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## SECTION 07 21 00

### THERMAL INSULATION

#### PART 1 GENERAL

##### 1.1 SUMMARY

A. Sections Includes: Provide DuraSpec SAV+R™ engineered expanded polystyrene foam insulation foundation protection board.

##### 1.2 REFERENCES

- A. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- B. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- C. ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.

##### 1.3 SUBMITTALS

- A. Submittals for Review.
  - 1. Product Data: Indicate product composition, performance characteristics, and installation details.
- B. Quality Control Submittals:

##### 1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain insulation through one source from a single manufacturer.
- B. Each insulation board must be labeled with manufacturer's name, product brand name, ASTM C578 Type, and identification of the third party inspection agency.

##### 1.5 DELIVERY, STORAGE & HANDLING

- A. Deliver insulation labeled with ASTM C578 Type and R-value.
- B. Store in original unopened packaging above ground, and protected from moisture and sunlight prior to installation.
- C. Product should not be exposed to open flame or other ignition sources.

##### 1.6 WARRANTY

- A. Provide Lifetime R-value warranty.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturers/Vendors: Plymouth Foam 1800 Sunset Drive Plymouth, WI 53073, [www.goplymouthfoam.com](http://www.goplymouthfoam.com).
- B. Substitutions: Not permitted.

### 2.2 MATERIALS

- A. DuraSpec SAV+R Engineered Expanded Polystyrene Foam Insulation Foundation Protection Board
  - 1. Description:
    - a. Engineered expanded polystyrene foam with build in Stress Reducers™
    - b. Foam board incorporates RID Technology™ -
      - i. Reduce lateral pressure
      - ii. Insulate foundation
      - iii. Drainage
- B. Engineered Expanded Polystyrene Foam Insulation: ASTM C578 with flame spread index less than 25 and smoke developed index less than 450 per ASTM E84/UL723.

\*\*\*Note to Specifier\*\*\* Select one or more of the following Type paragraphs and delete those not required.

- 1. SAV+R F1015
  - a. Total Board R-value - 10 R at 75° F, 11 R at 40° F tested to ASTM C578.
  - b. RID Technology.
  - c. Stress Reducers using Type C design.
  - d. Easy Flow Drainage Pathways™
- 2. SAV+R F0519
  - a. Total Board R-value - 5 R at 75° F, 5.4 R at 40° F tested to ASTM C578.
  - b. RID Technology.
  - c. Stress Reducers using Type C design.
  - d. Easy Flow Drainage Pathways™
- 3. SAV+R F1515
  - a. Total Board R-value - 15 R at 75° F, 16.3 R at 40° F tested to ASTM C578.
  - b. RID Technology.

- c. Stress Reducers using Type C design.
- d. Easy Flow Drainage Pathways™

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Comply with insulation manufacturer's written instructions applicable to products and applications.

END OF SECTION

SEE GUIDELINES BELOW

#### **SAV+R Installation Guidelines**

The intent of this document is to provide guidance on the installation of Plymouth Foam's SAV+R™ Engineered Expanded Polystyrene (EPS) products in residential and commercial construction.

#### **I. General**

- A. Optimum performance of Plymouth Foam's SAV+R™ Engineered EPS products is dependent on 1) selection of the correct product for the assembly or application into/on which it is to be placed and 2) following these installation instructions.
- B. Care should be used to protect and store product. All boards should be in good condition before installation.
- C. It is recommended that any masonry irregularities or jagged surfaces on the foundation wall or slab be removed prior to installation. Foundation walls should be protected from moisture leakage and dampness prior to installation of SAV+R™. Code approved drainage systems should be installed. Ensure foundation drainage meets local codes.

#### **II. SAV+R Foundation Product Specification**

- A. Molded and Shaped Engineered Polystyrene Foam Foundation Insulation
  - 1. SAV+R F0519- R-Value of board R5 at 75°F, R5.4 at 40°F
  - 2. SAV+R F1015- R-Value of board R10 at 75°F, R11 at 40°F
  - 3. SAV+R F1515- R-Value of board R15 at 75°F, R16.3 at 40°F
  - 4. RID Technology™
    - a. Incorporated Stress Reducers™
    - b. ASTM C578 R-Value
    - c. Easy Flow Drainage Pathways™ (EFDP)

#### **III. Foundation Wall – Exterior**

- A. Prior to backfilling, install SAV+R™ to the exterior, from top of footing to the full height of the foundation wall. Trim insulation where necessary, yet keep a proper fit.
- B. Adhere or fasten SAV+R™ with Easy Flow Pathways positioned vertically with edges tightly butted and vertical joints staggered. Joints and openings may be sealed with foam joint tape.
- C. Adhere SAV+R™ with construction adhesive compatible with polystyrene at the peak of the Stress Reducers. Mechanically fastening boards should be done with care as to not over drive the fastener. Fastener should be installed only through the Stress Reducer.

#### **IV. Caution and Care**

- A. Extreme care should be taken when backfilling and compacting SAV+R™.
- B. SAV+R™ is a polystyrene and should be covered and protected from UV light long-term.

- C. Any deformation of the application surface can result in a weakening of the attachment points and / or cracking of the insulation.
- D. There should be no voids or gaps in the insulation itself, around any objects that penetrate the insulation or at the interface.
- E. SAV+R™ Insulation is not structural product.
- F. Check with your local building inspectors for all codes that could affect this product.