

SecureTherm®

TECHNICAL DATA & PHYSICAL PROPERTIES

Tech Data

SecureTherm® Physical Properties					
Property		Type I	Type VIII	Type II	Type IX
Nominal Density	lb/ft ³ (kg/m ³)	1.00 (16)	1.25 (20)	1.50 (24)	2.00 (32)
Density ¹ , min.	lb/ft ³ (kg/m ³)	0.90 (15)	1.15 (18)	1.35 (22)	1.80 (29)
Design Thermal Resistance Per 1.0 thickness	75° °F: ft ² h/Btu (°K:m ² /W)	3.9 (0.68)	3.9 (0.69)	4.2 (0.73)	4.4 (0.77)
	40° °F: ft ² h/Btu (°K:m ² /W)	4.2 (0.73)	4.3 (0.75)	4.6 (0.80)	4.8 (0.84)
	25° °F: ft ² h/Btu (°K:m ² /W)	4.4 (0.77)	4.6 (0.80)	4.8 (0.84)	5.00 (0.88)
Compressive Strength ¹ @ 10% def. min.	psi (kPa)	10.0 (69)	13.0 (90)	15.0 (104)	25.0 (173)
Flexural Strength ¹ min.	psi (kPa)	25.0 (173)	30.0 (208)	35.0 (242)	50.0 (345)
Water Vapor Permeance ¹ of 1.0 in. thickness, max perm		5.0	3.5	3.5	2.5
Water Absorption ¹ by total immersion, max, volume%		4.0	3.0	3.0	2.0
Oxygen Index ¹ , min, volume%		24.0	24.0	24.0	24.0

¹See ASTM C578 Standard for test methods and complete information.

Caution: EPS contains flame retardant; however, it should be considered combustible and not exposed to sources of ignition. SecureTherm® has a flame spread index of less than 25 and a smoke-developed index of less than 450 when tested in accordance with ASTM E84 / UL 723 for densities from 0.70 - 3.0 lb/ft³. Refer to UL certificate for complete information.

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1. Product Name

SecureTherm™ expanded polystyrene (EPS) composite roof insulation

2. Manufacturer

ACH Foam Technologies
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Denver, CO 80216
(800) 525-8697
(303) 297-3844
Fax: (303) 292-2613
E-mail: info@achfoam.com
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3. Product Description

SecureTherm® is a high performance, light weight, environmentally friendly and water resistant expanded polystyrene (EPS) roof insulation that is factory laminated to a durable fiberglass facer to meet UL Class A requirements. SecureTherm® saves installation labor and time by eliminating the need for a cover board in many membrane applications.

BENEFITS

- Labor Savings - Saves installation time by eliminating the need for a cover board
- Energy Efficient - Consistent and proven thermal performance. 50-Year Thermal Warranty
- Durable & Versatile - Easy to handle and install
- Moisture Resistant - Low rate of permeability
- Used in Class A Assemblies
- Environmentally Friendly - Contains no ozone depleting agents and is made with recycled materials

3. Applicable Standards

- ASTM C578 - Standard Specification for Rigid Cellular Polystyrene Thermal Insulation
- UL 790 - Standard Test Methods for Fire Tests of Roof Coverings
- UL 1256 - Fire Test of Roof Deck Constructions
- UL 1897 - Uplift Tests for Roof Coverings
- FM 4450 - Class I Insulated Steel Deck Roofs

4. Submittals

- Submit insulation manufacturer's product literature and installation instructions, including:
 - Physical properties in compliance with ASTM C578 Type Specified
 - ICC ES Report
 - 50-year, non-prorated thermal performance warranty
- Shop drawings showing SecureTherm insulation board layout

5. Delivery, Storage & Handling

- Deliver insulation in packages labeled with material Type and R-Value.
- Store in original unopened packaging above ground, and protected from moisture and sunlight prior to installation
- Product should not be exposed to open flame or other ignition sources.

6. Warranty

Provide SecureTherm® composite roof insulation 50-year, non-prorated R-Value warranty covering the long-term performance of expanded polystyrene insulation.

7. Material Compatibility

The insulation must be compatible with all components of the roof assembly and the roofing membrane system. Consult membrane manufacturer for system requirements.

8. Insulation

- SecureTherm® composite roof insulation in compliance with ASTM C578
- Select one or more of the Insulation Types from the listings as follows, as required by the project:
 - SecureTherm® composite roof insulation: ASTM C578 [Type I, 0.90 pcf min.], [Type VIII, 1.15 pcf min.], Type II, 1.35 pcf min.], [Type IX, 1.80 pcf min.]
 - Thickness _____
 - R-Value _____

9. Thermal Barrier

- A Thermal barrier must be installed where required by code.
Note to SpecifierSelect the Thermal barrier installation from the listings, as required by the project:
 - [Metal Deck without a thermal barrier - A thermal barrier is not needed when in compliance with UL 1256.] [Metal Deck with a thermal barrier - The thermal barrier shall be installed in accordance with local building code requirements.] [Concrete Deck - A thermal barrier is not required.] [Combustible Deck - A 15 minute thermal barrier must be installed in accordance with code or excluded where code-recognized waiver of thermal barrier is allowed.]

10. Roofing Membrane

Any UL Classified or FM approved singly-ply membrane

11. Preparation

- Sweep and remove all loose particles and debris from the roof deck surface. The roof deck should be sound, smooth, and free of moisture.
- If a vapor retarder is required, it should be applied before the installation of SecureTherm™ composite roof insulation.
- If a thermal barrier is required, local building codes must be followed regarding thermal barriers separating insulation from the building interior.

12. Installation

- Lay insulation with all joints tightly butted and attached per membrane manufacturer's specifications.
- Follow the membrane manufacturer's specifications for fastening requirements for the insulation.
- Membrane should be installed per membrane manufacturer's specifications.



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