CCMC STANDARD COMPLIANCE EVALUATION

CCMC EVALUATION

CCMC 12802-L

CCMC Standard compliance evaluation

CCMC number:	12802-L
Status:	Active
Issue date:	2003-06-24
Modified date:	2023-11-08
Evaluation holder:	**Alpine Systems Corporation** 120 Travail Road Markham ON L3S 3J1 Canada Telephone: 905-417-2766
Product name:	Alpine Wave Plate
Criteria:	CSA-S347-14, "Method of Test for Evaluation of Truss Plates Used in Lumber Joints"

In most jurisdictions this document is sufficient evidence for approval by Canadian authorities.
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Product information

Product name

Alpine Wave Plate

Product description

The product is manufactured from a 20-gauge steel sheet that meets the minimum specified ultimate tensile strength (380 MPa) and minimum yield strength (275 MPa) requirements of ASTM A 653/A 653M, “Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process” SS Grade 275 steel, and galvanized with Z275 (G90) zinc coating. The product has an uncoated nominal thickness of 0.879 mm and is stamped with 0.0124 teeth/mm^2. The teeth are 9.5 mm in length.

Manufacturing plant

This evaluation is valid only for products produced at the following plant:

Product name	Manufacturing plant
	Litchfield, IL, US
Alpine Wave Plate	✓

✓ Indicates that the product from this manufacturing facility has been evaluated by the CCMC

Technical information

This evaluation is based on demonstrated conformance with the following criteria:

Criteria number	Criteria name
CSA-S347-14	Method of Test for Evaluation of Truss Plates Used in Lumber Joints

Table 1. Results of testing the ultimate tensile strength of the plate on the product

Grade of steel	Uncoated nominal plate thickness (mm)	Mean ultimate tensile (MPa)	Correction factor
SS Grade 275	0.879	421 MPa for Unstamped Metal	0.861
SS Grade 275	0.879	447 MPa for Unstamped Metal for Shear Tests	0.917

Table 2. Results of testing the lateral resistance of teeth (Hydraulic Press) on the product

Direction of load	Lateral resistance (MPa/plate) Specific gravity, (SG) = 0.42	
	Ultimate lateral resistance, n_u	Lateral slip resistance, n_s
Load parallel to grain, plate length parallel to load	2.00	1.96
Load parallel to grain, plate length perpendicular to load	1.86	2.09
Load perpendicular to grain, plate length parallel to load	1.29	1.14
Load perpendicular to grain, plate length perpendicular to load	1.36	1.49

Table 3. Results of testing the lateral resistance of teeth (Hydraulic Press) on the product

Direction of Load	Lateral resistance (MPa/plate) Specific gravity, (SG) = 0.47	
	Ultimate lateral resistance, n_u	**Lateral slip resistance, n_s**
Load parallel to grain, plate length parallel to load	2.44	2.32
Load parallel to grain, plate length perpendicular to load	2.15	2.43
Load perpendicular to grain, plate length parallel to load	1.29	1.14
Load perpendicular to grain, plate length perpendicular to load	1.36	1.49

Table 4. Roller press modification factors

Roller diameter	610 mm (24 in.)	
Specific gravity, SG	0.42	0.47

Ultimate strength modification factor, K_{pu}	0.79	0.87
Slip modification factor, K_{ps}	0.86	0.96

Table 5. Results of testing the tensile strength of plate on the product

Direction of load	Limit states design tensile resistance, t_p
Units	**N/mm/Plate**
Plate length parallel to load	165
Plate length perpendicular to load	151

Table 6. Results of testing the shear strength of the plate on the product

Angle (degree)	Limit states design for shear resistance, v_p (N/mm/plate)	Slots in plate axis
0,180	117	⊥
30T	139	//
30C	76	⊥
60T	175	//
60C	70	⊥
90	126	//
120T	101	⊥
120C	63	//
150T	161	⊥
150C	74	//
165T	148	⊥
165C	80	//

Legend for symbols:

⊥ : Slots perpendicular to plate, long dimension

// : Slots parallel to the plate, long dimension

C: Compression

T: Tension

Administrative information

Use of Canadian Construction Materials Centre (CCMC) assessments

This assessment must be read in the context of the entire CCMC Registry of Product Assessments, any applicable building code or by-law requirements, and/or any other regulatory requirements (for example, the Canada Consumer Product Safety Act, the Canadian Environmental Protection Act, etc.).

It is the responsibility of the user to confirm that the assessment they are using is current and has not been withdrawn or superseded by a later version on the CCMC Registry of Product Assessments.

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The National Research Council of Canada (NRC) has evaluated only the characteristics of the specific product described herein. The information and opinions in this evaluation are directed to those who have the appropriate degree of experience to use and apply its contents (such as authorities having jurisdiction, design professionals and specifiers). This evaluation is valid when the product is used as part of permitted construction, respecting all conditions and limitations stated in the evaluation, and in accordance with applicable building codes and by-laws.

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Language

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Saskatchewan Building Officials Association (SBOA)	(Saskatchewan Building Officials Association (SBOA))
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