

Safety & Buildings Division
201 West Washington Avenue
P.O. Box 2658
Madison, WI 53701-2658

Wisconsin Building Products Evaluation

Material

Icynene Insulation System®

Manufacturer

Icynene, Inc.
6747 Campobello RD.
Mississauga, Ontario, Canada L5N Z67

SCOPE OF EVALUATION

GENERAL: This report evaluates the use of the Icynene Insulation System® manufactured by Icynene, Inc. Icynene, a low density, semiflexible, spray-applied foam plastic insulation material is also a vapor-permeable product for use in brick and concrete block cavities, pre-cast hollow core panels and planks, and wood frame, in new and existing construction. The Icynene product was evaluated in accordance with the fire safety requirements for foam plastic, and thermal performance, for the codes listed below.

The (UDC), requirements below are in accordance with the current Wisconsin Administrative Uniform Dwelling Code:

- **Foam Plastic Material:** The Icynene Insulation System® was evaluated under the foam plastic requirements in accordance with **s. Comm 21.11**.
- **Thermal Performance:** The Icynene Insulation System® was evaluated in accordance with the thermal performance requirements of **Subchapter VI, ss. Comm 22.20, 22.21, 22.23, 22.25, 22.27, 22.28, and 22.31**.

The **IBC** requirements below in accordance with the current **Wisconsin Amended ICC Code:**

- **Foam Plastic Material:** The Icynene Insulation System® was evaluated under the foam plastic requirements in accordance with **ss. IBC 2603.1, 2603.2, 2603.3, 2603.4, 2603.4.1.7 and s. 2603.4.1.9**.
- **Changes, additions or omissions to IECC:** The Icynene Insulation System® was evaluated in accordance with the general requirements of **s. Comm 63.0100**.
- **Building Thermal Envelope:** The Icynene Insulation System® was evaluated under the building thermal envelope requirements of **s. Comm 63.0402**.

DESCRIPTION AND USE

General: The Icynene Insulation System[®] is a low density, semiflexible, spray-applied foam plastic insulation material. It is a vapor-permeable product with open cells that contain only air. Less than 5 minutes of curing time is needed. The material is a two component system, spray-in-place vapor permeable product used to insulate the building envelope and air-seal areas such as plumbing and wiring penetrations, rim joists areas, window frames, overhangs, porch and garage ceilings and exterior walls. After curing, Icynene remains semi-flexible.

TESTS AND RESULTS

Surface Burning Characteristics: The Icynene Insulation System[®] was tested in accordance with ASTM E 84, results: a flame spread rating of 15-20 and a smoke developed rating of 180-400, when installed at a maximum thickness of 6 inches and a nominal density of $0.5 \pm 10\%$ pounds per cubic foot. The testing was conducted by Warnock Hersey.

Thermal Resistance: The Icynene Insulation System[®] was tested in accordance with ASTM C518, results: a thermal resistance of 5.7 °F.ft².hr/Btu at a thickness of 1.6 inches, at a mean test temperature of 75 °F (24 °C). Omega Point Laboratories did testing, SWRI Procedure 99-02 (modified), Crawl Space Fire Exposure Evaluation.

LIMITATIONS OF APPROVAL

The (**UDC**), limitations below are in accordance with the current Wisconsin Administrative Uniform Dwelling Code:

- A vapor retarder shall be provided as required under **ss. Comm 22.05 (1) and 22.11 (1)**.
- The 1-inch air space in cathedral ceiling assemblies normally required under **s. Comm 22.05 (3) (a) 3.**, for non-rigid insulation is not required when using Icynene.
- The Icynene Insulation System[®] installed at a nominal thickness of 11 inches is permitted in attics, above floor/ceiling joists and below crawl space floor joists uncovered. A nominal thickness of 6 inches is permitted in walls. The walls shall be cover with a code approved ignition barrier.
- Icynene shall be protected from the weather after application.
- Icynene foam application shall be done only by factory-certified contractors.

The **IBC** limitations below are in accordance with the current **Wisconsin Amended ICC Code**:

- The Icynene Insulation System[®] installed at a nominal thickness of 11 inches is permitted in attics, above floor/ceiling joists and below crawl space floor joists uncovered. A nominal thickness of 6 inches is permitted in walls. The walls shall be cover with a code approved ignition barrier.
- Icynene shall be protected from the weather after application.
- Icynene foam application shall be done only by factory-certified contractors.

This approval will be valid through December 31, 2012, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The product approval is applicable to projects approved under the current edition of the applicable codes. This approval may be void for project approvals made under future applicable editions. The Wisconsin Building Product Evaluation number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Revision Date:

Approval Date: May 22, 2008

By: _____

Lee E. Finley, Jr.
Product & Material Review
Integrated Services Bureau

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