



**ESL-1347** 



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# This listing is subject to renewal April 2025.

CSI: DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES Section: 06 12 00—Structural Panels

## **Product Certification System:**

ICC-ES Listing Report

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

Product: INSULSPAN STRUCTURAL INSULATED ROOF PANELS

Insulspan Structural Insulated Roof Panels are factory-assembled, laminated sandwich panels consisting of expanded polystyrene (EPS) foam plastic core with wood-based structural-use sheathing facings.

### Listee: PLASTI-FAB LTD.

- **Evaluation:** Insulspan Structural Insulated Roof Panels Panels were evaluated when tested in accordance with the following standard:
  - ASTM E455-10, Standard Test Method for Static Load Testing of Framed Floor or Roof Diaphragm Constructions for Buildings, ASTM International.

### Components of Construction: Panel Assembly (See Figure 1):

- STRUCTURAL INSULATED PANELS: Insulspan Structural Insulated Panels consisting of minimum nominal 7<sup>3</sup>/<sub>8</sub>-inch-thick (187.3 mm) expanded polystyrene (EPS) core laminated between two sheets of minimum <sup>7</sup>/<sub>16</sub>-inch-thick (11.1 mm) oriented strand board (OSB). SIP Panels shall be labeled in accordance with <u>ESR-1295</u>.
- SPLINES: Insulspan Structural Insulated Panels for use in diaphragm assemblies are interconnected with insulated OSB (Block) splines, 3 inches wide (76.2 mm) and thickness equal to the core thickness of the SIP, along the full length of the spline connection. Surface splines consisting of <sup>7</sup>/<sub>16</sub>-inch-thick (11.1 mm) OSB may also be used.
- CHORDS AND BOUNDARY SPLINES: Diaphragm assemblies recognized in this report shall use solid lumber 1<sup>1</sup>/<sub>2</sub> inches (38.1 mm) wide minimum with a specific gravity of 0.42 or greater for chords and boundary support members.
- **FASTENERS:** See Table 2 and Figure 1 for fastener type and application.

# **Findings:** Insulspan Structural Insulated Roof Panels have the following allowable in-plane shear loads as specified in Table 2 below, based on testing in accordance with ASTM E455.

### Identification:

 The panels must have a label containin the name and address of the sandwich panel manufacturer, the plant identifier, the product panel number, the ICC-ES evaluation report number (<u>ESR-1295</u>) and / or ICC-ES listing number (ESL-1347), and when applicable, the ICC-ES listing mark. Bundles of Block Splines are delivered to the jobsite with shipping documents from the sandwich panel manufacturers noted in Table 1.

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.



2. The report holder's contact information is the following:

PLASTI-FAB LTD. 300, 2891 SUNRIDGE WAY NE CALGARY, ALBERTA T1Y 7H9 CANADA www.insulspan.com

**Installation:** Insulspan Structural Insulated Roof Panels shall be fabricated, identified and erected in accordance with this report, the approved construction documents and the applicable code.

### **Conditions of Listing:**

- 1. Additional attributes and their applications can be found in the ICC-ES evaluation report ESR-1295.
- 2. The listing report addresses only conformance with the standard noted above.
- 3. Approval of the product's use is the sole responsibility of the local code official.
- 4. The listing report applies only to the materials tested and as submitted for review by ICC-ES.
- 5. The Insulspan Structural Insulated Roof Panels are manufactured at Blissfield, Michigan and Delta, British Columbia facilities noted in Table 1, under a quality control program with inspections by ICC-ES.

INSULSPAN SIP MANUFACTURING PLANTS	PLANT IDENTIFICATION NUMBER		
PFB Manufacturing, LLC 245 N. Jipson Street Blissfield, MI 49228-1167	81		
Plasti-Fab Ltd. Unit 1, 600 Chester Road Annacis Business Park Delta, British Columbia V3M 5Y3 Canada	80		

#### **TABLE 1—MANUFACTURING LOCATIONS**

MINIMUM	Minimum Connections			Allowable	Apparent	Mox
NOMINAL SIP CORE THICKNESS (in.)	Surface Spline <sup>1</sup> (Figure 1a)	Support Element (Figure 1b)	Boundary Spline <sup>2</sup> (Figure 1c)	Shear Load (plf)	Shear Stiffness, Ga (kips/in.)	Max. Aspect Ratio
7 <sup>3</sup> /8	0.131-in. x 2- <sup>1/</sup> 2-in. nails, 6-in. O.C.	10-in. length, 0.190- in. shank diameter, 0.255-in. thread O.D., 2.750-in. thread length, 0.625-in. head diameter SIP screw, 6-in. O.C.	0.131-in. x 2- <sup>1/</sup> 2-in. nails, 6-in. O.C.	265	13	3:1
	0.131-in. x 2- <sup>1/</sup> 2-in. nails, 4-in. O.C.	10-in. length, 0.190- in. shank diameter, 0.255-in. thread O.D., 2.750-in. thread length, 0.625-in. head diameter SIP screw, 4-in. O.C.	0.131-in. x 2- <sup>1/</sup> 2-in. nails, 4-in. O.C.	330	21	3:1
	0.131-in. x 2- <sup>1/</sup> 2-in. nails, 2-in. O.C. staggered <sup>3</sup> / <sub>8</sub> -in. (Figure 1c)	10-in. length, 0.190- in. shank diameter, 0.255-in. thread O.D., 2.750-in. thread length, 0.625-in. head diameter SIP screw, 3-in. O.C.	0.131-in. x 2-1/2-in. nails, 2-in. O.C. staggered 3/8-in. (Figure 1c)	575	34	3:1

### TABLE 2-ALLOWABLE IN-PLANE SHEAR LOADS (POUNDS PER FOOT) FOR HORIZONTAL DIAPHRAGMS

For **SI**: 1 inch = 25.4 mm; 1 foot = 304.8 mm; 1 Kip = 453.6 kg; 1 plf = 14.6 kN/m; 1 psf = 47.9 Pa; <sup>1</sup>Surface or block spline only at interior panel-to-panel joints. Specified fasteners are required on both sides of panel joint through the top surface only, as shown in Figure 1a.

<sup>2</sup>Boundary spline shall be solid sawn lumber 1-<sup>1</sup>/<sub>2</sub>-in. wide minimum and have a specific gravity of 0.42 or greater. Specified fasteners are required through both facings as shown in Figures 1b and 1c.





1 3/4"

(1C): BOUNDARY SPLINES