

MASTERFORMAT™ SPECIFICATION

Section 07 22 16

PlastiSpan Insulation – Roof Board Insulation

INTRODUCTION

In the 2004 edition of MasterFormat, the Construction Specification Institute (CSI) revised the specification number system from 16 Divisions with 5 identifying numbers to 50 Divisions with 6 identifying numbers and a three part arrangement (General, Products, and Installation).

This MasterFormat Specification is a manufacturer-specific proprietary product specification with descriptive requirements, reference standards and performance requirements. Specifiers should verify that inter-related products correspond with this and other specification requirements and are both available and suitable for the applications indicated and being built.

The MasterFormat Specification section number and title may be varied by the Specifier to suit specific projects. PlastiSpan expanded polystyrene (EPS) insulation is specified under Division 07 – Thermal and Moisture protection, Section 07 20 00 which applies to the use of thermal insulation for various applications installed by others. It is more specifically specified as “Section 07 22 16 – Roof Board Insulation” when used as a rigid board insulation for roof applications.

The attached MasterFormat Specification (4 pages) is intended to be a part of the overall project manual and is not intended to be a stand-alone specification or contractual document. It has been prepared for PlastiSpan EPS Roof Insulation. It has not been prepared by ARCOM/MasterSpec® and no inference to ARCOM/ MasterSpec® is intended or implied.

SECTION 07 22 16

ROOF BOARD INSULATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes rigid expanded polystyrene (EPS) insulation.
 - 1. Types of EPS insulation include:
 - i. Plasti-Fab EPS flat roof insulation board
 - ii. Plasti-Fab EPS tapered roof insulation board
- B. Related Sections: Section(s) related to this section include:
 - 1. Section 01 33 00 Submittal Procedures
 - 2. Section 01 61 00 Common Product Requirements
 - 3. Division 07 Sections related to roofing
 - 4. Section 07 60 00 Flashing and Sheet Metal
 - 5. Section 07 92 19 Joint Sealants: Caulking and Sealants

1.02 REFERENCES

- A. ASTM International Publications:
 - 1. ASTM C578, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - 2. ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. Underwriters' Laboratories of Canada (ULC) Publications:
 - 1. CAN/ULC-S102.2, Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials.
 - 2. CAN/ULC-S107, Fire Tests of Roof Coverings.
 - 3. CAN/ULC-S701, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- C. Underwriters Laboratories (UL) Inc. Publications:
 - 1. UL 790, Standard Test Methods for Fire Tests of Roof Coverings
- D. Canadian Construction Materials Centre (CCMC) Publications:
 - 1. CCMC #12424-L, Plasti-Fab EPS insulation meeting CAN/ULC-S701, Type 1.
 - 2. CCMC #12425-L, Plasti-Fab EPS insulation meeting CAN/ULC-S701, Type 2.
 - 3. CCMC #12426-L, Plasti-Fab EPS insulation meeting CAN/ULC-S701, Type 3.
- E. Canadian General Standards Board (CGSB) Publications
 - 1. CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.
 - 2. CGSB 71-GP-24M, Adhesive, Flexible, for Bonding Cellular Polystyrene Insulation.

- F. FM Approvals LLC Publications:
 - 1. FM 4450, Approval Standard for Class I Insulated Steel Roof Deck
- G. Canadian Commission on Building and Fire Codes/National Research Council of Canada
 - 1. National Building Code of Canada (NBC).

1.03 SUBMITTALS

- A. Product Data: Submit insulation manufacturer's product literature including:
 - 1. Physical Properties Compliance: Provide third party certification listing for EPS insulation to demonstrate compliance with requirements CAN/ULC-S701 Type specified for construction.
 - 2. EPS Code compliance: Provide CCMC evaluation listing for EPS insulation to demonstrate compliance with current applicable code.
- B. Shop drawings: Submit EPS insulation shop drawings showing PlastiSpan flat and tapered EPS insulation board layout.
- C. Quality Assurance Submittals: Submit the following:
 - 1. Third-Party Quality Control: Provide proof of manufacturer participation in recognized third party certification program to assure conformance with CAN/ULC-S701 in accordance with Section 01 33 00 - Submittal Procedures.
 - 2. Submit copy of third party certification label demonstrating that manufacture of EPS insulation complies with specified performance characteristics and physical properties.
 - 3. Submit manufacturer-specific installation instructions for EPS insulation.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Ordering: Comply with EPS insulation manufacturer ordering instructions and lead time requirements to avoid construction delays.
- B. Delivery: Deliver materials from EPS insulation manufacturer with identification labels or markings intact identifying material Type and RSI/R-value.
- C. Storage: EPS insulation shall be protected from the weather. Store in original unopened packaging above ground, and protected from moisture and sunlight prior to installation. Product should not be exposed to open flame or other ignition sources.

