

ARCHITECTURAL SPECIFICATION: InSoFast® Panels

SECTION 07210: BUILDING INSULATION

PART 1 - GENERAL

1.01 SUMMARY

- A. InSoFast® Engineered Insulating panels incorporate a built-in drainage plain, a grid work molded in wiring / utility chases along with fully insulated molded in attachment studs that are flush with the insulation face.

Panels are attached to either side of interior or exterior walls using a bonding method with adhesive or mechanical attachment using corrosion resistant nails or screws through the attachment stud.

1.02 RELATED SECTIONS

- A. Elsewhere in Division 7
- B. Elsewhere in Division 9

1.03 SUBMITTALS

- A. System performance
 - 1. Stork Twin City Testing Project #30160 09-09553
 - a. Pullout performance of fasteners in the InSoFast® stud
 - b. Shear performance of fasteners in the InSoFast® stud
 - c. Pull off performance of adhesive bond to a concrete surface
 - 2. Permagrip® nail fastener data pull out and load data
 - a. Pullout
 - b. Shear
 - 3. Gripp-Con® nail fastener data pull out and load data
 - a. Pullout
 - b. Shear
 - 4. Tapcon® screw nail fastener data pull out and load data
 - a. Pullout
 - b. Shear

1.04 QUALITY ASSURANCE

- A. American Society of Testing and Materials (ASTM)
 - 1. ASTM C578 Standard Specification for Closed-Cell Polystyrene Rigid Thermal Insulation
 - 2. ASTM D1761-06 Standard Test Method for Mechanical Fasteners
 - a. Section 1 – Fastener Withdrawal Strength (Pullout)
 - b. Section 13 – Lateral Screw Resistance (Shear)
 - 3. ASTM D4541-02 Standard Test Method for Pull-Off Strength of Adhesive Bond

4. ASTM C518-04 Standard Test Method for Steady-State Thermal Transmission (for determining R-Value)
 5. ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials
- B. Interior Wall insulation shall not be produced with, or contain, any of the United States EPA regulated CFC compounds listed in the Montreal Protocol of the United Nations Environmental Program.

1.05 DELIVERY, STORAGE & HANDLING

- A. Deliver InSoFast panels to project in original packaging, clearly labeled with identification of manufacturer and product name visible.
- B. Store panels in original packaging on shipping pallets. Store loose panels on flat surface to prevent sagging or warping. Protect from weather, moisture, and soiling. Do not store in sealed containers.
- C. Handle panels carefully so that corners are not broken off or otherwise damaged.
- D. Ensure that ultra-violet protection is provided for material, should on-site storage extend beyond 30 days.

1.06 PROJECT CONDITIONS

- A. Use appropriate measures for protection and supplementary heating when required for curing conditions in accordance with manufacturer's recommendations if installation is carried out during periods of weather where temperatures are below minimum specified by the governing building code for concrete.

1.07 WARRANTY

- A. Contact the Manufacturer for a written copy of product warranty.

PART 2 - PRODUCTS

2.01 MANUFACTURER

Available Manufacturers: Subject to compliance with requirements specified herein, the following manufacturer and product is identified:

- A. InSoFast, LLC.
7895 180th St. N.
Hugo, MN 55038
651-653-3677
888-501-7899
Email: info@insofast.com
www.insofast.com

2.02 PANEL CONSTRUCTION

- A. InSoFast® panels shall be molded using closed-cell EPS foam with fire retardant with embedded fully insulated studs positioned at 16" o.c.
 - 1. Size: 48" wide by 24" high
 - 2. Thickness: 2"
- B. Panels to be supplied through an authorized InSoFast Distributor/Dealer.
- C. Substitutes and alternates will not be accepted.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Inspect all areas included in Scope of Work to establish extent of work and verify site access conditions.

3.02 SITE VERIFICATION OF CONDITIONS

- A. Verify that site conditions are as set out in Part 1- General Conditions.
- B. Examine walls installed under Section 03300 are within +/- 1/4" of level and straight or as agreed to between the Design Professional, Contractor and Installer.
- C. If specified, verify wall reinforcing steel dowels and negative moment bars are in place at specified locations along supporting walls/beams length.

3.03 PREPARATION

- A. Clean all debris from top of supporting walls/beams prior to commencing work.

3.04 INSTALLATION - FORMWORK

- A. Installation of forms to be in strict accordance with Manufacturer's installation manual or guide.
- B. Install formwork, shoring, and bracing to achieve project design requirements.
- C. Provide sufficient shoring to ensure safety, stability, alignment, and level formwork. Provide additional shoring and bracing of spliced, cut and/or damaged forms/panels.
- D. Install forms to join tongues and grooves to achieve flush beam pockets. Repair any damage with an approved foam adhesive.
- E. Coordinate this Section with other sections of work which require attachment of components to formwork.

3.05 INSTALLATION – INSERTS, EMBEDMENTS, AND OPENINGS

- A. Locate and set in place items which will be cast directly into concrete.
- B. Provide formed or sleeved openings where required for items to be embedded in or to pass through concrete work.
- C. Coordinate with work of other sections in forming and placing openings, slots, recesses, sleeves, bolts, anchors, and other components of other work.
- D. Install accessories in accordance with manufacturer's instructions; straight, level, and plumb. Ensure items are not disturbed during concrete placement.

3.06 FORM CLEANING

- A. Clean forms as installation proceeds, to remove foreign matter from forms/panels.
- B. Clean formed beam cavities of debris prior to placing concrete.
- C. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain properly.
- D. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms unless formwork and concrete construction proceed within a heated enclosure. Use compressed air or other means to remove foreign matter.
- E. Adhesive applied ceiling finishes: Remove oxides formed on the ceiling surfaces due to ultra violet rays with mild detergent and stiff brush. Rinse thoroughly with water.

3.07 FORMWORK TOLERANCES

- A. Construct formwork to maintain tolerances required by ACI 301.

3.08 FIELD QUALITY CONTROL

- A. Comply with Section 01400.
- B. Ensure that the cast-in-place concrete floors/roofs are level, square, and straight and that all dimensions conform to the project design drawings.
- C. Inspect formwork, shoring, and bracing to ensure that work is in accordance with design, and that supports, fastenings, cross braces, wall connections and other items are secure.
- D. Refer to Manufacturer's Final Checklist provided in the Installation Manual or Guide.
- E. Site Tests or Samples: To be specified as required.

3.09 CLEANUP

- A. Clean up and properly dispose of all concrete spillage and debris remaining on job site.

3.10 PROTECTION

- B. Provide railings at openings and perimeter as required by the code..
- C. Provide re-shoring of multiple floors as specified by the Project Design Professional.

END OF SECTION