

Sto Corp
Design No. STO/WEIFS 25-01
Exterior Wall Systems
Sto Category 1 Exterior Insulation and Finish Systems (EIFS)
StoTherm ci and StoTherm ci XPS
CAN/ULC S134 (2013)

Meets the Requirements of Article 3.1.5.5. of the National Building Code of Canada, 2010 and 2015

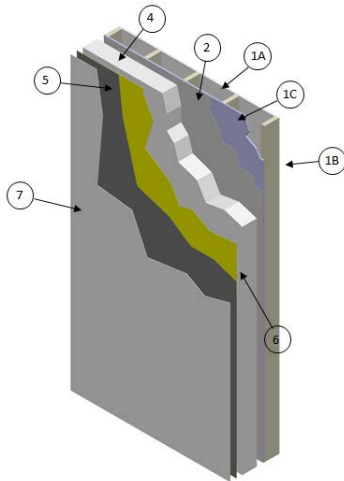


Figure 1: Construction with Wood Studs

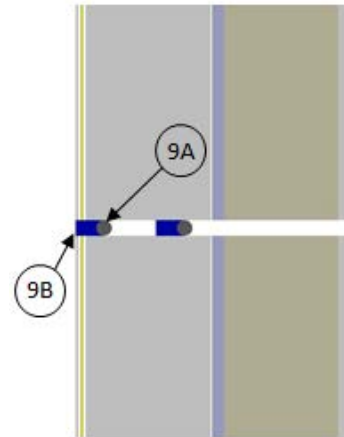


Figure 2: Joint System

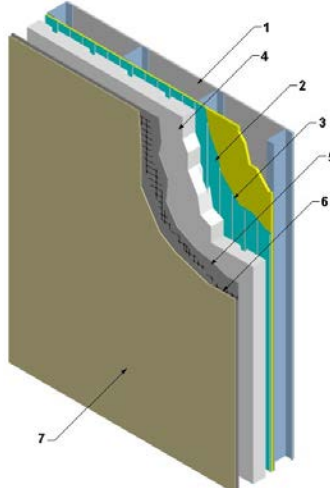


Figure 3: Construction with Steel Studs

1. WALL ASSEMBLY: Construct a wall assembly that shall comply with the local Building Code or other applicable regulatory requirements as established by the local Authority Having Jurisdiction. The wall assembly may include the

use of wood-framing. Where used, the wall assembly shall include:

- A. INTERIOR SHEATHING – Install one layer of min. 12.7mm (1/2 in.) thick gypsum interior sheathing to framing.

- B. FRAMING – Use min. nominal 2 x 6 framing spaced max. 406mm (16 in.) on center (oc) and cover with interior sheathing (Item 1A) and exterior sheathing (Item 1C).
- C. EXTERIOR SHEATHING – Install one layer of min. 12.7mm (1/2 in.) thick gypsum exterior sheathing to framing (Item 1B).

2. CERTIFIED MANUFACTURER: Sto Corp.**CERTIFIED PRODUCT:** Water Resistive Barrier**CERTIFIED MODEL:**

Apply one of the following membrane systems, according to manufacturer's instructions, to the exterior side of the wall assembly.

- A. STO FLEXYL – A cementitious air and moisture barrier trowel applied at a wet film thickness of 1.6mm.
- B. STOGUARD VAPOR SEAL R – A fluid-applied polymeric air, vapor, and moisture barrier, spray- or roller-applied in a two-coat process at a wet film thickness of 0.38mm (15 mils) per coat.
- C. STOGUARD – A fluid-applied polymeric air and moisture barrier applied in two coats at a wet film thickness of 0.25mm (10 mils) per coat. Where applied over sheathing, joints are to be first treated with Sto Gold Fill and mesh reinforcement, or StoGuard RapidFill, in accordance with Sto application instructions. Joints may also be treated with application of Sto Gold Coat in conjunction with StoGuard Fabric.
- D. STO GOLD FILL – (Not Shown) Trowel-apply one layer of Sto Gold Fill over the StoGuard Mesh (Item 6).

3. CERTIFIED MANUFACTURER: Sto Corp.**CERTIFIED PRODUCT:** Adhesive**CERTIFIED MODEL:**

Apply one of the following adhesives, according to manufacturer's instructions, to the certified water resistive barrier (Item 2).

- A. Sto Primer/Adhesive, StoPrimer/Adhesive-B, Sto BTS Silo, or Sto BTS Plus adhesives, applied to create vertical ribbons using a notched trowel with notches configured in one of two configurations:
 - a. 13mm x 13mm (nominal 1/2 in. x 1/2 in.) at 63mm oc
 - b. 16mm x 16mm (nominal 5/8 in. x 5/8 in.) at 32mm oc
- B. Sto TurboStick applied in foam bead ribbons 175mm (7 in.) oc, forming seven vertical ribbons over a 2400mm (48 in.) wide insulation board.

The approximate thickness of the adhesive ribbons following installation is 2mm.

