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Short Form Guide Specification

RIGID POLYSTYRENE ROOF BOARD FOAM INSULATION – FULLY-ADHERED STYROFOAM™ Brand DECKMATE Plus FA

March 2006

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The Dow Chemical Company
Short Form Guide Specification- Rigid Polystyrene Roof Board Foam Insulation - Fully-Adhered
STYROFOAM™ Brand DECKMATE™ Plus FA

SPEC NOTE: Following are suggested specification paragraphs to be used when specifying rigid polystyrene roof board insulation as part of a fully-adhered roofing membrane assembly. Insert the required paragraphs into the roof insulation Section under the noted Articles, and make any required selections, such as board size, thickness, etc. Where selection is indicated with an [OR] statement, select the appropriate paragraph and delete the inappropriate statement. Delete all SPEC NOTEs and [OR] statements prior to final printing.

DISCLAIMER: The manufacturer has reviewed the product information contained in this short form specification and is responsible for its accuracy. The information is organized and presented to assist the specification writer working on a construction project to select the appropriate products and to save time in writing the project specification Section. The specification writer is responsible for product selection as well as the use and application of this information, and should contact the manufacturer to ensure that all options are available and that the associated specification information is valid and correct.

PART 1 - GENERAL

1.XX REFERENCES

A. ASTM C578-05a: Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.

B. ASTM C208-95 (2001): Standard Specification for Cellulosic Fiber Insulating Board.

1.XX DELIVERY, STORAGE AND HANDLING

A. Refer to Section [01 60 00][_____].

B. Handle Products carefully, ensuring board corners are not broken and boards are not damaged.

C. Do not store Product exposed to direct sunlight. If stored outdoors, cover Product with light-colored opaque tarpaulins to protect from solar radiation.

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PART 2 - PRODUCTS

2.XX MATERIALS

A. Roof Board Insulation: Extruded polystyrene board to ASTM C578, Type X, rigid, closed cell type, with integral high density skin [, tapered where noted].
1. Thermal Resistance (ASTM C518): R-5 per 1 inch of thickness.
2. Board Size: 2 x 8 feet, [1-1/2] [2] [2-1/2] [3] [4] inches thick. [as indicated on Drawings.]
3. Compressive Strength: Minimum 16 psi.
4. Water Absorption (ASTM D2842): 0.9% by volume maximum.
5. Edges: Square.
6. Water Vapor Permeance (ASTM E96): <1.5 perms.
7. Flame Spread/Smoke Developed Values (ASTM E84): 5/165.
8. Manufacturer and Product Name: STYROFOAM™ Brand DECKMATE™ Plus FA by The Dow Chemical Company.

[OR]

A. Roof Board Insulation: Extruded polystyrene foam insulation to ASTM C578, Type IV, rigid, closed cell type, with integral high density skin [, tapered where noted].
1. Thermal Resistance (ASTM C518): R-5 per 1 inch of thickness.
2. Board Size: 2 x 8 feet, [1-1/2] [2] [2-1/2] [3] [4] inches thick.] [as indicated on Drawings.]
3. Compressive Strength: Minimum 25 psi.
4. Water Absorption (ASTM D2842): 0.7% by volume maximum.
5. Edges: Square.
6. Water Vapor Permeance (ASTM E96): <1.5 perms.
7. Flame Spread/Smoke Developed Values (ASTM E84): 5/165.
8. Manufacturer and Product Name: STYROFOAM™ Brand DECKMATE™ Plus FA by The Dow Chemical Company.

SPEC NOTE: Use roof insulation overlay boards to segregate asphaltic-based roof membranes from polystyrene foam insulation. Specify square edge for ½ inch material.

B. Overlay Board: [1/2 inch] [1 inch] thick high density fiberboard; to ASTM C208; [square][shiplapped] edges[, tapered where indicated].

SPEC NOTE: additional information and a more detailed description for INSTA STIK™ Quik Set Commercial Roofing Adhesive can be found by referring to the Dow Guide Specification 07 20 13 - ADHESIVES FOR THERMAL PROTECTION.

C. Adhesive: [INSTA STIK™ Quik Set Commercial Roofing Adhesive by The Dow Chemical Company.] [_____].

PART 3 - EXECUTION

3.XX EXAMINATION

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A. Verify that the insulation boards and adjacent materials are compatible.

B. Ensure vapor retardant membrane is clean and dry.

C. Verify that substrate is flat, sound, clean, and free of oil, grease, [objectionable air surface voids], [fins], [irregularities], [materials or substances that may impede adhesive bond].

SPEC NOTE: This short form guide specification only includes items specific to insulation boards. For information pertaining to vapor retardant membranes, roofing membranes, flashing, etc. refer to the National Roofing Contractors' Association.

3.XX INSTALLATION - INSULATION

A. Apply full bed of adhesive at a rate of [_____] gal/sy. Spread only enough adhesive to install four (4) boards at a time. Press boards in place to ensure complete bond with substrate. Apply adhesive fully around protrusions.

B. Apply insulation boards parallel to roof perimeter edges.

SPEC NOTE: consider the benefits of requiring the roof insulation to be installed in two layers.

C. [Lay second layer of insulation with joints staggered from first layer.]

D. Lay insulation boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.

E. Cut boards to slope for a distance of 24 inches (600 mm) back from roof drains for positive drainage.

F. Apply no more insulation than can be sealed with membrane in same day.

G. Keep insulation minimum 3 inches (75 mm) from heat emitting devices, and minimum 2 inches (50 mm) from sidewalls of Type A chimneys and Type B and L vents.

SPEC NOTE: Use the following paragraph when installing an asphaltic-based roof membrane system over polystyrene foam insulation.

H. Install single layer of overlay board, with joints staggered over insulation joints.

END OF SHORT FORM