#### BUILDING PRODUCTS LISTING PROGRAM

Class: Thermal Insulation

Customer: AMVIC Incorporated

Location: 501 McNicoll Avenue, Toronto, Ontario, M2H 2E2 Canada

Website: http://www.amvicsystem.com

http://www.amvicsystem.com/amdry-insulated-subfloor Product Site:

Listing No. B1061-1 Project No. B1061-1 May 30, 2014 Effective Date: Last Revised: April 5, 2015

Expires: N/A

Product: AMVIC Expanded Polystyrene (EPS) Thermal Insulation

AMVIC AmDRY Expanded Polystyrene (EPS) Insulated Subfloor / Thermal

Insulation

AMVIC PEX Panel Thermal Floor Insulation

Label: Product is marked with labels supplied by AMVIC Incorporated. The

label includes the manufacturer's name, trademark, or other recognized symbol of identification, the product model designation, month and year of manufacture or equivalent, QAI logo with the 'US' and "C" identifier, and CAN/ULC S701 Type, ASTM C578 Type (where applicable), CAN/ULC S102.2, and ASTM E84 FSI and SDI Rating. Labels are applied to

palletized finished products to ensure visibility on the jobsite.

Standard: CAN/ULC S701 "Thermal Insulation, Polystyrene, Boards and Pipe

Covering".

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

Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and

Assemblies".

ASTM C578 "Standard Specification for Rigid, Cellular Polystyrene Thermal

Insulation".

ASTM E84 - "Standard Test Method for Surface Burning Characteristics of

Building Materials".

The following outlines AMVIC Expanded Polystyrene (EPS) Thermal Ratings:

Insulation Performance determined in accordance with the noted

standards.

AMVIC Expanded Polystyrene Thermal Insulation Properties per CAN/ULC

S701

PROPERTY	TYPE 1	TYPE 2	TYPE 3
Thermal	0.65	0.70	0.74

Resistance Minimum at 25 mm Thickness (m <sup>2</sup> *°C/W)			
Water Vapour Permeance Maximum at 25 mm Thickness (Ng/Pa*s*m²)	300	200	130
Dimensional Stability Maximum Linear Change (%)	1.5	1.5	1.5
Flexural Strength Minimum (kPa)	170	240	300
Water Absorption By Volume Maximum (%)	6.0	4.0	2.0
Compressive Strength Minimum at 10% Deformation (kPa)	70	110	140
Limiting Oxygen Index Minimum (%)	24	24	24

# AMVIC Expanded Polystyrene Thermal Insulation Surface Burning Characteristics per CAN/ULC S102.2

AMVIC INSULATION	DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Type 1, Type 2, Type 3	Maximum 32 kg/m <sup>3</sup>	100 mm Maximum	≤ 210	≥ 500

### AMVIC Expanded Polystyrene Thermal Insulation Properties per ASTM C578

PROPERTY	TYPE I	TYPE VIII	TYPE II	TYPE IX
Compressive Strength Minimum @ 10% Deformation (psi)	10.0	13.0	15.0	25.0
Thermal Resistance Minimum @ 1 inch Thick (F*ft²*h/Btu)	3.6	3.8	4.0	4.2
Flexural Strength Minimum (psi)	25.0	30.0	35.0	50.0
Water Vapor	5.0	3.5	3.5	2.5

Permeance @ 1 inch				
Thickness				
Maximum				
(Perms)				
Water				
Absorption	4.0	3.0	4.0	2.0
By Volume	4.0	3.0	4.0	2.0
Maximum (%)				
Dimensional				
Stability	2.0	2.0	2.0	2.0
Linear Change	2.0	2.0	2.0	2.0
Maximum (%)				
Oxygen Index	24.0	24.0	24.0	24.0
Minimum (%)	21.0	2 1.0	2 1.0	21.0
Density				
Minimum	0.90	1.15	1.35	1.80
$(lbs/ft^3)$				

AMVIC Expanded Polystyrene Thermal Insulation Surface Burning Characteristics per ASTM E84<sup>1</sup>

AMVIC INSULATION	DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Type I, Type VIII, Type II, Type IX	Maximum 2.20 lbs/ft <sup>3</sup>	4.0 Inches Maximum	≤ 75	≤ 450

<sup>1</sup>Ceiling 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.

