

BUILDING PRODUCTS LISTING PROGRAM

Customer: Superform Products, Ltd.

Class: Insulated Concrete Forms (ICF)

Location: Pincher Creek, Alberta Website: www.superformicf.ca

Listing No. B1051-1

Project B1051-1, Edition 3

No.

Effective July 25, 2012

Date:

Last September 1, 2020

Revised:

Standards: **CAN/ULC S717.1** Standard for Flat Wall Insulating Concrete Form (ICF)

Systems.

ASTM E2634 Standard Specification for Flat Wall Insulating

Concrete Form (ICF) Systems.

Standard Test Methods for Mechanical Fasteners in **ASTM D1761**

Wood and Wood-Based Materials.

CAN/ULC S701.1 Thermal Insulation, Polystyrene, Boards and Pipe

Covering.

ASTM C578 Standard Specification for Rigid, Cellular Polystyrene

Thermal Insulation.

CAN/ULC S102.2 Standard Method of Test for Surface Burning

Characteristics of Flooring, Floor Coverings, and

Miscellaneous Materials and Assemblies.

ASTM E84 Standard Test Method for Surface Burning

Characteristics of Building Materials.

UBC-26-3 Room Fire Test Standard for Interior of Foam Plastic

Systems.

ASTM D635 Standard Test Method for Rate of Burning and/or

Extent and Time of Burning of Plastics in a Horizontal

Position.

ASTM D1929 Standard Test Method for Determining Ignition

Temperature of Plastics.

ASTM E119 Standard Test Methods for Fire Tests of Building

Construction and Materials.

CAN/ULC S101 Standard Methods of Fire Endurance Tests of Building

Construction and Materials.

UL 263 Standard for Fire Tests of Building Construction and

Materials.

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877.461.8378 ph. | 604.527.8368 fx. 909.483.0250 ph. | 909.483.0336 fx. 918.437.8333 ph. | 918.437.8487 fx. 905 605 5444

WWW.OALORG

Product: Superform Insulated Concrete Forms (ICF)

Product is marked with labels supplied by Superform Products, Ltd. Products are Markings: marked in a permanent manner where it is readily visible after installation with the following:

- a) Manufacturer's name or trademark
- b) Product model designation
- c) Month and year of manufacture
- d) QAI file Number: B1051-1
- e) CAN/ULC S701 Type 2, ASTM C578 Type II, ASTM E84 FSI and SDI Rating, and CAN/ULC S102.2 FSI and SDI ratings.
- f) QAI logo shown here:



Ratings:

Models / Superform ICF complies with specifications for flat-walled ICF in accordance with CAN/ULC S717.1.

> Superform ICF complies with specifications for flat-walled insulated concrete forms in accordance with ASTM E2634.

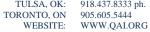
Superform ICF cross ties have a spontaneous ignition temperature ≥ 650°F when evaluated in accordance with ASTM D1929.

Superform ICF cross ties have a rate of burning of CC2 when evaluated in accordance with ASTM D635.

The following outlines Superform ICF test results determined in accordance with the noted standards.

Superform ICF has the following allowable fastener load capacities determined in accordance with ASTM E2634 and ASTM D1761:

FASTENER	ALLOWABLE WITHDRAWAL		ALLOWABLE LATERAL SHEAR	
	lbs	kg	lbs	kg
#6 Coarse Thread Drywall Screw, minimum penetration 3/4 inch (19 mm) into Superform ICF Crossties.	52	24	115	52
#10 Coarse Thread Wood Screw, minimum penetration ¾ inch (19 mm) into Superform ICF Crossties.	48	22	125	57





#14 Coarse Thread Wood Screw, minimum penetration ¾ inch (19 mm) into Superform ICF Crossties.	57	26	135	61
16 Gauge ½ inch Crown Staple, minimum penetration 1 inch (25 mm) into Superform ICF Crossties.	8.5	4	12	5.5

Superform ICF Type 2 Specifications per CAN/ULC S701.1

PROPERTY	SUPERFORM SPECIFICATION
Thermal Resistance	Minimum 0.70
m ^{2*o} C/W at 25 mm Thickness	
Water Vapour Permeance	Maximum 200
Ng/Pa*s*m² at 25 mm Thickness	
Dimensional Stability	Maximum 1.5
% Linear Change	
Flexural Strength	Minimum 240
kPa	
Water Absorption	Maximum 4.0
% Volume	
Compressive Strength	Minimum 110
kPa at 10% Deformation	
Limiting Oxygen Index	Minimum 24
%	

Superform ICF Type II Specifications per ASTM C578

PROPERTY	SUPERFORM SPECIFICATION
Compressive Resistance psi at Yield or 10% Deformation	Minimum 15.0
Thermal Resistance F*ft ² *h/Btu at 1.00 Inch Thickness	Minimum 4.0
Flexural Strength psi	Minimum 35.0
Water Vapor Permeance Perms at 1.00 Inch Thickness	Maximum 3.5
Water Absorption % Volume	Maximum 3.0
Dimensional Stability % Change Dimensions	Maximum 2.0
Oxygen Index % Volume	Minimum 24.0
Density lbs/ft ³	Minimum 1.35

Superform ICF Surface Burning Characteristics per CAN/ULC S102.2

SUPERFORM COMPONENT	DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Expanded	22 – 29	100 mm	≤ 210	≥ 500
Polystyrene	kg/m³	Maximum		
(EPS Panel)				

Superform ICF Surface Burning Characteristics per ASTM E841



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SUPERFORM COMPONENT	DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Expanded Polystyrene (EPS Panel)	1.35 – 1.80 lbs/ft ³	4.0 Inches Maximum	≤ 25	≤ 450

¹Ceiling Measurement Only. This measurement is conducted through determination of flame spread index and smoke developed index with the removal of any contribution of molten materials ignited on the floor of the tunnel assembly.

Superform UBC 26-3 Configuration

Meets requirements with $\frac{1}{2}$ inch thickness gypsum fastened with 1 $\frac{1}{2}$ inch length standard drywall screws at 12 inches on center spacing in the field, and 6 inches on center spacing around the perimeter. Fasteners must be anchored into Superform ICF web ties.

Superform ICF CAN/ULC S101, UL 263, ASTM E119 – Wall Assemblies

QAI Design #	Wall Type:	Wall Load:	Fire Endurance Period:
B1051-1	Insulated Concrete Wall of minimum 6.5 inches concrete thickness	Load Bearing ¹	4-hours

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

Product is to be installed in accordance with the manufacturer's published installation instructions by qualified installing personnel. Also see QAI CER_{US}-1001

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