

TIPS:

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PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Concrete faced insulating sheathing
 - 2. Concrete faced insulated perimeter wall panels

- B. Related Requirements:
 - 1. Division 01 - General Requirements: Administrative, procedural, and temporary work requirements.

1.2 REFERENCES

- A. ASTM International (ASTM):
 - 1. C518 - Standard Test Method for Steady State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - 2. C947 - Standard Test Method for Flexural Properties of Thin-Section Glass-Fiber-Reinforced Concrete (Using Simple Beam With Third-Point Loading).
 - 3. C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - 4. D696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between 30 176C and 30 176C With a Vitreous Silica Dilatometer.
 - 5. D1037 - Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
 - 6. D1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
 - 7. D2394 - Standard Test Methods for Simulated Service Testing of Wood and Wood Base Finish Flooring.
 - 8. D4716 - Standard Test Method for Determining the (In plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head.
 - 9. E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 10. E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials.
 - 11. CAN/ULC S701 – Standard for Thermal Insulation, Polystyrene Boards
 - 12. NFPA 286 – Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at [**Project site**] <Insert location>.
 - 1. Review the following:

- a. Special inspection and testing and inspecting agency procedures for field quality control.

1.4 SUBMITTALS

- A. Provide submittals in accordance with section [01-33-00 Submittal Procedures]
- B. Product Data:
 1. Provide most recent technical components data sheets describing materials physical properties and include product characteristics, performance criteria, physical size and limitations.
 2. Provide manufacturers recommended installation methods
 3. Provide manufacturers recommended storage and handling requirements and recommendations
- C. Manufacturer's Certificate: Certify that Insulated Concrete Faced Panel form meets or exceed **[ASTM C578, Type II] [CAN/ULC S701, Type 2]**.
- D. Test and Evaluation Report: Submit laboratory test reports certifying that the Insulated Concrete Faced Panel Form is in compliance with NFPA 286.
- E. Manufacturers Installation Instructions: Indicate any special instructions.
- F. Field quality-control reports.
- G. Minutes of preinstallation conference.

1.5 QUALITY ASSURANCE

- A. Testing and Inspection Agency Qualifications: An independent agency, **[acceptable to authorities having jurisdiction]** qualified in accordance with ASTM C1077 and ASTM E329 for testing indicated.
- B. Mockups: Formed surfaces to demonstrate typical joints, surface finish, texture, tolerances, and standard of workmanship.
 1. Build panel approximately **[100 sq. ft. (9.3 sq.m)]** <Insert area> in the location indicated or, if not indicated, as directed by Architect.
 2. Subject to compliance with requirements, approved mockups may become part of the completed Work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store panels off ground and under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.
- B. Store panels flat

- C. Do not drop panels

PART 2 - PRODUCTS

2.1 Concrete Faced Insulated Sheathing

- A. Concrete Faced Insulated Sheathing: Concrete Faced Insulated Sheathing complying with **[ASTM C578, Type II]** **[CAN/ULC S701, Type 2]**, consisting of EPS Insulation faced with high strength fiber reinforced cement.

- 1. Alleguard; Amgard

- a. Panel Thickness: **[2-6" (51-152mm)]**
- b. Panel Dimensions (width by length): [2x4 feet (610x1219mm)]
- c. Thermal Resistance: [R4.0 (RSI 0.70) per inch (25.4mm)]
- d. Minimum Compressive Strength: [16psi (110kPa)]
- e. Surface-Burning Characteristics: Comply with **[ASTM E84]** **[CAN/ULC S102]**; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1) Flame-Spread Index: **[≤25]** **[≤250]**.
 - 2) Smoke-Developed Index: **[≤450]** **[≥500]**.

2.2 Concrete Faced Insulated Perimeter Wall Panels

- A. Concrete Faced Insulated Sheathing: Concrete Faced Insulated Sheathing complying with **[ASTM C578, Type II]** **[CAN/ULC S701, Type 2]**, consisting of EPS Insulation faced with high strength fiber reinforced cement.

- 1. Alleguard; Amgard

- a. Panel Thickness: **[2-6" (51-152mm)]**
- b. Panel Dimensions (width by length): [2x4 feet (610x1219mm)]
- c. Thermal Resistance: [R4.0 (RSI 0.70) per inch (25.4mm)]
- d. Minimum Compressive Strength: [16psi (110kPa)]
- e. Surface-Burning Characteristics: Comply with **[ASTM E84]** **[CAN/ULC S102]**; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1) Flame-Spread Index: **[≤25]** **[≤250]**.
 - 2) Smoke-Developed Index: **[≤450]** **[≥500]**.

PART 3 - EXECUTION

3.1 INSTALLATION GENERAL

- A. Install in accordance with manufacturer's instructions.

3.2 INSTALLATION – CONCRETE FACED INSULATING SHEATHING

A. Steel and Wood Studs

1. Install sheathing horizontally with long dimension perpendicular to studs.
2. Locate joint on studs.
3. Fastener at 6 inches (152mm) on center on panel joint and maximum 6 inches (152mm) on center at intermediate studs if studs are 16 inches (406mm) or less on center and 4-1/2 inches (114mm) on center if studs are 24 inches (610mm) on center.
4. Use self-drilling, corrosion resistant screws with 5/8 inch (16mm) pancake head with square or star drive head.

B. Concrete and Masonry Substrates

1. Surfaces to Receive Panels: Flat, sound, clean, and free from irregularities and or jagged surfaces.
2. Lay out panels to maximize board sizes. Do not use boards less than 6 inches (152mm) wide.
3. Install panels in orientation to maximize full sheets.
4. Install fastening clips and cap flashings.

3.3 INSTALLATION - CONCRETE FACED INSULATED PERIMETER WALL PANELS

- A. Surfaces to Receive Panels: Flat, sound, clean, and free from irregularities and or jagged surfaces.
- B. Lay out panels to maximize board sizes. Do not use boards less than 6 inches wide.
- C. Install panels in orientation to maximize full sheets.
- D. Install fastening clips and cap flashings

3.4 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a **[special inspector] [and] [qualified testing and inspecting agency]** to perform field tests and inspections and prepare test reports.
- B. Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

3.5 CLEANUP AND PROTECTION

- A. Clean up and properly dispose of all debris remaining on Project site related to the installation of the insulating concrete forms. The materials of an Insulated Concrete Panel are recyclable where available.

END OF SECTION 07-44-00