

## **BUILDING PRODUCTS LISTING PROGRAM**

Customer: Greenstone Structural Solutions Inc.  
Class: Insulated Wall Assemblies  
Location: Brandon, Manitoba, Canada  
Website: [www.greenstonestructuralsolutions.ca](http://www.greenstonestructuralsolutions.ca)

Listing No. B1100-1  
Project No. B1100-1 Edition 1

Effective Date: June 22, 2017  
Last Revised Date: June 22, 2017  
Expires: N/A

Standards: ASTM C578	Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
CAN/ULC-S701	Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
ASTM E84	“Standard Test Method for Surface Burning Characteristics of Building Materials”
CAN/ULC-S102.2	Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies.
CAN/ULC-S101	Standard Methods of Fire Endurance Tests of Building Construction and Materials
ASTM E119	Standard Test Methods for Fire Tests of Building Construction and Materials.

Product: Thermally Insulated Building Assembly Products

Markings: Each panel is marked with a permanent label containing the following information:

- Manufacturers name or recognized trademark
- Product name
- Date of manufacture
- QAI file number: B1100
- ASTM E84 Flame Spread Index and Smoke Developed Index
- CAN/ULC-102.2 Flame Spread Index and Smoke Developed Index
- ASTM E119 and CAN/ULC-S101 Fire Resistance Rating
- QAI logo shown here:



Models / Ratings: **The following outlines Greenstone Structural product’s thermal insulation performance determined in accordance with the noted standards.**

Greenstone Structural insulation products specifications per CAN/ULC-S701.

PROPERTY	Expanded Polystyrene Insulation
	TYPE 2
Thermal Resistance Minimum at 25 mm Thickness (m <sup>2</sup> *°C/W)	0.70
Water Vapour Permeance Maximum at 25 mm Thickness (Ng/Pa*s*m <sup>2</sup> )	200
Dimensional Stability Maximum Linear Change (%)	1.5
Flexural Strength Minimum (kPa)	240
Water Absorption By Volume Maximum (%)	4.0
Compressive Strength Minimum at 10% Deformation (kPa)	110
Limiting Oxygen Index Minimum (%)	24

Greenstone Structural insulation products surface burning characteristics determined in accordance with CAN/ULC S102.2.

EXPANDED POLYSTYRENE (EPS) INSULATION	DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Type 2 (Type II) EPS	Maximum 32 kg/m <sup>3</sup>	100 mm Maximum	≤ 250	≥ 500

Greenstone Structural insulation products specifications per ASTM C578.

PROPERTY	Expanded Polystyrene Insulation
	TYPE II
Compressive Strength Minimum @ 10% Deformation (psi)	15.0
Thermal Resistance Minimum @ 1 inch Thick (F*ft <sup>2</sup> *h/Btu)	4.0
Flexural Strength Minimum (psi)	35.0
Water Vapor Permeance @ 1 inch Thickness Maximum (Perms)	3.5
Water Absorption By Volume Maximum (%)	3.0
Dimensional Stability Linear Change Maximum (%)	2.0
Oxygen Index Minimum (%)	24.0
Density Minimum (lbs/ft <sup>3</sup> )	1.35

Greenstone Structural insulation products surface burning characteristics determined in accordance with ASTM E84

EXPANDED POLYSTYRENE (EPS) INSULATION	DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Type 2 (Type II) EPS	Maximum 2.0 lbs/ft <sup>3</sup>	6.0 Inches Maximum	≤ 25	≤ 450

Greenstone Structural Insulated Wall Assemblies per CAN/ULC-S101 & ASTM E119 – Loadbearing<sup>†</sup> Walls and Partitions

QAI Design #	Fire Resistance Rating	Sheathing
<b>B1100-1a</b>	<b>CAN/ULC-S101/ASTM E119 1 Hour Restricted – Load Bearing Fire Resistance-Rated Wall Assembly</b>	<b>2 Layers Gypsum Board</b>
<b>B1100-1b</b>	<b>CAN/ULC-S101/ASTM E119 1 Hour Restricted – Load Bearing Fire Resistance-Rated Wall Assembly</b>	<b>1 Layer Gypsum Board 1 Layer MgO Board</b>

<sup>†</sup> Restricted-Load Bearing - Load rating for this assembly is 3800 lb per linear foot (55 kN/m).

Notes: Products must be installed with the manufacturer’s published installation instructions and in accordance with the building codes recognized by the authority having jurisdiction.

Product is to be installed in accordance with the QAI Design Listing and manufacturer’s published installation instructions by qualified installing personnel.

Listed manufacturers are subject to on-going inspections by QAI to ensure that the products outlined above remains as it is listed.

The materials, products or systems listed herein have been qualified to bear the QAI Listing Mark under the conditions stated with each Listing. Only those products bearing the QAI Listing Mark are considered to be listed by QAI. No warrantee is expressed or implied, and no guarantee is provided that any jurisdictional authority will accept the Listing found herein. The appropriate authorities should be contacted regarding the acceptability of any given Listing. Visit the QAI Online Listing Directory located at [www.qai.org](http://www.qai.org) for the most up to date version of this Listing and to validate that this QAI Listing is active. Questions regarding this listing may be directed to [info@qai.org](mailto:info@qai.org). Please include the listing number in the request.

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