

# Product Information Bulletin

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## Insulspan<sup>®</sup> SIP System LEED for New Construction

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The Insulspan<sup>®</sup> structural insulating panel (SIP) system consists of oriented strand board (OSB) structurally laminated to a core of PlastiSpan<sup>®</sup> expanded polystyrene (EPS) insulation. The Insulspan SIP system provides building owners with superior thermal resistance and reduced air leakage. It is used as a key component in the building envelope to comply with requirements of recognized energy efficiency rating systems.

“LEED” stands for Leadership in Energy and Environmental Design. LEED for New Construction is a Green Building Rating System that represents U.S. Green Building Council (USGBC) and Canadian Green Building Council (CaGBC) efforts to provide national standards for what constitutes a “green building.” The table below summarizes requirements from the LEED rating system where the Insulspan SIP system can provide points.

### LEED Rating System for New Construction

#### Energy and Atmosphere (EA)

##### **EA Prerequisite 2: Minimum Energy Performance**

Insulspan SIP system can be used to achieve **required** building envelope design exceeding baseline energy consumption targets relative to ASHRAE/IES Standard 90.1-1999 in US or Model National Energy Code for Buildings in Canada.

##### **EA Credit 1: Optimize Thermal Performance – 10 Points Available**

A building envelope constructed using the Insulspan SIP system will improve the energy efficiency of the completed building. The higher effective thermal resistance (R-Value) and lower air leakage characteristic provided by the Insulspan SIP system can contribute to one of the LEED optimized energy performance levels above the baseline requirement.

USGBC LEED Version 2.1		CaGBC Version 1.0	
Design Energy Cost Base	ASHRAE /IESNA 90.1-1999	Design Energy Cost Base	Model National Energy Code for Buildings
Cost Decrease	Possible Points	Cost Decrease	Possible Points
15%	1	24%	1
20%	2	29%	2
25%	3	33%	3
30%	4	38%	4
35%	5	42%	5
40%	6	47%	6
45%	7	45%	7
50%	8	51%	8
55%	9	55%	9
60%	10	60%	10

## LEED Rating System for New Construction

### Materials & Resources (MR)

#### ***MR Credit 5.1: Local/Regional Materials: One Point Available***

Insulspan manufacturing plants are strategically located to minimize transportation requirements. PlastiSpan insulation, the core material for the Insulspan SIP system is manufactured in facilities located near Insulspan facilities. Dependent upon building site location, minimized transportation distance may be available as a credit for using a building material that has been manufactured within 500 miles (800 km) of the project site.

#### ***MR Credit 6: Rapidly Renewable Materials: One Point Available***

The Insulspan SIP system uses oriented strand board (OSB) laminated to an EPS insulation core. OSB is a wood based structural use panel manufactured from wood strands sliced from freshly harvested trees and bonded together using waterproof and heat proof resin binders. The wood strands used come from sustainable self-regenerating forests or plantation/woodlot thinnings.

### Indoor Environmental Quality (EQ)

#### ***EQ Credit 2: Increase Ventilation Effectiveness: One Point Available***

Structures built using the Insulspan SIP system can achieve superior air-tightness. A heat recovery ventilation (HRV) system is recommended as an integral part of the design process for Insulspan SIP structures and will provide air change effectiveness to ensure that indoor air quality (IAQ) is maintained.

#### ***EQ Credit 4: Low-Emitting Materials: One Point Available***

The key components in the Insulspan SIP system are OSB, structural laminating adhesive and EPS insulation. The Volatile Organic Content (VOC) and formaldehyde emissions from these materials are virtually undetectable.