CANDADIAN CODE EVALUATION REPORT

CERCAN-1033

PUBLISHED:	July 2025
REVISED:	July 2025
EXPIRATION:	July 2027

PRODUCT:	**EDCO Metal Roofing Panels**
REPORT HOLDER:	EDCO Products Inc.
CONTACT DETAILS:	800 2nd Street Northeast, Hopkins, MN 55343 USA www.edcoproducts.com
CSI DIVISION:	07 00 00 - Thermal and Moisture Protection
CSI SECTION:	07 31 16 – Metal Shingles 07 41 13 – Metal Roof Panels
APPLICABLE CODES:	2020 National Building Code of Canada (NBC) 2024 British Columbia Building Code (BCBC) 2023 National Building Code of Canada Alberta Edition (NBC(AE)) 2024 Ontario Building Code (OBC)
EVALUATED:	Weather Resistance Wind Resistance Roof Fire-Classification Hail-Impact Resistance

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1.0 APPROVED FOR FOLLOWING:

APPROVED TYPES OF CONSTRUCTION:	Combustible/Non-Combustible Construction
APPROVED USE:	Roof coverings for use in Class A and Class B fire-classified assemblies.
APPROVED INSTALLATIONS:	Roof coverings including fire-classified roof assemblies.

2.0 DESCRIPTION:

2.1 General:

EDCO Metal Roofing Panels are roof coverings formed from 28-gauge (0.39 mm) G90 galvanized steel complying with ASTM A653/ASTM A653M in accordance with section 9.3.3.2 of the National Building Code of Canada (NBC). The top of the panel is coated with a polyvinylidene fluoride (PVDF) paint. This product is intended for use on slopes ≥ 1:3 (4:12, 33%) as per Section 9.26.3.1 of the NBC. EDCO Metal Roofing Panels are available in two different model types: ArrowLine Slate and ArrowLine Shake/Shingle.

When installed in accordance with Section 4.4 and Table 3 of this report, EDCO Metal Roofing Panel products outlined in this report provide a Class A and Class B roof-fire assembly determined in accordance with Section 3.1.15.2 of the NBC evaluated in accordance with CAN/ULC S107.

EDCO Metal Roofing Panels outlined in this report comply as steel roof coverings including use in roof fire classified assemblies for jurisdictions governed by the BCBC, NBC, OBC and other provincial codes in Canada. See Section 10 and Section 11 of this report for additional details.

2.2 Products:

2.3.1 EDCO Metal Roofing Panels:

See Table 1 below for the properties of the recognized models of EDCO Metal Roofing Panels.

Table 1 – EDCO Metal Roofing Panel Properties

Product	Length		Width		Installed Weight		Installed Exposure	
	mm	Inches	mm	Inches	kg/m^2	lbs/sqft	mm	Inches
ArrowLine Slate	1288	50.7	325	12.8	4.44	0.91	308	12-1/8
ArrowLine Shake/Shingle	1288	50.7	325	12.8	4.20	0.86	308	12-1/8

3.0 DESIGN:

EDCO Metal Roof Panel products outlined in this report comply with performance requirements outlined in Part 3, Part 4, and Part 5 of the NBC as well as the prescriptive requirements of Part 9. EDCO Metal Roofing Panels are to be installed on roofs with minimum slopes of 1:3 (4:12, 33%).

Where installed in accordance with Section 8.1 of this report EDCO Metal Roofing Panels are limited to applications to maximum allowable uplift pressures listed in Table 2 of this report. Use in applications greater than those stated require approval by a registered design professional and approval by the authority having jurisdiction.

EDCO Metal Roofing Panels are intended for use as the finished roof covering on new and over existing construction where existing roof coverings have been removed in accordance with Section 4.2 and 4.3 of this report as applicable. When used in applications requiring roof fire classified assemblies, installation shall conform to Section 4.4 and Table 3 of this report.

4.0 INSTALLATIONS:

4.1 General:

Installation of EDCO Metal Roofing Panels must comply with the manufacturer's published installation instructions, this report, and the applicable code(s). Where differences are found, this report and the applicable building code shall be followed.

EDCO Metal Roofing Panels require direct-to-deck installation over plywood or oriented strandboard (OSB) sheathing of minimum 12 mm (15/32-inch) thickness complying with the NBC Section 9.23.16. Each EDCO Roofing Panel is attached using five to seven EDCO steel clips which are fastened to the underlying sheathing using one (1) #10 by 25 mm (1-inch) length corrosion resistant zip screw for each clip, installed at a preformed EDCO Roofing Panel locations. Attachment of the sheathing to underlying framing elements is outside the scope of this report and shall be in accordance with the applicable code and sufficient to resist service loads.