The following outlines AMVIC AmDRY Expanded Polystyrene Thermal Insulated Subfloor Performance determined in accordance with the noted standards.

AMVIC AmDRY Properties per CAN/ULC S701

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

(%)	

#### AMVIC AmDRY Surface Burning Characteristics per CAN/ULC S102.2

AME INSULA		DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Type 2	2 EPS	Maximum 32 kg/m <sup>3</sup>	100 mm Maximum	≤ 210	≥ 500

#### AMVIC AmDRY Properties per ASTM C578

PROPERTY	TYPE II
Compressive Strength Minimum @ 10% Deformation (psi)	15.0
Thermal Resistance Minimum @ 1 inch Thick (F*ft²*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 (%)	4.0
Dimensional Stability Linear Change Maximum (%)	2.0
Oxygen Index Minimum (%)	24.0
Density Minimum (lbs/ft³)	1.35

#### AMVIC AmDRY Surface Burning Characteristics per ASTM E84<sup>1</sup>

AMDRY INSULATION WITH STYRENE COATING	DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Type II	Maximum 2.20 lbs/ft <sup>3</sup>	4.0 Inches Maximum	≤ 75	≤ 450

<sup>1</sup>Ceiling 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.

## The following outlines AMVIC PEX Panel Thermal Floor Insulation Performance determined in accordance with the noted standards.

#### AMVIC PEX Panel Insulation Properties per CAN/ULC S701

PROPERTY	TYPE 2	TYPE 3
Thermal Resistance Minimum at 25 mm Thickness (m²*°C/W)	0.70	0.74
Water Vapour Permeance	200	130

Maximum at 25 mm Thickness (Ng/Pa*s*m²)		
Dimensional Stability Maximum Linear Change (%)	1.5	1.5
Flexural Strength Minimum (kPa)	240	300
Water Absorption By Volume Maximum (%)	4.0	2.0
Compressive Strength Minimum at 10% Deformation (kPa)	110	140
Limiting Oxygen Index Minimum (%)	24	24

AMVIC Expanded Polystyrene Thermal Insulation Surface Burning Characteristics per CAN/ULC S102.2

AMVIC INSULATION	DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Type 2, Type 3 EPS Insulation	Maximum 32 kg/m <sup>3</sup>	100 mm Maximum	≤ 210	≥ 500

#### AMVIC PEX Panel Thermal Floor Insulation Properties per ASTM C578

PROPERTY	TYPE II	TYPE IX
Compressive Strength Minimum @ 10% Deformation (psi)	15.0	25.0
Thermal Resistance Minimum @ 1 inch Thick (F*ft²*h/Btu)	4.0	4.2
Flexural Strength Minimum (psi)	35.0	50.0
Water Vapor Permeance  @ 1 inch Thickness Maximum (Perms)	3.5	2.5
Water Absorption By Volume Maximum (%)	4.0	2.0
Dimensional Stability Linear Change Maximum (%)	2.0	2.0
Oxygen Index Minimum (%)	24.0	24.0
Density Minimum (lbs/ft³)	1.35	1.80

AMVIC PEX Panel Thermal Floor Insulation Surface Burning Characteristics per ASTM  $\rm E84^1$ 

AMVIC INSULATION	DENSITY	MAXIMUM THICKNESS	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)
Type II, Type IX EPS Insulation	Maximum 2.20 lbs/ft <sup>3</sup>	4.0 Inches Maximum	≤ 75	≤ 450

<sup>1</sup>Ceiling 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.

Note:

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.

Visit the QAI Online Listing Directory located at <a href="www.qai.org">www.qai.org</a> for the most up to date version of this Listing and to validate that this QAI Listing is active.

\*\*\*

Effective Date: July 25, 2012 QM0604 Listing Page Page 6 of 6
Revision Date: No Revisions to Date Revision 1