Division of Industry Services
1400 East Washington Ave.
Madison, WI 53703

Evaluation # 201505-I

Wisconsin
Building Products Evaluation

Material: CrownTonka, Thermalrite & ICS
Walk-In Coolers & Freezers

Manufacturers:

International Cold Storage (ICS)
11042 Wildwood Drive
Olive Branch, MS 38654

Thermalrite
8886 White Oak Ave E.
Rancho Cucamonga Ca, 91730

CrownTonka Walk-ins
304 Main Street North
Winnebago, MN 56098

CrownTonka Walk-ins
140 T. Elmer Cox Drove
Greenville, TN 37743

SCOPE OF EVALUATION

GENERAL: This report evaluates the use of foam plastic material used in walk-in coolers, freezers and refrigerated facilities (Trade Names **CrownTonka, Thermalrite and ICS**), manufactured by Rainey Road Holdings.

The cited **IBC** requirements below are in accordance with of the current **Wisconsin Amended ICC 2009 Code**:

- **Foam Plastic Core Material:** The **CrownTonka, Thermalrite and ICS** foam plastic sandwich panel was evaluated under the foam plastic requirements in accordance with **ss. IBC 2603.1, 2603.2, 2603.3** and **Exception 4, 2603.5.2** and **s. IBC 2603.9**.
- **Wall and Ceiling Panel:** The **CrownTonka, Thermalrite and ICS** foam plastic sandwich panel was evaluated as an insulated wall and ceiling panel used in refrigerated facilities and freezer warehouses in accordance with **ss. IBC 2603.4.1.2, 2603.4.1.3, 2603.5.2** and **2603.9**.

The structural performance and thermal transmission properties of the panels are outside the scope of this evaluation and are subject to specific evaluation and approval by the building plan reviewer. Additionally refrigerated rooms or spaces may require a second exit as required by 1015.5.

DESCRIPTION AND USE

CrownTonka, Thermalrite and ICS coolers and freezers consist of wood or high-density foam-framed wall and ceiling panels with foamed-in-place urethane insulation cores, and galvanized or Galvalume or stainless steel cladding. A variety of optional wall and floor finishes are available. Panels have tongue and groove construction and are joined together using a cam lock fastener that is operated with a hex wrench.

TESTS AND RESULTS

Factory Mutual Research conducted their full-scale room corner test (**FM 4880**) on galvanized steel-faced panels for wall/ceiling with **5-inch** thick polyurethane cores (BASF'S P19080R/P1001U). The wall/ceiling panels met the Factory Mutual Research requirements for a Class I fire rating and met code requirement for use without a thermal barrier and 30 foot height limitation.

ASTM D1929 test data for flash ignition and self-ignition temperatures: flash ignition 833° F (445° C) and self-ignition 806° F (430° C).

ASTM E84/UL 723 tests was conducted on the panel assembly. The results are as follows:

	Core Material	4 and 5 inch thick painted or unpainted **aluminum** finished panels	4 and 5 inch thick painted or unpainted **steel** finished panels
Flame Spread Index	25	25	25
Smoke Developed Index	300	>500	>500

ASTM D482 test data for ignition residue: the residue left after ignition of the test specimens was 0.24% by weight.

The test data is on file with the department.

LIMITATIONS OF APPROVAL

The **IBC** limitations below are in accordance with of the current **Wisconsin Amended ICC 2009 Code**:

- **Wall and Ceiling Panel: Section IBC 2603.9** allows the use of the **CrownTonka, Thermalrite and ICS** panels without a thermal barrier and automatic sprinkler system based on diversified tests up to a maximum height of 30 feet 5 inch thickness. All panels are approved for use to a maximum height of 30 feet without a thermal barrier and a automatic sprinkler system (in refrigerated facilities, walk-in coolers or freezers over 400 square feet, and freezer warehouses), required under **ss. IBC 2603.3** and **Exception 2.**, and **ss. IBC 2603.4.1.2, 2603.4.1.3** and **2603.5.2**.

NOTES:

1. For refrigerated buildings and freezer warehouses, building heights exceeding 30 feet, and panels up to 5 inches thick maximum, thermal barriers on both sides of the panel shall be required for proper protection.

2. Other chapters of the code not mentioned above may require an automatic sprinkler system based on limitations of occupancy, area, height, etc., or may specify stricter height limitations.

Installation shall be in accordance with the Factory Mutual Research listings, the manufacturer's instructions and this evaluation. In the event of conflicts, the more strict requirements shall govern.

Installation and maintenance shall be in accordance with the manufacturer's instructions.

This approval will be valid through December 31, 2020, 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.

Approval Date: December 21, 2015	By: Jason Hansen Bureau of Technical Services