Flashing, counterflashing, and valley flashing shall be sheet metal complying with the applicable code and compatibile with EDCO galvanized steel roofing without promoting corossion. Sheet metal must be G90 galvanized of minimum 0.33 mm (0.013 inches) uncoated thickness. Valley flashing shall be a minimum 600 mm (23.6 inches) wide sheet metal of minimum 0.33 mm uncoated thickness. Flashing, including fasteners, shall not be in contact with dissimilar metals to avoid corrosion. Flashing shall prevent moisture from entering the wall and comply with Section 9.26.4 of the NBC.

4.1.2 Underlayment:

EDCO Metal Roofing panels must be installed over underlayment consisting of minimum one layer of No. 15 asphalt felt or equivalent as per Section 9.26.6.1 of the NBC. For fire-classified roof assemblies, underlayment shall be installed in accordance with Table 3 and Section 4.4 of this report. Underlayment must comply with and be installed in accordance with the applicable code and the manufacturer's published installation instructions.

Except as provided in NBC Section 9.26.5.1.2 , eave protection shall be included on roofs, extending from the edge of the roof a minimum of 900 mm (35.4 inches) up the roof slope to a line not less than 300 mm (11.8 inches) inside the inner face of the exterior wall. Eaves protection may consist of materials as specified in the NBC Section 9.26.5.2. Following, the standard underlayment shall be lapped over the eaves protection and shall overlap a minimum of 102 mm (4 inches). Attachment and overlapping of the eaves protection to underlayment are outside the scope of this report and is to be in accordance with the applicable code and the manufacturer's published installation instructions. Alternate eaves protection is outside the scope of this report but may be used where approved by the authority having jurisdiction.

4.2 New Construction:

EDCO Metal Roofing Panels are to be installed directly on solid or closely fitted minimum 12 mm (15/32-inch) thick plywood or OSB complying with the applicable code. A metal starter piece is secured along the eave. Full-length panels are then laid atop the approved underlayment, beginning at the eave line. The lower edge of each panel must securely engage with the starter strip. Panels should be overlapped along the sides from left to right. Next, the system is fastened to the substrate using clips and fasteners as specified in Table 2 of this document. Each additional row of panels is installed by locking the bottom edge into the top fold of the panel below and securing it per manufacturer instructions. When used in applications requiring a fire-classified roof assembly, installation shall follow Section 4.4 and Table 3 of this report

4.3 Reroofing Applications:

EDCO Metal Roofing Panels are not intended for installation over existing roof systems. Existing roof coverings and underlayment are to be removed, and roof sheathing and penetrations are to be inspected to ensure the roof structure is free of rot and damage prior to installation of the EDCO products. All past existing roof coverings shall be completely removed, following all installation conditions noted in Section 4.1 and 4.2. When used in applications requiring a fire-classified roof assembly, installation shall follow Section 4.4 and Table 3 of this report.

4.4 Roof Fire Classified Assemblies:

EDCO Metal Roofing Panels comply for use as Class A and Class B roof-assemblies per Section 3.1.15.1 of the NBC as outlined in Table 3 of this report. Installation and assembly details, including maximum roof slope, are to be in accordance with Table 3 found in Section 8.2 of this report.

4.5 Hail Impact Resistant Assemblies:

EDCO Metal Roofing Panels have been evaluated for hail impact resistance and are eligible for use in hail-prone areas when installed in accordance with Table 4 of this report.

5.0 LIMITATIONS:

- Installation of EDCO Metal Roofing Panels are to comply with the applicable codes, this report and the manufacturer's installation instructions. Where differences are found, the applicable code and this report shall be followed.
- EDCO Metal Roofing Panels are intended for use on roof slopes ≥ 1:3 (4:12, 33%).
- EDCO Metal Roofing Panel maximum exposed allowable wind uplift pressures are not to exceed values outlined in Table 2 of this report. Use in applications requiring greater wind uplift resistance than those stated require engineering design and approval by the authority having jurisdiction.
- Attachment of sheathing to underlying framing members is outside the scope of this report and shall be in compliance with the applicable code and be sufficient to resist uplift forces and service loads required.
- EDCO Metal Roofing Panels used in Class A and Class B fire rated roof-assemblies are to be installed in accordance with Sections 4.4 and 8.2 Table 3 of this report.
- EDCO Metal Roofing Panels used in hail-prone areas are to be installed in accordance with Sections 4.5 and 8.3, Table 4 of this report.
- EDCO Metal Roofing Panel products are manufactured in Hopkins, MN with inspections by QAI Laboratories.