1.05 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty conditions and provisions.

PART 2 PRODUCTS

2.01 MANUFACTURERS/SUPPLIERS

- A. Plasti-Fab Ltd., 679 Aldford Avenue, Annacis Industrial Estates, Delta, BC V3M 5P5
- B. Plasti-Fab Ltd., 718 McCool Street, P.O. Box 768, Crossfield, AB T0M 0S0
- C. Plasti-Fab Ltd., 859 – 57 Street East, Saskatoon, SK S7K 5Z2
- D. Plasti-Fab Ltd., 2485 Day Street, P.O. Box 62067, Winnipeg, MB R2C 5G2
- E. Plasti-Fab Ltd., 1214 Union Street, P.O. Box 1120, Kitchener, ON N2G 4G1
- F. Plasti-Fab Ltd., 40 Mills Road, Ajax, ON L1S 2H1
- G. Plasti-Fab Ltd., 100, 2886 Sunridge Way, N.E., Calgary, AB T1Y 7H9

2.02 INSULATION MATERIALS

- A. PlastiSpan expanded polystyrene (EPS) insulation complying with CAN/ULC-S701. Insulation type and manufacturer shall be identified with label of accredited Third Party Certification agency.
- B. Select one or more of the Insulation Types from the listings as follows, as required by the project:
 - 1. PlastiSpan Flat EPS Roof Insulation: CAN/ULC-S701, [Type 1], [Type 2], [Type 3]
 - i. Thickness _____.
 - ii. [RSI-value _____] or [R-value _____].
 - 2. PlastiSpan Tapered EPS Roof Insulation: CAN/ULC-S701, [Type 1], [Type 2], [Type 3].
 - i. Minimum Thickness _____.
 - ii. Slope _____.
 - iii. [Average RSI-value _____.] or [Average R-value _____.]
- C. THERMAL BARRIER
 - 1. A thermal barrier must be installed where required by code.
Note to Specifier Select the Thermal barrier installation from the listings, as required by the project:
 - 2. [Metal Deck without a thermal barrier - A thermal barrier is not needed when in compliance with NBC 2010, Division B, Article 3.1.14.2.] [Metal Deck with a thermal barrier - The thermal barrier shall be installed in accordance with local building code requirements.] [Concrete Deck - A thermal barrier is not required.] [Combustible Deck - A 15-minute thermal barrier must be installed in accordance with code or excluded where code-recognized waiver of thermal barrier is allowed.]

D. ROOFING MEMBRANE

1. Any ULC Classified or FM approved single-ply, modified bitumen, or built up roofing.

2.03 SOURCE QUALITY

- A. Source Quality Assurance: EPS insulation required shall be supplied by an approved supplier.
- B. EPS insulation shall be labeled indicating Third Party Certification.
1. Provide evidence of Third Party Certification and labeling of all insulation.

PART 3 INSTALLATION

3.01 MANUFACTURER INSTRUCTIONS

A. Preparatory Work

1. Handle, store and protect boards in accordance with Plasti-Fab recommendations. Ensure product secured against movement from wind storms at the storage location and handle boards carefully so corners are not broken off or otherwise damaged. Protect from direct sunlight exposure with tarpaulins or light-coloured polyethylene sheets if stored on site for extended periods of time (more than a few weeks).

B. Methods of Application

1. Installation methods may vary with specific applications. Instructions for all applications can be found in various Plasti-Fab brochures or on the Plasti-Fab website at www.plastifab.com.

C. Precautions

1. Rigid foamed plastic insulation, such as PlastiSpan insulation, is combustible and should be treated with normal care accorded to all combustible materials. Although EPS insulation contains a combustion modifier to inhibit accidental ignition, the product should not be exposed to a large, continuous fire source. Avoid open flames, welding torches and high intensity lamps, and if welding is necessary in proximity to the EPS insulation, protect the insulation with fire-rated gypsum board or similar products.
2. Do not leave plastic foam insulation exposed in inhabited areas. A protective barrier or thermal barrier is required as specified in the appropriate Building Code.

D. Building Codes

1. Installation must comply with all applicable local, provincial and National code jurisdictions. Plasti-Fab can offer technical assistance as needed.

END OF SECTION 07 22 16