- 4. INSULATION BOARD:** Prior to installation of insulation board, install Sto Detail Mesh, or cut strips of Sto Mesh at termination and/or system starting points so to encapsulate the insulation and allow for the overlapping of wrapping mesh and field mesh on the exposed surfaces of the insulation as described in section 6(c). This wrapping mesh is to extend no less than 64mm (2-1/2 in.) onto the adhering surface, or the inward facing side of the insulation board and then adhered to the substrate using an adhesive described in section 3(A). Install either of the following:

- a. 25mm to 165mm (1 in. to 6-1/2 in.) thick Expanded Polystyrene (EPS) compliant with CAN/ULC S701, Type 1. The nominal density of the EPS is 16 kg/m³ (1.0 pcf).
- b. 25mm to 165mm (1 in. to 6-1/2 in.) thick Graphite Expanded Polystyrene (GPS) compliant with CAN/ULC S701, Type 1. The nominal density of the GPS is 16 kg/m³ (1.0 pcf). Installation of GPS must use Sto TurboStick (Item 3B).
- c. 25mm to 106.7mm (1 in. to 4.2 in.) thick Extruded Polystyrene (XPS) compliant with CAN/ULC S701, Type 3. The nominal density of the XPS is 25 kg/m³ (1.55 pcf).
- b. Center StoGuard Fabric over sheathing joints and embed into Sto Gold Coat (Item 2).
- c. Embed Sto Mesh 152 g/m² (4.5 oz/yd²) into the applied base coat (Item 5).
- d. For EPS insulation thicknesses of up to 102mm (4 in.) and XPS systems, mesh overlaps shall be min. 64mm (2-1/2 in.) and increasing to 102mm (4 in.) for EPS thicknesses 114mm to 165mm (4-1/2 in. to 6-1/2 in.).
- e. Additional layers of mesh may be installed for increased impact resistance. Where Sto Armor Mat 15 Mesh (425 g/m² – 15 oz/yd²) is used, it is to be embedded in a certified base coat (Item 5), prior to application of base coat and Sto Mesh as per Item 6(d). Alternatively, StoArmat Classic Plus may be applied over Sto Base Coat (Item 5) and Sto Armor Mat 15 in conjunction with Sto Mesh. Sto Mesh overlaps as noted in Item 6(d) for the installed thickness of insulation. Where the base coat (Item 5) application includes Sto Mesh as described in Item 6(d), the Sto Armat Classic Plus may be applied without additional mesh before use of a certified finish coat (Item 7).

Insulation board may be flush-faced or contain geometrically defined cavities of up to 15% of the board area in the wall-facing side.

5. CERTIFIED MANUFACTURER: Sto Corp.

CERTIFIED PRODUCT: Base Coat

CERTIFIED MODEL: Sto Primer/Adhesive, Sto Primer/Adhesive-B, Sto BTS Silo, or Sto BTS Plus Base Coats

Apply a first layer of base coat over the EPS board. Embed Sto Mesh (see Item 6) in the base coat and apply a second layer of the base coat. Trowel to thoroughly cover the mesh and remove excess coat. The final base coat dry thickness measures 1.6mm, or thicker where additional layers of mesh are applied.

6. CERTIFIED MANUFACTURER: Sto Corp.

CERTIFIED PRODUCT: Reinforcing Mesh

CERTIFIED MODEL: StoGuard Mesh, Sto Mesh, StoGuard Fabric

- a. Center StoGuard Mesh over sheathing joints by pressing into place.

7. CERTIFIED MANUFACTURER: Sto Corp.

CERTIFIED PRODUCT: Finish Coats

CERTIFIED MODEL: Stolit, Stolit Lotusan, Sto Textured Finish, Sto Essence DPR, or StoSilco Lit finish coats, Sto Element, and Sto-Ecoshapes

NOTE: Stolit finishes are also used to produce StoCreativ Brick

Apply one of the following finish coats, according to manufacturer's instructions, over the dried certified base coat (Item 5) to achieve final texture.

- A. STOLIT, STOLIT LOTUSAN, STO ELEMENT, STO ESSENCE DPR, STOSILCO LIT – Trowel-applied ready-mixed acrylic based finish coat. The applied thickness is governed by the aggregate size (1mm – 3mm).
 - B. STO-ECOSHAPES – Trowel-apply the Sto Bonding and Pointing Mortar over the dried certified base coat (Item 5). Press Sto-Ecoshapes, preformed acrylic rendered shapes which simulate brickwork or other patterns, in the Sto Bonding and Pointing Mortar per the manufacturer's instructions. The Sto-Ecoshapes thickness may be nominally 4mm – 8mm.
- B. STO ARMAT CLASSIC PLUS – (Optional; Not Shown) Trowel-apply Sto Armat Classic Plus to the rendered certified base coat (Item 5) and certified reinforcing mesh (Item 6) prior to application of the certified finish coat (Item 6(d)).
9. **JOINT SYSTEM:** Install a 1- or 2-stage joint system with max. width of 19mm (3/4 in.). Install the joint with the following specifications:
- A. **BACKER MATERIAL** – Install nominal 22.2mm (7/8 in.) diameter soft cell polyethylene backer rod firmly into opening of the joint as a permanent structure from the exterior side of the wall. Set the interior backer rod to a depth that aligns approximately with the exterior surface of the sheathing (Item 1C). Install sealant (Item 3B) against interior backer rod and tool to concave profile as specified by sealant manufacturer. Install exterior backer rod to a depth as specified by the sealant manufacturer for exterior surface joints.
 - B. **JOINT SEALANT** – Install a joint sealant, with a Flame Spread Index of 10 or less per ASTM E84, into recess of joint to cover backer material (Item 9A) flush with the surface of the panels. Install the joint sealant on the interior backer rod to a depth specified by the manufacturer.

8. CERTIFIED MANUFACTURER: Sto Corp.

CERTIFIED PRODUCT: Sto Primer, Sto Armat Classic Plus

Sto Primer is applied to the prepared base coat as per the manufacturer's instructions.

Sto Armat Classic Plus is a non-cementitious organic compound supplied in pails and used without addition of cement or any other modifying additives for the provision of enhanced lamina abuse resistance.

CERTIFIED MODEL: Primer, Fortification Layer

- A. STO PRIMER – (Optional) Apply on certified base coat (Item 5) prior to finish application (not shown).