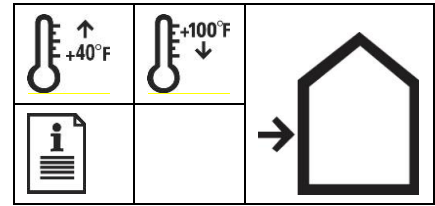


## PRODUCT BULLETIN

# Sto EPS Insulation Board



### PRODUCT DESCRIPTION

Sto Expanded Polystyrene (EPS) Insulation Board is a rigid cellular expanded polystyrene insulation board intended for use in StoTherm® ci Exterior Insulation and Finish System (EIFS).

Sto EPS Board complies with:

- ASTM C578, Type I, *Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*
- ASTM E2430, *Standard Specification for Expanded Polystyrene (EPS) Thermal Insulation Boards for Use in Exterior Insulation and Finish Systems (EIFS)*

FEATURES	BENEFITS
Continuous exterior insulation	Efficient and effective use of insulation reduces energy consumption and cost
No fluorocarbon blowing agents (HFC, HCFC, or CFC) used in manufacturing	Low global warming potential and zero ozone depletion potential
Recyclable	Reduced environmental impact
Water vapor semi-permeable	Aids in drying incidental water in walls

**Packaging:** packaged in bundles wrapped in Sto yellow polyethylene bags

**Shelf Life:** 2 years in original, unopened, properly stored packaging.

**Storage:** Store in a well-ventilated area away from sources of high heat, ignition, sparks, flame, flammable or volatile materials. Enforce “No Smoking – No Matches – No lighters – No Welding” rules. Store in original packaging in a dry location on pallets minimum 3 inches (76mm) above ground. Store inside, or, if stored outside slit the polyethylene bag or remove it to prevent accumulation of condensation. Protect from UV exposure with an opaque light colored weatherproof covering. Avoid covering with dark colored tarps or other coverings which can cause heat build-up and surface deformation of the insulation. If stored outside without protective covering the surface will chalk with extended exposure to sunlight. Chalking does not affect physical properties but it will prevent adhesion of coatings.

### SIZES AND R-VALUE

Each piece is 2 x 4 ft x Thickness (in)

Thickness (in)	R-value* (ft <sup>2</sup> ·h·°F/Btu)
1	3.6
2	7.2
3	10.8
4	14.4
5	18
6	21.6
7	25.2
8	28.8
9	32.4
10	36
11	39.6
12	43.2

\*R-value at 75° F (23.9° C) mean temperature. Sto EPS Insulation Board is generally available in thickness increments of 1/2-inch (13mm).

### APPLICATION

As a component of StoTherm® ci: use full pieces of board or cut to fit as needed with a sharp scoring knife. Pre-wrap or backwrap all EPS board terminations with Sto Mesh embedded in the specified Sto base coat. Attach EPS board in a running bond pattern to the supporting substrate with vertical ribbons of the specified Sto adhesive. Butt board joints tightly. Stagger insulation board joints a minimum of 6-inches (152mm) from sheathing joints. Interlock inside and outside corners and use L-shaped boards around openings. Install EPS slivers if any gaps exist between boards. Allow adhesive to cure until the board is firmly held in place. When cured rasp the surface of the insulation board to remove any surface chalking or contamination and to break the surface smoothness. Finish with the specified Sto base coat/mesh and Sto textured finish. For additional information go to [www.stocorp.com](http://www.stocorp.com) and refer to:

- *StoTherm EIFS Installation Guide* for complete installation instructions
- Applicable Product Bulletins for the Sto products used to install the StoTherm® ci System
- *52s.xx Sto Design Guide and Detail Booklet* for guide details
- *5200 StoTherm ci Specification* for guide specifications

## PRODUCT BULLETIN

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# Sto EPS Insulation Board

### LIMITATIONS

- Do not use on interior walls
  - Minimum thickness is 1-inch (25mm)
  - A thermal barrier is required (typically minimum ½ inch [12.7mm] gypsum wallboard) to separate the insulation board from the building interior
  - Use on noncombustible construction is limited<sup>1</sup> to 12-inches (305mm) maximum thickness
  - Use on fire-resistance-rated wall construction is limited<sup>1</sup> to 6-inches (152mm)
  - Do not use below grade. Maintain clearance of minimum 6-inches (152mm) above grade and exposed earth
  - Do not use on surfaces subject to in-service water immersion.
  - Do not use in direct contact with fire or in proximity to sources of high heat, ignition, sparks, or, in long term high-temperature applications
  - Maximum sustained service temperature is 165°F (73.9°C). Avoid the use of dark colored coatings (Light Reflectance Value less than 20) to prevent heat build-up on the surface of the insulation board
  - Surface will chalk with prolonged UV exposure. Rasp the surface to remove chalk before applying any coatings.
  - Refer to ICC-ESR 1748 for other limitations of use that may apply .
1. NOTE: Certain assemblies may be extended beyond the listed products and/or limitations, through engineering judgments on file at Sto Corp., or by way of modeling or rational analysis applied to the particular assembly in question.

### LIMITED WARRANTY

StoTherm® ci is subject to a written limited warranty which can be obtained free of charge from Sto Corp.