6.0 SUPPORTING INFORMATION:

The following data has been evaluated for EDCO Metal Roofing Panel products:

- Data for use in roof fire classified assemblies determined in accordance with CAN/ULC S107.
- Data for wind uplift performance.
- Data for outlining hail impact resistance.
- Data for performance under wind driven rain.

7.0 MARKING:

EDCO Metal Roofing Panel finished products are labeled with the product and model name, manufacturer's name (EDCO Products, Inc.), location of manufacture, and the QAI CERcan-1033. Examples of finished product labels can be seen in Figure 1 below.

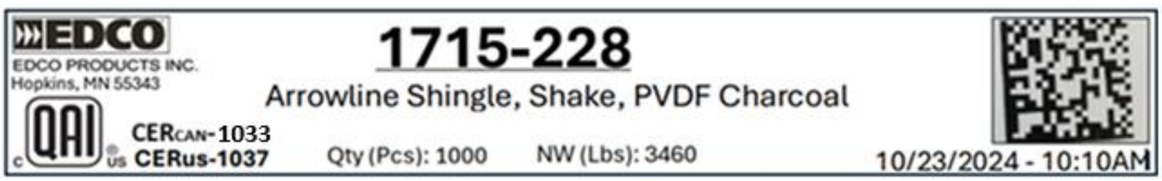

Figure 1 – Representative Example of EDCO Metal Roofing Panel Product Label

8.0 RESULTS/RATINGS:

8.1 Wind Uplift Resistance

Table 2 – Wind Uplift Classification Assembly Details

System No.	Substrate[1]	Roofing Panel	No. of Clips[4]	Fasteners	Allowable Wind Uplift Pressure
1	Minimum 12 mm (15/32-inch) Plywood	ArrowLine Slate	5	#10 by 25 mm (1-inch) length Zip screw	3.4 kPa (71 psf)
2	Minimum 12 mm (15/32-inch) Plywood	ArrowLine Slate, or ArrowLine Shake/Shingle	6	#10 by 25 mm (1-inch) length Zip screw	4.3 kPa (89 psf)
3	Minimum 12 mm (15/32-inch) Plywood	ArrowLine Slate, or ArrowLine Shake/Shingle	7	#10 by 25 mm (1-inch) length Zip screw	5.6 kPa (116 psf)
4	Minimum 12 mm (15/32-inch) OSB	ArrowLine Slate, or ArrowLine Shake/Shingle	5	#10 by 25 mm (1-inch) length Zip screw	2.7 kPa (56 psf)
5	Minimum 12 mm (15/32-inch) OSB	ArrowLine Slate, or ArrowLine Shake/Shingle	6	#10 by 25 mm (1-inch) length Zip screw	3.7 kPa (77 psf)
6	Minimum 12 mm (15/32-inch) OSB	ArrowLine Slate, or ArrowLine Shake/Shingle	7	#10 by 25 mm (1-inch) length Zip screw	5.2 kPa (108.5 psf)
7	Minimum 12 mm (15/32-inch) plywood	ArrowLine Shake/Shingle	5	#10 by 25 mm (1-inch) length Zip screw	4.1 kPa (86 psf)

1. Attachment of sheathing to underlying framing members and framing members to structure is outside the scope of this report and shall be in accordance with the applicable code and sufficient to resist uplift forces required.
2. Maximum uplift pressure was determined with a factor of safety of 2.0 applied to ultimate pressures achieved.
3. Clips to be spaced evenly along the length of the panel as per EDCO installation guidelines and anchored through sheathing.

