



Department of Commerce

Safety & Buildings Division

201 West Washington Avenue

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Madison, WI 53701-2658

Evaluation # 200309-I

Wisconsin Building Products Evaluation

Material

Foam-In-Place Insulation

Manufacturer

CoreFoam, Inc.
PO Box 10393
Knoxville, TN 37939

SCOPE OF EVALUATION

GENERAL: This report evaluates the use of CoreFoam™ cellular plastic (a second-generation amino-plast polymer) insulation, manufactured by CoreFoam, Inc., evaluated as a foamed-in-place insulation for brick and block cavities, concrete block cavities, pre-cast hollow core block and plank, and new frame construction. The CoreFoam™ foamed-in-place cellular plastic insulation was evaluated in accordance with the fire safety requirements for foam plastic, and thermal performance, for the codes listed below.

This review includes the cited **Comm** code requirements below in accordance with the current **Wisconsin Uniform Dwelling Code (UDC), for 1- & 2-family dwellings:**

- **Foam Plastic:** The CoreFoam™ foamed-in-place cellular plastic (amino-plast) insulation was evaluated in accordance with the fire safety requirements of **s. Comm 21.11**.
- **Thermal Performance:** The CoreFoam™ foamed-in-place cellular plastic (amino-plast) insulation 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**. Note see LIMITATIONS OF APPROVAL section.

This review includes the cited **International Building Code (IBC)** requirements below in accordance with the current **Wisconsin Amended IBC Code:**

- **Foam Plastic:** The CoreFoam™ foamed-in-place cellular plastic (amino-plast) insulation was evaluated in accordance with the fire safety requirements of **ss. IBC 2603.1, 2603.2, 2603.3 and s. IBC 2603.4**.
- **Thermal Performance:** The CoreFoam™ foamed-in-place cellular plastic (amino-plast) insulation was evaluated in accordance with the thermal performance requirements of **s. Comm 63.1018(2)(a)1., (c)**. Note see LIMITATIONS OF APPROVAL section.

DESCRIPTION AND USE

CoreFoam™ foam insulation is a second-generation amino-plast polymer that produces a non-toxic and odor-free material. The foaming process incorporates a two-component system consisting of a solid water-soluble plastic resin and an aqueous based foaming agent/catalyst. Compressed air or nitrogen is used to generate the dense closed-cell foam, physically coated with the plastic resin.

CoreFoam™ foam insulation is installed from the top in the cores or cavities of concrete block walls during construction, and can be injected into a wall cavity (drywall, frame, or brick), through holes. Walls of existing buildings or new construction may be insulated through holes drilled in masonry joints or through the block at cores.

CoreFoam™ foam, formed by mixing resin and catalyst components and air. Setting takes place 10 to 30 seconds after the foam leaves the applicator gun. Initial drying requires 24 to 48 hours. Final full curing takes from 2 to 4 weeks, depending on ambient temperature and humidity.

TESTS AND RESULTS

Tests for surface-burning characteristics for CoreFoam™ foam were conducted in accordance with ASTM E84. The flame spread index was determined to be 25 and the smoke-developed value was determined to be 200.

A thermal conductivity test for was performed in accordance with ASTM C518. The results were as follows: the thermal conductivity of CoreFoam™ foam is 0.2552 Btu-in./hr./ft.²/°F. The thermal resistance, R-value is 13.93, and the thermal resistance per inch is 3.92.

LIMITATIONS OF APPROVAL

General: CoreFoam™ foam is approved for installation in the cores of concrete-block walls, in the cavities between block and brick or double-brick walls and in pre-cast panels.

CoreFoam™ foam shall be installed by licensed, certified CoreFoam dealers in accordance with the manufacturer's recommendations.

CoreFoam™ foam shall not be used where temperatures exceeding 190°F are present for prolonged periods of time.

CoreFoam™ foam shall not be used to support compressive loads and shall not be used for flotation or overhead applications.

The **Comm** limitation requirements below are in accordance with the current **Wisconsin Uniform Dwelling Code (UDC), for 1- & 2-family dwellings:**

- **Foam Plastic:** The CoreFoam™ foamed-in-place cellular plastic (amino-plast) insulation shall be separated from the building interior with a thermal barrier as required by **s. Comm 21.11 (1)**.
- **Thermal Performance:** The CoreFoam™ foamed-in-place cellular plastic (amino-plast) insulation shall meet the thermal performance requirements of **Subchapter VI, ss. Comm 22.20, 22.21, 22.23, 22.25, 22.27, 22.28, and 22.31**. Calculations shall be signed, sealed and submitted in accordance with **s. Comm 22.31**.

The **IBC** limitations below are in accordance with the current **Wisconsin Amended IBC 2000 Code:**

- **Foam Plastic:** The CoreFoam™ foamed-in-place cellular plastic (amino-plast) insulation shall be separated from the building interior with a thermal barrier as required by **s. IBC 2603.4**.
- **Thermal Performance:** The CoreFoam™ foamed-in-place cellular plastic (amino-plast) insulation shall meet the thermal performance requirements of **s. Comm 63.1018(2)(a)1., and (c)**. Calculations shall be signed, sealed and submitted in accordance with **s. Comm 63.1019**.

This approval will be valid through December 31, 2008, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. 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 29, 2003 By: _____

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

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