

## **SECTION 31 2323.43**

### **EPS GEOFOAM**

#### **PART 1 GENERAL**

##### **1.1 SUMMARY**

- A. The work of this section includes, but is not limited to:
  - 1. Expanded polystyrene (EPS) geofoam rigid structural fill for use at locations indicated.
- B. Related Documents and Section: Examine Contract Documents for requirements that directly affect or are affected by Work of this Section. A list of those Documents and Sections include, but is not limited to the following:
  - 1. General provisions of the Contract, including General and Supplementary Conditions, and Division 01 General Requirements Specification Sections.
  - 2. Section 03 3000 - CAST-IN-PLACE CONCRETE
  - 3. Section 07 2100 - BUILDING INSULATION

##### **1.2 SUBMITTALS**

- A. Product Data: Submit EPS Geofoam manufacturer's product literature and technical data, including:
  - 1. Physical properties in compliance with ASTM D6817 Type specified.
  - 2. 10-year physical property warranty.
- B. Shop Drawings: Showing EPS Geofoam block layout.
- C. Field quality-control reports.
- D. Minutes of preinstallation conference.

##### **1.3 QUALITY ASSURANCE**

- A. Certificates: Manufacturer shall supply a product certificate showing evidence of Third Party Quality Control.
- B. Test Compliance: Summary of test compliance with specified performance characteristics and physical properties.
- C. Source Limitations: Contractor shall obtain each material from a single source and manufacturer.
- D. EPS blocks shall be labeled with the manufacturer's name and the block density.

##### **1.4 DELIVERY, STORAGE, AND HANDLING**

- A. Contractor shall prevent damage to EPS blocks during transportation, delivery, storage and construction. Contractor shall review and implement manufacturer's recommendations for handling and care of EPS blocks.
- B. The Contractor shall protect EPS Geofoam from sunlight / UV exposure prior to installation.
- C. The on-site storage time shall be minimized to the extent possible.

- D. The Contractor shall not expose the EPS Geofoam to open flame or other ignition sources, nor to petroleum-based solvents such as gasoline or diesel fuel, nor to organic solvents (acetone, benzene, and paint thinner).

## 1.5 WARRANTIES

- A. Provide EPS Geofoam 10-year warranty covering the long-term physical property of expanded polystyrene Geofoam.

## PART 2 PRODUCTS

### 2.1 EPS GEOFOAM SYSTEM

- A. Rigid Cellular Polystyrene Geofoam: ASTM D 6817, Type EPS 22, 1.35-lb/cu. ft. (21.6-kg/cu. m) density, 7.3-psi (50-kPa) compressive strength at 1 percent deformation; 19.6-psi (135-kPa) compressive strength at 10 percent deformation.
- B. Fabrication: Shop and/or field fabricate EPS Geofoam to comply with the following as a minimum:
  - 1. Geofoam blocks shall be fabricated using virgin feedstock manufactured into block having no more than five percent regrind content.
  - 2. Unless smaller sizes are required due to geometry of the void location to be filled, blocks shall be 6" in. high, 48" wide and 96" long.
  - 3. Core holes and channels for the purpose for accommodating utility systems.
  - 4. All blocks shall be smooth and flat, and within tolerances of 0.5% of respective height, width and length dimensions. Additional field cutting and/or shop cutting will be required to fit the geometry of the fill being constructed.
- C. Manufacturers: Provide EPS Geofoam as manufactured and supplied by one of the following manufacturers:
  - 1. ACH Foam Technologies, LLC, 809 East 15th Street, Washington, IA.
  - 2. TerraLite EPS Geofoam, GeoTech Systems Corporation, PO Box 1045, Great Falls, VA.
  - 3. Versatech. Inc. 701 Sargent Lane, Fredericktown, MO.
  - 4. Insulfoam, 19727 57<sup>th</sup> Avenue East, Puyallup, WA.
  - 5. Acceptable equivalent.
- D. Geofoam Connectors: Gripper plates shall be used to restrain EPS Geofoam from moving laterally in layer over layer applications. The plate shall be made of galvanized steel with two-sided 0.60" high multi-barbed design capable of piercing geofoam. Each plate shall be capable of a lateral holding strength of 60 lbs.
  - 1. Install a minimum of four plates for each 4' x 8' section or less of EPS geofoam.
  - 2. Plates shall be approved by the geofoam manufacturer for use with the geofoam product.

## PART 3 EXECUTION

### 3.1 GEOFOAM FILL

- A. Install geofoam blocks in layers with abutting edges and ends and with the long dimension of each block at right angles to blocks in each subsequent layer. Offset joints of blocks in successive layers.
- B. Install geofoam connectors at each layer of geofoam to resist horizontal displacement according to geofoam manufacturer's written instructions.

- C. Compliance: Comply with manufacturer's EPS Geofoam product data; including technical bulletins.
- D. Site Verification of Conditions: Verify conditions of substrate, grade and other conditions which affect installation of geofoam.

### 3.2 PROTECTION

- A. Protect installed product and finish surfaces from damage during construction as required..

**END OF SECTION**

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