8.2 Roof Fire Classified Assemblies:

Table 3 – Roof Fire Classified Assemblies per CAN/ULC S107

System	Substrate	Approved Underlayment[2]	Approved Roof Coverings	Installation Guidelines	Maximum Slope	Class
New construction or reroof when existing roof is removed[1]	Minimum 12 mm (15/32-inch) plywood	One layer of Type G3 mineral-surfaced cap sheet complying with the ASTM D3909 applied over one layer of ASTM D226 Type II asphalt felt.	ArrowLine Slate or ArrowLine Shake/Shingle	See Sections 4.1, 4.2, 4.3, 4.4	Unlimited	A
New construction or reroof when existing roof is removed[1]	Minimum 12 mm (15/32-inch) plywood	Two layers of GAF VersaShield™.	ArrowLine Slate or ArrowLine Shake/Shingle	See Sections 4.1, 4.2, 4.3, 4.4	Unlimited	A
New construction or reroof when existing roof is removed[1]	Minimum 12 mm (15/32-inch) plywood	One layer of GAF VersaShield™.	ArrowLine Slate or ArrowLine Shake/Shingle	See Sections 4.1, 4.2, 4.3, 4.4	Unlimited	B
New construction or reroof when existing roof is removed[1]	Minimum 12 mm (15/32-inch) plywood or OSB	One layer of Eco Chief SOLARHIDE™.	ArrowLine Slate or ArrowLine Shake/Shingle	See Sections 4.1, 4.2, 4.3, 4.4	Unlimited	A
New construction or reroof when existing roof is removed[1]	Non-Combustible[3]	Unrestricted	ArrowLine Slate or ArrowLine Shake/Shingle	See Sections 4.1, 4.2, 4.3, 4.4	Unlimited	A

1. Installation of the EDCO Metal Roofing Panels requires complete removal of existing roof coverings and underlayment and inspection prior to installation in accordance with Section 4.3 of this report.
2. Underlayment end laps to require offsets to comply with the applicable code and manufacturer's instructions.
3. Certified non-combustible substrates complying with CAN/ULC S114.

8.3 Impact Rated Assemblies:

Table 4– Impact Rated Assemblies

Substrate	Approved Underlayment	Approved Roof Coverings	Installation Guidelines	Hail-Impact Classification[1]
Minimum 15/32-inch (12 mm) plywood	Unrestricted	ArrowLine Slate Metal Roofing Panel	See Sections 4.1, 4.2, 4.3, 4.4	Class IV
Minimum 15/32-inch (12 mm) plywood	Unrestricted	ArrowLine Shake/Shingle Metal Roofing Panel	See Sections 4.1, 4.2, 4.3, 4.4	Class IV

1. Hail-impact classification determined from impact of 51 mm (2-inch) diameter 0.52 kg (1.15lbs) chrome steel ball dropped from height of 6.1 m (20 feet) with an impact energy of 31.2 Joules in accordance with method UL 2218.\

9.0 PRODUCT DETAILS:

9.1 EDCO Metal Roofing Panel Product Drawings

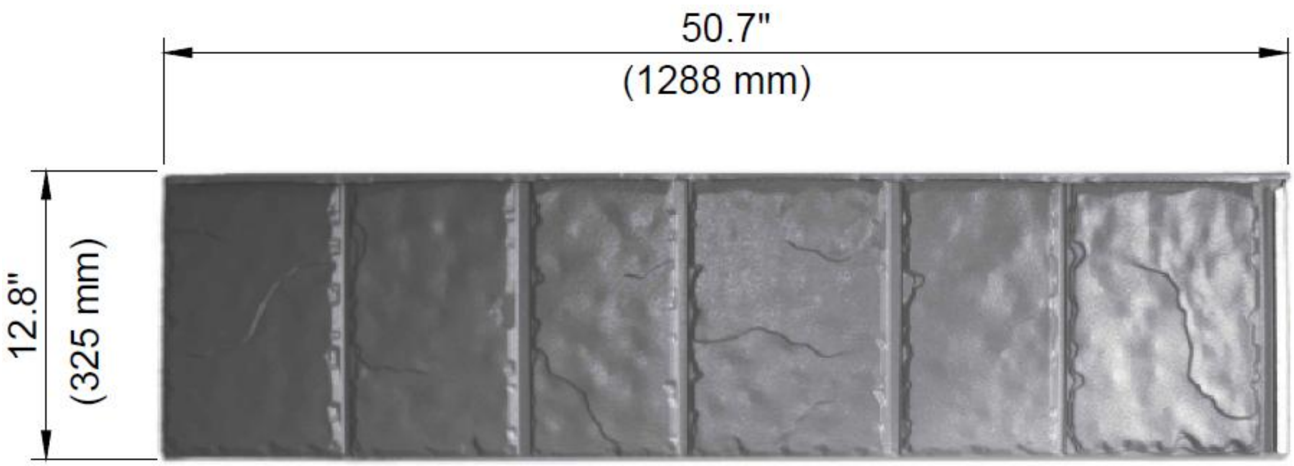

Figure 2 – EDCO ArrowLine Slate Details

2.

