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BUILDING PRODUCTS LISTING PROGRAM

Customer: ZS2 Technologies Limited
Class: Structural Panels
Location: Calgary, Alberta
Website: https://zs2technologies.com

Listing No. B1141
Project No. B1141-1 Edition 1

Effective Date: December 12, 2022
Last Revised Date: December 12, 2022
Expires: N/A

Standard(s):

CAN/ULC-S101	*Standard Test Methods for Fire Tests of Building Construction and Materials*.
ASTM E119	*Fire Endurance Tests of Building Construction and Materials*.
CAN/ULC S102	*Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*.
ASTM E84	*Standard Test Method for Surface Burning Characteristics of Building Materials.*
CAN/ULC S135	*Standard Test Method for the Determination of Combustibility Parameters of Building Materials Using an Oxygen Consumption Calorimeter (Cone Calorimeter)*.

Product: TechBoard™ Magnesium Oxide (MgO) Sheathing.

Markings: Product is marked with labels supplied by ZS2 Technologies Ltd. The label includes:

a) ZS2 name and address
b) Product name
c) Date of manufacture
d) QAI logo with ‘c’ and ‘us’ identifier
e) QAI Listing number (B1141)
f) Flame Spread / Smoke Developed Rating (FSI = 0, SDI < 5)
g) Ignition Resistant.
h) QAI Code Evaluation Report CER_{US}-1009

Labels are applied to palletized finished products to ensure visibility on the jobsite.

Models / Ratings: The following outlines TechBoard™ MgO sheathing performance determined in accordance with the noted standards.

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TechBoard™ MgO boards are eligible for use in the following fire-resistance rated assemblies determined in accordance with CAN/ULC S101 and ASTM E119:

QAI DESIGN #	FIRE-RESISTANCE RATING	ASSEMBLY
B1141-1a	1 hours – Restricted Load-Bearing	2 x 6 lumber assembly at 24 inches stud spacing optional cavity insulation, with 12 mm (1/2'') Techboard™ each face fastene with staples at 76 mm (3'') on center, with interior finish of 16 mm (5/8'') Type X gypsum board or 12 mm (1/2'') TechBoard™ interior finish, joints offset from the underlying TechBoard™ layer. See design listing for additional installation details.
B1141-1b	1 hours – Restricted Load-Bearing	2 x 6 lumber assembly at 24 inches stud spacing optional cavity insulation, with 12 mm (1/2'') Techboard™ each face fastened with #8 wood screws at 152 mm (6'') on center, with interior finish of 16 mm (5/8'') Type X gypsum board or 12 mm (1/2'') TechBoard™ interior finish, joints offset from the underlying TechBoard™ layer. See design listing for additional installation details.

TechBoard™ MgO boards have the following surface burning characteristics determined in accordance with CAN/ULC S102:

TECHBOARD™ SURFACE BURNING CHARACTERISTICS PER ASTM CAN/ULC S102[1]				
PRODUCTS	MAX. THICNESSES		FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
	mm	Inches		
TechBoard™	12	½	0	≤ 5

TechBoard™ MgO boards have the following surface burning characteristics determined in accordance with CAN/ULC ASTM E84:

TECHBOARD™ SURFACE BURNING CHARACTERISTICS PER ASTM E84					
PRODUCTS	MAX. THICNESSES		FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX	CLASS
	inches	mm			
TechBoard™	½	12	≤ 0	≤ 5	A

TechBoard™ MgO boards have the following parameters of combustion determined in accordance with CAN/ULC S135:

TECHBOARD™ PARAMETERS OF COMBUSTION PER CAN/ULC S135[1]					
PRODUCTS	MAX. THICKNESS		APPLIED HEAT FLUX kW/m²	TOTAL HEAT RELEASE MJ/m²	AVERAGE TOTAL SMOKE EXTINCTION AREA m²
	inches	mm			
TechBoard™	½	12	50	≤ 3	≤ 1.0

Note 1: Product has been found to meet the 2015 National Building Code of Canada Section 3.1.5.1 Clause 2) for use in *non-combustible construction*.

Notes: Final acceptance of the product in the intended application is to be determined by the authority having jurisdiction.

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

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 warranty 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 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. Please include the listing number in the request.

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