

Date of Authorization
BMEC Authorization
BMEC Application

APRIL 29, 2004
BMEC # 04-05-297
#A 2003-23

AUTHORIZATION REPORT- INSULSPAN™: Wall and Roof Sheathing Panels**1. Applicant**

Insulspan
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2. Manufacturing Facilities

Insulspan
245 Jipon Street
Blissfield, Michigan
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3. Description

The Insulspan™, Wall and Roof Sheathing Panels (the “sheathing panels”) are comprised of two sheets of 11.1 mm (7/16”) oriented strand board (OSB) placed on the interior and exterior side of a modified expanded polystyrene (MEPS) foam core. The sheathing panels are bonded together with an adhesive under pressure into a sandwich configuration. The panels may be used as a sheathing material for wall and / or roof construction in buildings subject to the requirements of Part 9 of the Ontario Building Code.

The sheathing panels shall be installed over framing members spaced not greater than 600 mm (23-5/8”) o.c.

The sheathing panels are intended for use as an exterior, non-loadbearing, nonstructural wall or roof sheathing material for use in a building envelope system. The sheathing panels are factory constructed and do not incorporate any vertical load bearing members and the bottom of panel is continuously supported.

The sheathing panels are available in widths sizes from 1220 mm to 2440 mm (4' to 8') with lengths up to 7315 mm (24'); and with MEPS thickness of 60 mm (3-5/8”), 111 mm (5-5/8”), 168 mm (7-3/8”), 238 mm (9-3/8”) and 270 mm (11-3/8”).

4. Authorization requested

The applicant sought a Building Materials Evaluation Commission (the "BMEC") authorization for the sheathing panels as an alternative to a wall, and roof sheathing material as required by Subsections 9.23.15. "Roof Sheathing", and 9.23.16. "Wall Sheathing" of 1997 Ontario Building Code, as amended (the "OBC").

5. Assessment

Reports and assessments provided by the applicant show that if the sheathing panels are designed, performance tested and installed in accordance with the manufacturer's instructions and limitations and the specific terms and conditions stated in this authorization, the level of performance required by the OBC will be provided.

The reports submitted, and reviewed were, but are not limited to:

1. Morrison Hershfield Report to the Building Materials Evaluation Commission, March 17, 2003.
2. PFS, TECO "PSF Test Report #95-07 Water Vapour Transmission (Permanence) of OSB ab EPS Sandwich Panels" prepared for Insulspan™, Inc July31, 1995.
3. Southwest Research Institute "Fire Performance Evaluation od a Load-bearing Floor/Ceiling Panel System in Accordance with ASTM E119-98 "Standard Test for Methods for Fire Tests of Building Construction and Materials" SwRI Project No.01-2305-311, June 1999.
4. National Evaluation Report No. NER-520, re-issued January 1, 2001.
5. National Evaluation Report No. NER-520, re-issued November 1, 2002.
6. Notes to the Designer and the Installer (4/30/03); S-1(Ont.) Double OSB Spline (4/29/03); S-3 (Ont.) Interior Wall - Plan detail (4/29/03); P-2 (Ont.) Insulspan™ Rim Detail (4/29/03); C-2 (Ont.) Outside Corner (4/29/03); R-2 (Ont.) Eave Detail (4/29/03); R-3 (Ont.) Ridge Detail (4/29/03); R-8 (Ont.) Valley Overlay (4/29/03); W-X SIP Wall Section (5/01/03)
7. Insulspan™ Quality Procedure, "EPS Specification", ISO Doc. ID: PP 6.7, Rev #9/22/99.
8. Insulspan™ "Installation Guideline for SIP Sheathing in Ontario: Forming a Part of the Registered Insulation™ Builders Program."
9. Engineering Report: Buchan, Lawton, Parent Ltd. re: "Thermal Resistance of the Insulspan™: Structural Insulated Panels", March 14, 2003.

10. Great Lake Insulspan™ Limited Warranty, Insulspan™ Building Panels.
11. Insulspan™ “Short Form Residential Specification”.
12. Insulspan™ “Master Guide Specification”.
13. Insulspan™ Manufacturer’s Information “The SIP Advantage” copyright 2000.

