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EVALUATION REPORT

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MONOKOTE® Z-3306 THERMAL BARRIER

W. R. GRACE & CO. – CONN.
CONSTRUCTION PRODUCTS DIVISION
62 WHITTEMORE AVENUE
CAMBRIDGE, MASSACHUSETTS 02140

1.0 SUBJECT

Monokote® Z-3306 Thermal Barrier.

2.0 DESCRIPTION

2.1 General:

Monokote® Z-3306 thermal barrier material is a cementitious mixture of approximately one-and-one-half parts water to one part cementitious mixture by weight. The product is available in 42-pound (19 kg) bags and has a shelf life of one year from the date of manufacture. The mixture is spray-applied to a minimum $\frac{3}{8}$ -inch (9.5 mm) thickness over the following substrates:

1. Maximum 2-inch-thick (50.8 mm) polyurethane foam plastic having a maximum 2.3-pcf (36.8 kg/m³) density, and having maximum flame-spread and smoke-density ratings of 45 and 450, respectively. Minimum dry density of the thermal barrier is 20 pcf (320 kg/m³).
2. Maximum 4-inch-thick (102 mm) polystyrene foam plastic having a maximum 5-pcf (80 kg/m³) density, maximum Class I flame-spread classification and maximum smoke-density rating of 450. Minimum dry density of the thermal barrier is 24 pcf (384 kg/m³).

2.2 Application:

All substrates must be free of oil, grease, dirt, loose paint, decomposed foam or any other matter which would impair adhesion. All clips, hangers, supports, sleeves and other attachments are to be placed prior to the application of the thermal barrier material.

Prior to application on polystyrene foam, Fiberlock Technologies, Inc., Firebond 7460 Concentrate (Clear) or 7450 Adhesive (Clear) is applied to the clean, dry surface. The Firebond 7460 Concentrate is applied at a rate of 1,000 ft.²/gal. (24.6 m²/L), the Firebond 7460 Concentrate diluted 1:1 with potable water is applied at a rate of 500 ft.²/diluted gallon (12.3 m²/L), and the 7450 Adhesive is applied at a rate of 500 ft.²/gal. (12.3 m²/L). The concentrate or adhesive is applied in accordance with the installation instructions published by Fiberlock Technologies, Inc.

No roof traffic is permitted until the Monokote® Z-3306 Thermal Barrier coating has dried and full bond strength has been attained. Drying time varies according to relative humidity and temperature. With good ventilation and fan-forced circulation, drying is usually complete in 10 to 14 days.

Air and substrate temperature must be minimum 40°F (4.4°C) during application and drying.

Sufficient air circulation and ventilation are necessary to dry the material. The material is considered dry when a representative sample, placed adjacent to the actual in-place material (under dry interior ambient conditions), registers no weight change in a minimum 24-hour period.

2.3 Coolers:

The Monokote® Z-3306 Thermal Barrier is permitted to be used on cooler walls, provided the material is cooled at a maximum rate of one degree Fahrenheit per hour until a minimum temperature of 35°F (1.7°C) is attained. Doors should be open during cool-down to relieve any internal vacuum caused by cooling.

2.4 Freezers:

Monokote® Z-3306 Thermal Barrier is permitted to be used on freezer walls, provided the material is cooled to 35°F (1.7°C) as detailed in Section 2.3 of this report. The temperature of the freezer room is maintained at 35°F (1.7°C) for a minimum of seven days, such that residual moisture has been removed and all components are in equilibrium. After the seven-day period, the temperature of the freezer room is permitted to be dropped to an operating temperature as low as -50°F (-45.5°C) at a rate not to exceed one degree Fahrenheit per two hours; however, total daily drop cannot exceed 10 degrees Fahrenheit.

2.5 Patching:

Patching material is sprayed through a standard browning or finishing nozzle, and may be troweled in place.

2.6 Identification:

The material is delivered to the field in sealed bags bearing stamps noting the company and product names, component, mixing instructions, shelf life in the form of expiration date, and the Underwriters Laboratories Inc. label.

3.0 EVIDENCE SUBMITTED

Reports of tests in accordance with UBC Standards 8-1 and 26-3.

4.0 FINDINGS

That the Monokote® Z-3306 Thermal Barrier described in this report complies as a thermal barrier under the 1997 Uniform Building Code™, subject to the following conditions:

- 4.1 Materials and application comply with this report and the manufacturer's instructions.
- 4.2 The coating is limited to interior locations which include cold storage facilities.
- 4.3 The coating is protected from accidental damage by vehicles and similar equipment, and material handling.

This report is subject to re-examination in two years.

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