

SECTION 07200
Hi-R[®] Concrete Masonry Unit Insulation
(Guide Specification or Performance Specification)

PART 1—GENERAL

1.00 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section 04200 – Hi-R Concrete Unit Masonry.

1.01 SUMMARY

- A. Section provides for pre-installed individually molded, two-piece, interlocking, expanded polystyrene insulation inserts for Hi-R concrete masonry units.

1.02 REFERENCES

- A. American Society for Testing and Materials
 - 1. ASTM C 578 – Specification for Rigid Cellular Polystyrene Thermal Insulation
 - 2. ASTM C 272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
 - 3. ASTM E 84 – Flame Spread Characteristics
 - 4. ASTM C 303 – Test Method for Density of Preformed Block-type Thermal Insulation
 - 5. ASTM E 119 – Standard Methods of Fire Tests of Building Construction and Materials

1.03 SUBMITTALS

- A. Product Data: Spec-Data[®] Sheet and installation procedures.
- B. Test Reports: UL test data, wall system thermal performance test data, Building Code Listings, and other applicable testing by independent testing laboratories which are available on request from:

Concrete Block Insulating Systems, Inc.
PO Box 1000 Freight House Road
West Brookfield, MA 01585
800/628-8476
e-mail: korfil@cbisinc.com.

- C. Certification of compliance with Performance Requirements.

1.04 WARRANTY

- A. Warrant that Hi-R inserts are free of defects and are manufactured to meet physical properties and material specifications.

Hi-R[®] Concrete Masonry Unit Insulation

PART 2—PRODUCTS

2.01 MATERIALS

- A. Description: Inserts complying with ASTM C 578; Standard Type X.
- B. Performance Requirements:
 - 1. Moisture Absorption: ASTM C 272 – < 1.0% by volume
 - 2. Flame Spread Characteristics: ASTM E 84 – Flame Spread < 5

[Note to Specifier: Select appropriate CMU thickness & Values from current literature]

- 3. Thermal Resistance (R) per inch of thickness at 75° = 5.00
- 4. Drainage: Allows full drainage of water in cores of masonry units.
- 5. Rot & Vermin Resistance: Produced from expanded polystyrene – fully resistant to rot; does not attract vermin, termites or rodents.
- 6. Density: ASTM C 303 – 18.3 kg/m³ (1.3 lb./cu. ft.)
- 7. Components: Insulation shall contain no fluorocarbons and no formaldehyde.
- 8. Hourly Rating: ASTM E 119 Insert shall cause no reduction in hourly rating.
- 9. Shape: Two-piece, interlocking insert shall overlap at both head & bed joints with edges of adjacent inserts of the same type. Keyway shall be provided for butt welded cross-rods of 400 mm (16") o.c. ladder type horizontal wall reinforcement.

[Note to Specifier: Delete the following if a performance specification is required]

- C. Product: Hi-R[®] inserts manufactured by Concrete Block Insulating Systems & available exclusively from Concrete Masonry Block Producers.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine conditions, with installer present, for compliance with requirements, for installation tolerances and other specific conditions, and other conditions affecting performance of unit masonry.

3.02 INSTALLATION

- A. General: Inserts shall be pre-installed by CMU manufacturer prior to delivery to jobsite.
- B. Unless otherwise indicated on Construction Documents, inserts shall be left in place when grouting.

End of Section

Hi-R[®] Concrete Masonry Unit Insulation
Short Form Specification or Performance Specification
(For inclusion in Section 04200)

[Note to Specifier: Incorporate the following in PART 1 – GENERAL]

- A: Pre-installed two piece, interlocking, Concrete Masonry Unit Insulation for Hi-R CMU's:
1. Description: Inserts pre-installed in CMU's prior to delivery to jobsite shall comply with ASTM C 578; Standard Type X.
 2. Physical Properties:
 - a. Moisture Absorption: ASTM C 272= < 1.0% by volume
 - b. Flame Spread Characteristics:
 - (1) ASTM E 84 –Flame Spread < 5
 - (2) ASTM E 119 – Insert shall cause no reduction in hourly rating.

[Note to Specifier: Select appropriate CMU thickness & Values from current literature]

- c. Thermal Resistance (R) per inch of thickness at 75° = 5.00
- d. Drainage: Allows full drainage of water in cores of masonry units. The face of the insert shall be tapered at interface with outside face shell to direct water downward.
- e. Rot & Vermin Resistance: Produced from expanded polystyrene – fully resistant to rot; does not attract vermin, termites or rodents.
- f. Density: ASTM C 303 – 18.3 kg/m³ (1.3 lb./cu. ft.)
- g. Components: Insulation shall contain no fluorocarbons and no formaldehyde.
- h. Shape: Two-piece, interlocking insert shall overlap at both head & bed joints with edges of adjacent inserts of the same type. Keyway shall be provided for butt welded cross-rods of 400 mm (16") o.c. ladder type horizontal wall reinforcement.

[Note to Specifier: Incorporate the following in PART 2 – PRODUCTS]

- A. Pre-installed two-piece, interlocking Concrete Masonry Unit Insulation:

[Note to Specifier: Delete the following if a performance specification is required]

1. Product: Hi-R inserts manufactured by Concrete Block Insulating Systems & available exclusively from Concrete Masonry Block Producers.

Hi-R[®] Concrete Masonry Unit Insulation

Short Form Specification or Performance Specification

[Note to Specifier: Incorporate the following in PART 3 – EXECUTION]

- A. Pre-installed two-piece, interlocking Concrete Masonry Unit Insulation:
 - 1. General: Inserts shall be pre-installed by CMU manufacturer prior to delivery to jobsite.
 - 2. Unless otherwise indicated on Construction Documents, inserts shall be left in place when grouting.

We hope the information given here will be helpful. It is based on data and knowledge considered to be true and accurate, and is offered for the user's consideration, investigation and verification but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright. Concrete Block Insulating Systems, Inc. West Brookfield, MA 01585