6. Authorization

Use of the Insulspan™ Wall and Roof Sheathing Panels are authorized as an alternative to a wall and roof sheathing material as required by Subsections 9.23.15. “Roof Sheathing”, and 9.23.16. “Wall Sheathing”, all other requirements pertaining to the installation are subject to the requirements of Part 9 and all other Parts of the OBC, and subject to the following terms and conditions:

A. Specific Terms & Conditions

1.0. General

- 1.1. This authorization is valid only for Insulspan™ wall and / or roof panels for use as sheathing only, in non-loadbearing applications.
- 1.2. The sheathing panels shall serve as an exterior sheathing material that is attached to the outside of the framing members spaced not greater than 600 mm (24") o.c. as specified by Sentence 9.23.1.1.(1). of the OBC.
- 1.3. The framing around openings such as, but not limited to doors, windows or dormers shall meet the requirements of OBC Subsections 9.23.12. “Framing Over Openings” and 9.23.13. “Roof and Ceiling Framing”, or Part 4 of the OBC.
- 1.4. The fasteners, attachments of the sheathing panels to the framing, and the framing around openings in the sheathing panels shall be designed in accordance with the requirements of Part 4 of the Ontario Building Code, the review shall be carried out by a Professional Engineers as defined in the Professional Engineers Act (Ontario); and the design calculations should be submitted to the Chief Building Official for review.
- 1.5. The sheathing panels may be used only where combustible construction is permitted.
- 1.6. The sheathing panels shall not be used where the wall and / or the roof assembly is required to have a fire resistance rating.

- 1.7. The sheathing panels shall be shipped, site handled, and stored as per the requirements of the manufacturer and as specified in the "Insulspan™ Installation Guideline for SIP Sheathing in Ontario."
 - 1.8. The sheathing panels shall be identified by a permanent stamp or mark indicating the manufacturer's name or trademark.
 - 1.9. The sheathing panels shall be modified or otherwise altered according to the manufacturer's instructions and as per the "Insulspan™ Installation Guideline for SIP Sheathing in Ontario."
 - 1.10. As per the requirements of "Insulspan™ Installation Guideline for SIP Sheathing in Ontario", the sheathing panels shall be fastened to each other with a 75 mm (3") non-structural, non-loadbearing spline that fits into precut grooves; and the sheathing panels shall be sealed with an expanding foam which is compatible with all components of the panel and the adjacent materials.
- 2.0. Building Envelope and Thermal Requirements:
- 2.1. The sheathing panels shall meet the thermal requirement of Subsection 9.25.2. "Thermal Insulation" or Section 9.38. "Thermal Design" of the OBC.
 - 2.2. Assemblies incorporating the sheathing panels shall have an air barrier installed as per the requirements of Subsection 9.25.3. "Air Barrier Systems" of the OBC.
 - 2.3. Assemblies incorporating the sheathing panels shall have a vapour barrier installed as per the requirements of Subsection 9.25.4. "Vapour Barriers" of the OBC.
- 3.0. Walls:
- 3.1. The sheathing panels shall be covered with an exterior cladding material.
 - 3.2. The cladding material shall be installed such that it conforms to the requirements Section 9.27. "Cladding" of the OBC.
 - 3.3. The sheathing panels shall not be used in conjunction with stucco cladding.
- 4.0. Roofs:
- 4.1. The roofing system shall be vented as per the requirements of Subsection 9.19.1. "Venting" of the OBC.
 - 4.2. The sheathing panels shall be covered with an approved roofing material as specified in Article 9.26.2.1. "Roofing Materials" of the OBC.

B. General Conditions

1. The use of the sheathing panels as described in 6. A. Specific Terms and Conditions No. 1. must comply with the *Building Code Act, 1992* (the "Act") as amended or re-enacted from time to time and except as specifically authorized herein, with the OBC.
2. A copy of this Authorization shall accompany each application for a building permit and shall be maintained on the site of the construction with the building permit.
3. The Applicant named in Part 1 hereof shall promptly notify the BMEC of:
 - (a) the failure of the Applicant, or of the material, system or building design that is the subject matter of this Authorization, to comply with any of the terms and conditions set out in 6. A. above; or
 - (b) the occurrence of any of the events described in Conditions 6. B. 4. (a) and (b) (ii) below.
4. The BMEC may amend or revoke this Authorization where it determines that:
 - (a) any change has been made to:
 - (i) the material, system or building design that is the subject matter of this Authorization;
 - (ii) the address of the applicant specified in Part 1 of this Authorization; or,
 - (iii) the ownership of the applicant specified in Part 1 of this Authorization.
 - (b) the use of the material, system or building design authorized herein;
 - (i) does not comply with the *Act* or any relevant legislation as they may be amended or re-enacted from time to time; or
 - (ii) provides an unsatisfactory level of performance, in situ.
 - (c) the Applicant, or the material, system or building design that is the subject matter of this Authorization, has failed to comply with any of the terms and conditions set out in this Authorization; or
 - (d) any OBC provision relevant to this Authorization has been amended or remade.

5. Where the BMEC receives additional information concerning the material, system or building design authorized herein, the BMEC may review this Authorization and the BMEC may after the review amend or revoke this Authorization as in the opinion of the BMEC may be necessary.

Dated at Toronto this 29th day of April 2004.

BUILDING MATERIALS EVALUATION COMMISSION

Tony Chow, Vice-Chair