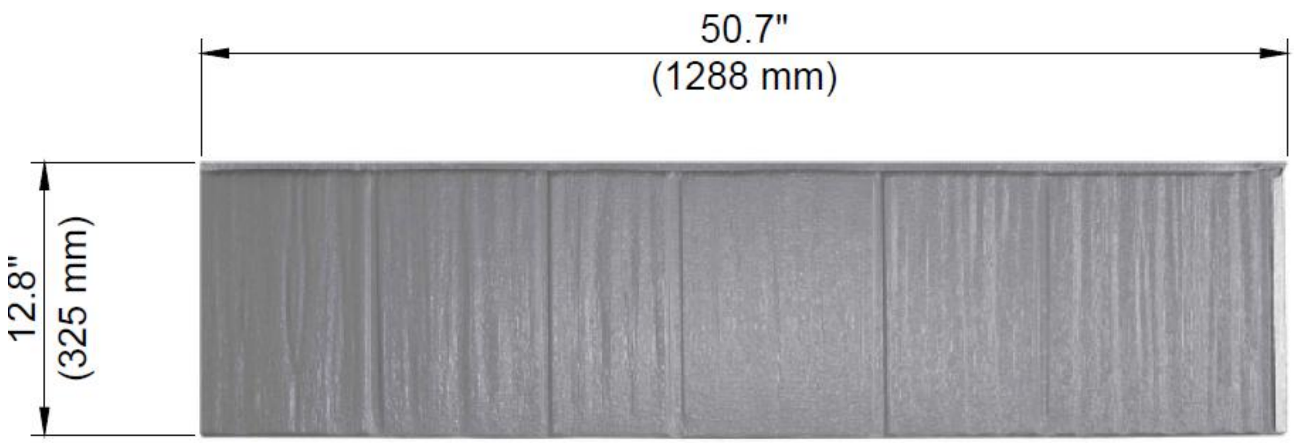

Figure 3 – EDCO ArrowLine Shake/Shingle Details

10.0 SUPPLEMENTAL CODES

10.1 2024 British Columbia Building Code (BCBC):

EDCO Metal Roofing Panels as detailed in Sections 2.0 through 9.0 of QAI CER_{CAN}-1033 comply with the 2024 British Columbia Building Code (BCBC) requirements for a roof covering when installed in accordance with the applicable building codes. See Section 10.4 for specific code references related to the performance requirements of this product.

10.2 2023 National Building Code Alberta Edition (NBC(AE)):

EDCO Metal Roofing Panels as detailed in Sections 2.0 through 9.0 of QAI CER_{CAN}-1033 comply with the 2023 National Building Code Alberta Edition (NBC(AE)) requirements for a roof covering when installed in accordance with the applicable building codes. See Section 10.4 for specific code references related to the performance requirements of this product.

10.3 2024 Ontario Building Code (OBC):

EDCO Metal Roofing Panels as detailed in Sections 2.0 through 9.0 of QAI CER_{CAN}-1033 comply with the 2024 Ontario Building Code (OBC) requirements for a roof covering when installed in accordance with the applicable building codes. See Section 10.4 for specific code references related to the performance requirements of this product.

10.4 Building Code References

Table 5 – Building Code References and Solution Types:

Property	Building Code References				Solution Type
	2020 NBC	2024 BCBC	2023 NBC(AE)	2024 OBC	
Roof Fire Classification	3.1.15.2	3.1.15.2	3.1.15.2	3.1.15.2	Acceptable
Wind Uplift Performance	4.1.7, 5.1.4.1	4.1.7, 5.1.4.1	4.1.7, 5.1.4.1	4.1.7, 5.1.4.1	Alternative
Hail Impact Resistance	5.1.4.2	5.1.4.2	5.1.4.2	5.1.4.2	Alternative
Protection from Precipitation	5.1.4.2, 9.26.1.2	5.1.4.2, 9.26.1.2	5.1.4.2, 9.26.1.2	5.1.4.2, 9.26.1.2	Alternative
Sheet Steel Galvanization	9.3.3.2	9.3.3.2	9.3.3.2	9.3.3.2	Acceptable
Required Protection	9.26.1.2	9.26.1.2	9.26.1.2	9.26.1.2	Acceptable
Roofing Materials	9.26.2	9.26.2	9.26.2	9.26.2.1	Alternative
Metal Thickness	9.26.13.1	9.26.13.1	9.26.13.1	9.26.13.1	Acceptable

