

SECTION 07222

RIGID TAPERED ROOF BOARD INSULATION

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work of this section is subject to requirements of the Contract Documents including the General Conditions and Supplementary Conditions and applicable portions of Division 1 - General Requirements.
- B. The work consists of all labor, material and equipment necessary and incidental to the proper execution as shown on the drawings and specified herein for tapered roof board insulation.
- C. Insulation for electrical rooms shall have higher R-Values than required by Code. Provide minimum R-30 for air conditioned electrical rooms unless otherwise ordered by the Engineer.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Building Insulation: Section 07210.
- B. Built-up Bituminous Roofing: Section 07550.
- C. Sheet Metal Flashing and Trim: Section 07620.
- D. Roof Specialties and Accessories: Section 07720.

1.03 QUALITY ASSURANCE

- A. Thermal Conductivity: The thicknesses shown are for the thermal conductivity (k-value at 75 degree F) specified for each material.
- B. Use insulation boards to slope and drain the roof.

1.04 SUBMITTALS

- A. Manufacturer's Data: Submit copies of manufacturer's specifications and installation instructions for insulation required, for roofing manufacturer's full system warranty. Include data substantiating that the materials comply with specified requirements.
- B. Shop Drawings: For tapered roof insulation indicating location of roof drains, cants and tapered edge strips. Verify roof drain locations with mechanical trades.

1.05 DELIVERY, HANDLING AND STORAGE

- A. Protection from Deterioration: Do not allow insulation materials to become wet or soiled.
- B. Comply with manufacturer's recommendations for handling, storage and protection during installation.

1.06 JOB CONDITIONS

- A. Do not proceed with installation of roof insulation unless the materials, equipment and tradesmen required for the installation of the roofing over the insulation are at the project site and ready to follow with this Work immediately (same day) behind the insulation work.
- B. Examination of Substrate: Examine the substrate and the conditions under which the insulation work is to be performed, and notify the Contractor in writing of any unsatisfactory conditions. Start of work will evidence acceptance.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Vapor Barrier: At roof decks shall be as recommended by manufacturer.
- B. Roof Board Insulation: Shall be the following:
 - 1. Shall be rigid polyisocyanurate board and tapered board; shall be supplied by the roofing system manufacturer to qualify for total system warranty; shall be of thickness required, with R-Value of not less than 6 per 1 inch of thickness at 75 degrees F, complying with ASTM C 518; manufacturer's standard sizes except as otherwise indicated.
- C. Fasteners for Insulation: Shall be mechanical type. Recommended by the Insulation Manufacturer and as tested in NOA – Notice of Acceptance for Miami Dade County for Roofing Assembly tested. Structural Concrete Deck Fastener.
- D. Preformed Cant Strips: Wherever preformed cant strips of insulation material are shown, provide units supplied by the manufacturer of the associated roof insulation, and formed of the same material.

PART 3 EXECUTION

3.01 INSPECTION OF SURFACES

- A. Verify that work of other trades which penetrates roof deck has been completed.

- B. Examine deck for defects before applying insulation work. Advise Architect of any defects found. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. General: Comply with manufacturer's instructions for the particular conditions of installation. If printed instructions are not available or do not apply to the project conditions, consult the manufacturer's technical representative for specific recommendations before proceeding with the work.
- B. A vapor seal course shall be placed using adhesive between roof insulation and roof deck. Lap each sheet over adjacent sheet. Extend up vertical surfaces and cut off at height of insulation.
- C. Apply insulation in two layers as shown over entire surface to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation and mastic. Form cant strips as required for proper drainage of the membrane.
- D. Mechanically fasten units to deck in accordance with the recommendations of the manufacturer.
- E. Insulation shall be applied using mechanical fasteners over the surfaces for the first layer of insulation. Apply the second layer of insulation using mechanical fasteners.
- F. All joints in first layer of insulation shall be staggered, and all joints in second layer of insulation shall be staggered with joints in first layer. Each piece shall be shoved into place for perfect adhesion. All joints shall be tightly butted.
- G. Only as much insulation shall be laid as can be covered with roofing the same day. Provide acceptable watertight protection for insulation at any work stoppage.

3.03 PROTECTION

- A. Do not permit construction-period traffic over completed insulation work, except as required for roofing. Protect insulation work from exposure to moisture, damage and deterioration, primarily by prompt installation of roofing shown to be placed over the insulation. Remove and replace insulation work which has become wet, damaged or deteriorated before proceeding with other work. Test for moisture content, by suitable means, wherever there is a possibility that exposed insulation work has acquired moisture in excess of the maximum content for optimum application of roofing.

END OF SECTION