Evaluation Listing CCMC 13270-L
MT18HS

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1. Evaluation

The product conforms to CSA S347-14 and CSA O86-14. CSA S347 test results are shown in the following tables.

Table 1.1 Result of Testing the Ultimate Tensile Strength of the Plate on the Product

Grade of Steel	Uncoated Nominal Plate Thickness (mm)	Mean Ultimate Tensile Strength (MPa)	Correction Factor
HSLA II410	1.22	546	0.872

Table 1.2 Results of Testing the Lateral Resistance of the 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	1.76	2.12
Load parallel to grain, plate length perpendicular to load	2.02	2.40
Load perpendicular to grain, plate length parallel to load	1.45	1.71
Load perpendicular to grain, plate length perpendicular to load	1.39	1.66

Table 1.3 Roller Press Modification Factors of the Product

Roller diameter	610 mm (24 in.)
Roller feed speed	45.7 m/min (150 ft/min)
Ultimate strength modification factor, K_{pu}	0.82
Slip modification factor, K_{ps}	0.79

Table 1.4 Results of Testing the Tensile Strength of the Plate on the Product

Direction of Load	Unit	Tensile Resistance, t_p
Load parallel to plate length	N/mm/plate	263
Load perpendicular to plate length	N/mm/plate	277

Table 1.5 Results of Testing the Shear Strength of the Plate on the Product

Angle (Degree)	Shear Resistance, v_p (N/mm/Plate)	Slots in Plate Axis
0, 180	162	⊥
30T	169	‖
30C	138	⊥
60T	215	‖
60C	130	⊥
90	154	‖
120T	171	⊥
120C	121	‖
150T	215	⊥
150C	136	‖

Legend for Table 1.5:

⊥	Slots perpendicular to the plate, long dimension
‖	Slots parallel to the plate, long dimension
C	Compression
T	Tension

2. Description

"MT18HS" truss plate is manufactured from 18 gauge steel sheet that meets the minimum strength and yield requirements of ASTM A 653, Grade 60 HSLA II410 steel and galvanized with G90 zinc coating per ASTM A 924/A 924M. "MT18HS" truss plate has an uncoated nominal thickness of 1.22 mm and is stamped with 0.0124 teeth per square mm. The teeth are approximately 8 mm in length.

3. Standard and Regulatory Information

See the Annex, appended to this Listing, which summarizes the product standard.

This/these product(s) was/were evaluated to the product standard referenced in the Annex current as of 2015-02-03. Note that the Annex may have been updated since this Listing was issued to include more recent editions of the applicable product standard. Therefore, this Listing may not reflect the requirements contained in any updated version of this product standard.

Listing Holder

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Metal Truss Connector Plates [Annex]

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Scope

These Evaluation Listings apply to light metal plate connectors used in structural lumber assemblies. The proponent has demonstrated that the product meets the requirements of the following standard:

- CSA O86-14, "Engineering Design in Wood"

The design values for the metal truss connector plates are based on test results obtained in accordance with CSA S347-14, "Method of Test for Evaluation of Truss Plates used in Lumber Joints."

Standards

CSA S347 requires testing on the following properties:

- lateral resistance of teeth;
- tensile strength of plate;
- shear strength of plate;
- ultimate tensile strength of plate material;
- roller press lateral resistance; and
- moisture response for truss plate joints in structural composite lumber.

Clause 12.8.1.2 of CSA O86 does not apply to truss plates in situations where corrosive conditions exist, or in lumber that has been treated with a fire retardant and that is used in wet service conditions or in locations prone to condensation.

Truss plates must be manufactured from galvanized sheet steel and should be of G90 coating class meeting Clause 12.8 of CSA O86.

National Building Code of Canada (NBC)

NBC References

CSA O86 is referenced in Table 4.1.8.9. and Sentence 4.3.1.1.(1) of Division B of the NBC 2010.

CSA S347-14 is not directly referenced in the NBC 2010, however it is referenced in CSA O86-14, Clauses 16.4.2 and 16.4.3.