Installation and Usage Guide
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Recommended Usage

Recommended for:

• IBC Type V construction or IRC
• Above Grade walls
  - Use as braced wall panels (intermittent bracing) integrated with other rigid insulated sheathing
  - Use as continuous structural bracing method (all SIS on a wall).
• Attics
  - Use without a protective thermal barrier or ignition barrier on the interior of the building, including (but not limited to) knee and gable end walls
  - Attic space may be unventilated or ventilated

Not recommended for:

• Claddings that require a 7/16” wood structural panel for nail backing
  - Follow manufacturer’s installations for all claddings
• Can not be substituted for wood structural panel in IRC narrow wall details described in 2006 IRC R602.10.6.1 & R602.10.6.2
  - However, SIS or other foam sheathings can be used on exterior of these wall details with the wood structural panel located on the interior.
Recommended Zones

• **Wind zones**: Use prescriptively in wind zones <110 mph (under the 2006 IRC)
  
  (Use in higher wind zones requires an engineered design, Call Dow for allowable shear values)

• **Seismic zones**: Use prescriptively in Seismic Design Categories A, B and C (under the 2006 IRC)
  
  (Do not use in higher seismic regions, D₀, D₁ and D₂ at this time)
Avoid storage directly on the ground unprotected

- Product bundles are shipped from the factory in weather-tight packaging.
  - Normal care should be taken to avoid excessive moisture exposure (soaking) to unpackaged product.
  - Use of damaged product is dependent on the extent of the damage. Contact your Dow rep if there are concerns regarding product quality.

Maintain packaging protection until using the product

- Once removed from the protective bundle covering and installed on the wall frame, it can remain uncovered for up to 90 days of UV exposure.
Materials Checklist

- Work surface (sawhorses)
- Circular saw
- Straight edge/chalk line
- Safety glasses/goggles and gloves
- Measuring tape
- Pencil/chalk
- Approved fasteners (staples or nails)
- Pneumatic nail/staple gun
- WEATHERMATE™ Construction Tape (2 7/8 inches wide) – Tape Dispenser recommended
Installation:
Step 1 – Measuring and Cutting

- Wear safety gloves and eye protection
- Mark cut lines using one of two options:
  - Use straight edge and chalk line
  - Drag the hook of a measuring tape along the printed side of the board while holding the other end of the tape
- Cut boards on a flat, sturdy surface, using a circular saw
Board orientation

• Install panels so that the foam faces the exterior of house
• For structural use, all edges must be fastened and backed by minimum 2” (nominal) framing.
• For non-structural uses, edges don’t need to be backed.
When used in combination with nonstructural foam sheathing:

- Use STYROFOAM SIS™ Sheathing in areas where bracing is required.
- Supplement remaining wall with regular foam sheathing, such as STYROFOAM™ Residential Sheathing, Super TUFF-R™, or most other Dow rigid insulations.
Installation:
Step 3 – Fastening

- Fasten boards using approved nails or staples every 3" around the perimeter of the board
- Nail or staple every 6" in the field of the board
- A 3-3 pattern may also be used for staples, resulting in lower bracing percentage requirements (Please refer to ESR 2436 at www.dowsis.com or www.icc-es.org)

NOTE: STYROFOAM SISTM Panels used in non-structural areas may be installed using fasteners spaced 6" at the perimeter of the board and 12" in the field of the board.
## Installation:
### Step 3 – Fastening (continued)

<table>
<thead>
<tr>
<th>Product</th>
<th>Recommended Nail Type</th>
<th>Recommended Staple Type</th>
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<tbody>
<tr>
<td>0.5-inch STYROFOAM SIS™</td>
<td>Shank Diameter: 0.113 min. Stud Penetration: 1-inch min.</td>
<td>Gauge: 16&lt;br&gt;Crown: 0.5-inch or 1-inch Stud Penetration: 1-inch min.</td>
</tr>
<tr>
<td>1-inch STYROFOAM SIS™</td>
<td>Shank Diameter: 0.113 min. Stud Penetration: 1-inch min.</td>
<td>Gauge: 16&lt;br&gt;Crown: 0.5-inch or 1-inch Stud Penetration: 1-inch min.</td>
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![Diagram of 0.5-inch STYROFOAM SIS™ Fastening](image1)

![Diagram of 1-inch STYROFOAM SIS™ Fastening](image2)
• To ensure a water-resistive barrier, tape all joints with 2 7/8" WEATHERMATE™ Construction Tape (Fasteners in the field of the board do NOT need to be taped to achieve WRB)
  – Center the tape over the joint to cover fasteners
  – When taping joints, use shingle fashion technique
  – Tape must be installed in temperatures between 15°F and 120°F (service temperatures of -40°F to 220°F)

