

# ARCHITECTURAL SPECIFICATION

## InSoFast® Panels

### SECTION 07210: BUILDING INSULATION

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. InSoFast® Engineered Insulating panels incorporate a built-in drainage plane, a grid work of 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. Pull-out 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. Pull-out
    - b. Shear
  - 3. Tapcon® screw nail fastener data ; pull-out and load data
    - a. Pull-out
    - 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 (Pull-out)
    - 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 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](mailto:info@insofast.com)  
[www.insofast.com](http://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. Examine wall surface for compliance with requirements for installation tolerances and other conditions.
- B. Examine floor for levelness. If floor is not level make necessary adjustments to insure panels are installed level across the wall surface.

### **3.03 PREPARATION**

- A. Ensure that all wall surfaces are free from soiling that could affect the adhesive bond when using the adhesive bonding method.
- B. Remove any excess concrete flashing that would be out of installation tolerances.

### **3.04 INSTALLATION**

- A. Begin installation of InSoFast panels at a corner.
- B. Attach panel to substrate choosing the appropriate attachment method of adhesive bonding, mechanical attachment, or a combination of both.
  - 1. Adhesive Bonding Method
    - a. Apply adhesive to ribbed bonding surfaces on back side of stud.
    - b. Recommended Adhesives
      - i. PL Premium Construction Adhesive
      - ii. Other adhesives suitable for bonding EPS foam, polypropylene plastic, and the surface the panels are to be bonded to.
  - 2. Mechanical Attachment Method
    - a. Utilize recessed attachment points on surface of studs to avoid protruding fastener heads.
    - b. Follow fastener specifications and instructions for installation.
- C. Install panels in a running bond utilizing the tongue and groove connection.
- D. Cut panels to fit around openings. Panels can be cut with long blade utility knife, reciprocating saw, hacksaw, or circular saw. Use additional adhesive directly on foam at corners and any cut around openings.
- E. If additional attachment at corners or around openings is needed for drywall attachment, adhere metal corner bead or galvanized sheet metal angle to foam. This sub-corner reinforcing will aid in attachment of drywall or other covering.
- F. Electrical boxes and conduit.
  - a. Existing electrical boxes, conduit, plumbing, and other protrusions.
    - i. Press panel against box or conduit.
    - ii. Using the impression left on the backside of the panel, cut out foam to create a chase.
  - b. Installation of new wiring and boxes.
    - i. New wiring can be pulled through factory-formed chases when using flexible or armored wiring or cabling.
    - ii. Boxes are cut into panel using long-blade utility knife and fastened to substrate.
  - c. All electrical boxes should be sealed to prevent moisture from penetrating boxes when utilizing the draining plane.
- G. Periodically check panels for proper vertical and horizontal alignment.

### **3.05 CLEANUP**

- A. Remove and recycle or dispose of scraps of panels, packaging, and other materials associated with this installation.

**END OF SECTION**