mini	Sto BTS Plus Sto Armat Classic Plus	StoCast Finish ⁸

¹All base coats are reinforced with the appropriate Sto Mesh product listed in [Table 2](#).

²Sto Primer is an optional component of the systems listed above.

³Sto BTS Silo basecoat is not recognized for use with Stolit Milano and Stolit X finish.

⁴Refer to Insulation Board in the Assembly section for alternate insulation board.

⁵Mesh reinforcement for base coat is Sto Mesh 6-oz. Corrosion resistant self-drilling screws with 1-1/4 inch (32mm) diameter galvanized steel washer installed through the reinforced base coat (with washer seated on base coat) into framing members at 36 inches (914mm) on center vertically and 16 inches (406mm) horizontally. Screw threads must engage steel studs and be of sufficient length to penetrate minimum three full threads beyond the stud thickness.

⁶Thin brick grouted with ANSI 118.7 compliant grout.

⁷Manufactured stone must be recognized in a current ICC-ES evaluation report demonstrating compliance with ICC-ES Acceptance Criteria for Precast Stone Veneer (AC51).

⁸StoCast Finish is installed with StoCast Wood Adhesive (each plank is 6 inches wide by 6 feet long). StoCast Brick is installed with Sto Bonding and Pointing Mortar.

TABLE 2—REINFORCING MESH PRODUCTS

PRODUCT NO.	PRODUCT NAME ¹	NOMINAL WEIGHT, oz/yd ² (g/m ²)
80920E	Sto Mesh	4.5 (153)
80919	Sto Detail Mesh	4.2 (142)
80985	Sto 6-oz. (170 g) Mesh	6.0 (170)
80918	Sto Intermediate Mesh	11.0 (373)
80921	Sto Armor Mat	15.0 (509)
80922	Sto Armor Mat XX	20.0 (678)
80921A	Sto Corner Mat	7.6 (258)

¹Other listed mesh may be used for detail construction or to supplement impact resistance of the EIFS.

TABLE 3—ASSEMBLIES FOR USE IN TYPES I THROUGH IV CONSTRUCTION

FRAMING MEMBERS ^{5,8}			INTERIOR SHEATHING ^{1,7} (TYPE X GYPSUM)		EXTERIOR SHEATHING (TYPE X GYPSUM)		MAX. INSULATION BOARD THICKNESS, (inches)	APPLICABLE SYSTEMS (AS NUMBERED IN TABLE 1 ABOVE) ⁹
Metal		Max. Spacing (inches)	Min. Thickness (inch)	Max. Fastener Spacing (inches)	Min. Thickness (inch)	Max. Fastener Spacing (inches)		
Min. Depth (inches)	Min. Gage							
3 1/2	18	16	1/2	8 at perimeter 12 in field ²	1/2	6 at perimeter 8 in field ³	12	3
3 1/2	18	16 ⁶	1/2	6 ⁴	5/8	6 at perimeter 8 in field ³	12	1 and 2
6	20	16	5/8	8 ⁴	5/8	8 ⁴	12	StoTherm® ci with Sto TurboStick, Sto TurboStick Mini, Sto Primer/Adhesive-B base coat and Stolit X finish
3 1/2	18	16 ⁶	5/8	8 at perimeter 12 in field	5/8	8 at perimeter 12 in field	9	1 with Turbo Stick adhesive and Type I EPS or GPS
3 1/2	18	16 ⁶	5/8	8 at perimeter 12 in field	5/8	8 at perimeter 12 in field	6	StoTherm® ci with XPS insulation, Sto BTS Xtra base coat and Stolit finish
3 5/8	18	16	5/8	8 at perimeter 12 in field	5/8	8 at perimeter 12 in field	4	5
3 5/8	18	16	5/8	8 at perimeter 12 in field	5/8	8 at perimeter 12 in field	6	6 with Sto TurboStick adhesive and Sto BTS Plus base coat

For **SI**: 1 inch = 25.4 mm.

¹All board joints backed by framing.

²Fasteners are minimum No. 8, Type S, corrosion-resistant screws, with sufficient length to penetrate framing a minimum of 3/8 inch (9.5 mm).

³Fasteners are No. 6 drywall screws having sufficient length to penetrate framing a minimum of 3/8 inch (9.5 mm).

⁴Fasteners are No. 6 by 1 1/4-inch-long (31.7 mm), buglehead drywall screws.

⁵Stud cavities at floor levels are blocked with Owens Corning Thermafiber insulation, 4 lb/ft³ (64 kg/m³) density, 4 inches (102 mm) thick and 2 feet (610 mm) wide.

⁶Stud cavities must be filled with R-11 fiberglass insulation (optional for systems 5 and 6 in Table 1).

⁷All joints must be taped and treated with joint compound. Intermediate fastener heads are treated with joint compound in accordance with ASTM C840 or GA216.

⁸Openings must be framed with minimum 0.0428-inch-thick steel framing.

⁹Applicable to StoTherm® ci systems listed in [Tables 1](#) and 3, except for StoTherm® ci systems using Stolit Milano and Stolit X finish, unless noted otherwise.