Table 6 – Building Code Objectives:

Category	Subcategory	Objective	Definition
OS - Safety	OS1 Fire Safety	OS1.1	Fire or explosion occurring
		OS1.2	Fire or explosion impacting areas beyond its point of origin
	OS2 Structural Safety	OS2.3	damage to or deterioration of building elements
		OS2.5	instability of the building or part thereof
OP - Fire and Structural Protection of Buildings	OP1 Fire Protection of the Building	OP1.1	Fire or explosion occurring
		OP1.2	Fire or explosion impacting areas beyond its point of origin
	OP2 Structural Sufficiency of the Building	OP2.3	damage to or deterioration of building elements
		OP2.5	instability of the building or part thereof
	OP3 Protection of Adjacent Buildings from Fire	OP3.1	fire or explosion impacting areas beyond the building of origin

Table 7 – Building Code Functional Statements:

Statement	Definition
F01	To minimize the risk of accidental ignition
F02	To limit the severity and effects of fire or explosions.
F03	To retard the effects of fire on areas beyond its point of origin.
F20	To support and withstand expected loads and forces
F22	To limit movement under expected loads and forces.
F61	To resist the ingress of precipitation, water or moisture from the exterior or from the ground.
F62	To facilitate the dissipation of water and moisture from the building.
F80	To resist deterioration resulting from expected service conditions.

11.0 ELIGIBILITY OF REPORT

QAI is an independent and accredited certification, testing and inspection agency following the requirements of ISO/IEC 17065, ISO/IEC 17025, and ISO/IEC 17020. Accreditations are held by QAI for the Conformity Assessment of products used in construction as governed by building codes. QAI operates in accordance with recognized standards of impartiality, technical competence and independence as required to support alternative solutions per the National Building Code of Canada (NBC) or provincial / municipal codes.

QAI's Canadian Code Evaluation Report is in accordance with the National Building Code of Canada (NBC) 2020, Division A, Section 1.2.1.1, which permits the use of alternative solutions to the acceptable solutions in Division B. An alternative solution must at least meet the minimum level of performance required or satisfy the intent of the Code defined by the objectives and functional statements associated to the applicable acceptable solutions. Supporting data has been evaluated by QAI for compliance of the noted materials and assemblies with the applicable Code requirements, as detailed in this report.

In accordance with STANDATA interpretation 23-BCI-005, QAI is recognized by the Government of Alberta Ministry of Municipal Affairs as an approved organization to issue evaluation reports to determine compliance with the requirements of the National Build Code Alberta Edition (NBC(AE)).

This Canadian Code Evaluation Report has been developed to demonstrate that the noted materials or assemblies satisfy the performance associated with the relevant objectives and functional statements of the NBC, or noted provincial / municipal codes, and is intended to support authorities having jurisdiction (AHJs), design professionals, contractors, and engineers in assessing the compliance of the evaluated product. The limitations of this evaluation are detailed in the report and QAI accepts no responsibility for site specific conditions and any product or installation changes beyond the scope of this evaluation.

The report has been reviewed and approved by a Registered Professional Engineer licensed in a Canadian jurisdiction.

The product is labelled and subject to ongoing surveillance using QAI's accredited ISO/IEC 17020 inspection program to ensure continued compliance.

For more information regarding QAI Laboratories, please visit www.QAI.org.

The above is an example of the QAI registered Listing mark. The Listing mark may only be used by the Report Holder per the QAI service agreement on products defined in this report. The 'c' indicator in the 8 o'clock position indicates the product complies with the properties evaluated with limitations outlined in this report for use in the Canadian market. A 'us' indicator in the 4 o'clock position indicates the product has been evaluated for use in the US market.

12.0 REFERENCED STANDARDS

CAN/ULC S107 - *Standard Methods of Fire Tests of Roof Coverings*

ASTM A653/ASTM A653M - *Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process*

ASTM D3909 - *Standard Specification for Asphalt Roll Roofing (Glass Felt) Surfaced with Mineral Granules*

ASTM D226/D226M - *Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing*

CAN/ULC S114 - *Standard Method of Test for Determination of Non-Combustibility in Building Materials*

UL 2218 - *Standard for Safety Impact Resistance of Prepared Roof Covering Materials*