• Housewrap can be installed over STYROFOAM SIS™ Sheathing; however, it is not required to meet WRB requirements if all joints are taped (visit www.insulateyourhome.com for WEATHERMATE™ Housewrap installation instructions)
Installation:
Step 5 – Flashing Details
For Windows, Doors & Penetrations

Figure 1 - Typical Penetration Flashing Detail - Flanged

Figure 2 - Typical Penetration Flashing Detail - Unflanged

Figure 3 - Typical Window Flashing Detail

NOTE: Refer to WEATHERMATE™ flashing details for WEATHERMATE moisture warranty
STYROFOAM™ installed as a Water-Resistive Barrier

Step 1: Wall to Roof Flashing Detail

- Tip: If sequencing allows, roofing paper should be turned up at the wall behind the STYROFOAM™ sheathing about 12”

- After STYROFOAM™ sheathing is in place, install the L-shaped step flashing at the wall

- Install 4” WEATHERMATE(™) Straight flashing to cover the top edge of the step flashing

- Install WEATHERMATE(™) Construction Tape to cover the top edge of the WEATHERMATE(™) Straight Flashing

- Install shingles per manufacturer’s recommendations
STYROFOAM™ installed as a Water-Resistive Barrier

Step 1: Air seal rectangular window interior perimeter

- Insert GREAT STUFF PRO™ Window & Door nozzle into the gap to fill the **width** of the gap to a **depth** of about 1" (Do not fill entire cavity depth)
- Apply sealant to all 4 sides of a window opening
- Trim away excess with a sharp knife after foam is fully cured
- Tip: Apply GREAT STUFF PRO™ Window & Door Sealant between 40°F and 100°F
• Insert GREAT STUFF PRO™ Window & Door nozzle into the gap to fill the width of the gap to a depth of about 1” (Do not fill entire cavity depth)

• Apply sealant to 3 sides of a door opening

• Trim away excess with a sharp knife after foam is fully cured

• Tip: Apply GREAT STUFF PRO™ Window & Door Sealant between 40°F and 100°F
For proprietary stucco systems and all other cladding systems, follow manufacturer’s installation instructions.

“Typical instructions” when installing STYROFOAM SIS™ Sheathing with stucco and thin stone systems:

For non-proprietary stucco systems such as three-coat stucco, the STYROFOAM SIS™ Sheathing system will provide one layer of water-resistive barrier. Provide additional WRB layer as recommended for 3-coat stucco and other cladding systems.

- Apply SIS directly to the exterior of the wall studs. Taping of all joints and flashing of penetrations provides one layer of water-resistive barrier.

- Provide a second layer of water-resistive barrier layer as required by the installation instructions.
  - SIS should not be used as a nail base, however, lathe or mesh may be stapled to the SIS between studs.
For more information:
Contact: 1-866-583-BLUE (2583)
Visit: www.dowsis.com

NOTICE: Changes to the International Residential Code require the installation of a water-resistive barrier (WRB) within most exterior wall assemblies in residential construction. The following Dow insulated sheathing products qualify as a WRB when installed according to the installation instructions developed for “installation of foam sheathing as a water-resistive barrier”: STYROFOAM™ DURAMATE™ Plus, STYROFOAM™ Residential Sheathing, STYROFOAM™ Tongue and Groove, STYROFOAM™ SIS™, STYROFOAM™ Square Edge, STYROFOAM™ Residing Board, STYROFOAM™ High Performance Underlayment, THERMAX™ Sheathing, TUFF-R™ and SUPER TUFF-R™ and therefore do not require the use of a building paper or a housewrap as a WRB. When a WRB is not needed, these Dow foam sheathings may be installed according to standard installation instructions for foam sheathing from Dow. Be sure products and installation instructions meet code requirements for your particular location. Note: WEATHERMATE™ and WEATHERMATE™ Plus Housewraps have already qualified as water-resistive alternatives to the prescribed WRB (see Evaluation Reports NER-593 and NER-660 for approved alternative).

WARNING: Rigid foam insulation does not constitute a working walkable surface or qualify as a fall protection product.

CAUTION: This product is combustible and shall only be used as specified by the local building code with respect to flame spread classification and to the use of a suitable thermal barrier. For more information, consult NIOSH, call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-866-583-BLUE. Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.
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No material supplier including Dow can give assurance that mold will not develop in any specific system.

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