### HEALTH & SAFETY

#### Health Precautions

Inhalation or eye exposure to dust from this product may cause temporary irritation. Skin exposure to the product may cause mechanical irritation, cuts or punctures.

#### Safety Precautions

Use adequate ventilation. Protective gloves, long sleeved shirt and long pants are recommended to reduce skin contact or irritation. Remove contaminated clothing immediately.

#### First Aid

SKIN CONTACT: Wash with mild soap and running water. Remove and launder contaminated clothing before reuse. If irritation develops seek medical attention.

EYE CONTACT: Flush eyes with running water for at least 15 minutes. Seek medical attention if irritation develops.

RESPIRATORY PROBLEMS: Respiratory protection is not normally required. If dusts are generated up to 10 times above occupational exposure limits, use a NIOSH-approved particulate respirator with an efficiency rating of N95 or higher.

INGESTION: Ingestion of this material is unlikely. If it does occur, do not induce vomiting; seek medical attention.

FIRE: Move to fresh air. Administer oxygen and seek medical attention.

HYGIENE: Wash hands immediately after use. Wash clothing before re-use.

#### Spills

Land Spill: Scoop up material and put into suitable container for recycling or disposal as a non-hazardous waste in an appropriate recycling or disposal facility.

Water Spill: this material will float and disperse with wind and current. Contain the material with brooms, pick up or remove with a vacuum truck.

Air Release: This material will settle out of air. If concentrated on land, it can then be scooped up for recycling or disposal as a non-hazardous waste material.

#### Disposal

Incinerate, recycle or dispose in a licensed facility in accordance with local, state or federal regulations. Do not discharge into waterways or sewer systems without proper authority.

#### Warning

KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP OUT OF THE REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY. Consult the Safety Data Sheet (SDS) for further health and safety information. Safety Data Sheet (SDS) is available at [www.stocorp.com](http://www.stocorp.com).

## PRODUCT BULLETIN

# Sto EPS Insulation Board

### TECHNICAL DATA

REPORT	TEST METHOD	TEST CRITERIA	TEST RESULT
Compressive Strength at 10% deformation	ASTM C578 / D1621	Report Results	10 lb/in <sup>2</sup> (69 kPa) maximum
R-value per inch (25mm) at 75° F (23.9°C) mean temperature	ASTM C578 / C518	Report Results	3.6 ft <sup>2</sup> ·h·°F/Btu (0.63 m <sup>2</sup> ·K/W) minimum
R-value per inch (25mm) at 40° F (4.4°C) mean temperature	ASTM C578 / C518	Report Results	4.0 ft <sup>2</sup> ·h·°F/Btu (0.70 m <sup>2</sup> ·K/W) minimum
R-value per inch (25mm) at 25° F (-3.9°C) mean temperature	ASTM C578 / C518	Report Results	4.2 ft <sup>2</sup> ·h·°F/Btu (0.74 m <sup>2</sup> ·K/W) minimum
Flexural Strength	ASTM C578 / C203	Report Results	25 lb/in <sup>2</sup> (173 kPa)
Water Absorption by total immersion	ASTM C578 / C272	Report Results	4.0% maximum
Dimensional Stability	ASTM C578 / D2126	Report Results	2.0% maximum
Water Vapor Permeance at 1-inch (25mm) thick	ASTM C578 / E96	Report Results	5.0 perms (287 ng/Pa·s·m <sup>2</sup> at 25mm)
Density	ASTM C578 / C303	Report Results	0.9 lb/ft <sup>3</sup> (15 kg/m <sup>3</sup> ) minimum
Oxygen Index	ASTM C578 / D2863	Report Results	24.0% minimum
Surface Burning	ASTM E84	Flame Spread: ≤ 25 Smoke Developed: ≤ 450	< 25 < 450
Flammability and Flame Propagation	NFPA 285	Meets acceptance criteria	Meets criteria to qualify for use on noncombustible construction as a component of StoTherm® ci
Radiant Heat Ignitability	NFPA 268	No ignition at radiant heat flux of 12.5 kW/m <sup>2</sup> (1.10 btu/ft <sup>2</sup> -sec) for 20 min	No ignition when used as a component of StoTherm® ci
Fire-resistance	ASTM E119	Meets requirements for rated assembly	Meets requirements for 1 and 2 hour rated assemblies as a component of StoTherm® ci

### Building Code Compliance

- Complies with ASTM C578, Type I
- Complies with ASTM E2430 for use in EIFS
- Complies with ASHRAE 90.1-2019, Section 5, Building Envelope, continuous insulation requirements as a component of StoTherm® ci
- Complies with 2021 IBC, IRC, and IECC. Meets continuous insulation requirements when used as a component of StoTherm® ci
- Meets requirements for use on Noncombustible Construction as a component of StoTherm® ci. Refer to ICC-ESR1748
- Meets requirements for use in fire-resistance-rated wall assemblies as a component of StoTherm® ci. Refer to ICC-ESR 1748

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### ATTENTION

This product is 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. It 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 this product 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 EXPRESSED OR IMPLIED EXCEPT FOR EXPLICIT LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCEPTED BY BUILDING OWNERS IN ACCORDANCE WITH STO'S WARRANTY PROGRAMS WHICH ARE SUBJECT TO CHANGE FROM TIME TO TIME.** 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](http://www.stocorp.com)