Evaluation Listing CCMC 11996-L
MT20

MasterFormat:	06 05 23.07
Evaluation issued:	1989-06-29
Re-evaluated:	2018-03-12

1. Evaluation

The “MT20” truss plate conforms to CSA S347-14, “Evaluation of truss plates used in lumber joints,” and to CSA O86-14, “Engineering design in wood.” Results from testing the product in conformance with CSA S347 are shown in the following tables.

Table 1.1 Results of Testing the Ultimate Tensile Strength

Grade of Steel	Uncoated Nominal Plate Thickness (mm)	Mean Ultimate Tensile (MPa)	Correction Factor
SQ275	0.914	400	0.872

Table 1.2 Results of Testing the Lateral Resistance of the Teeth (Hydraulic Press)

Direction of Load	Specified Strength (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	2.24	2.37
Load parallel to grain, plate length perpendicular to load	1.80	2.17
Load perpendicular to grain, plate length parallel to load	1.28	1.66
Load perpendicular to grain, plate length perpendicular to load	1.34	1.62

Table 1.3 Roller Press Modification Factors

Roller Diameter	Roller Feed Speed	Ultimate Strength Modification Factor, K_{pu}	Slip Modification Factor, K_{ps}
610 mm (24 in.)	45.7m/min (150 ft/min)	0.69	0.83

Table 1.4 Results of Testing the Tensile Strength

Direction of Load	Unit	Limit States Design Tensile Resistance, t_p
Plate length parallel to load	N/mm/plate	174
Plate length perpendicular to load		164

Table 1.5 Results of Testing the Shear Strength

Limit States Design		
Angle (Degree)	**Shear Resistance, v_p (N/mm/Plate)**	**Slots in Plate Axis**
0, 180	107	^
30T	127	//
30C	88	^
60T	153	//
60C	69	^
90	83	//
120T	102	^
120C	81	//
150T	128	^
150C	76	//

Legend for symbols in Table 1.5:

^ Slots perpendicular to the plate length

// Slots parallel to the plate length

C Compression

T Tension

2. Description

The “MT20” truss plate is manufactured from 20 gauge steel sheet that meets the minimum strength and yield requirements of ASTM A653, SS Grade 40 SQ275 and galvanized with G90 zinc coating per ASTM A924/A924M. The “MT20” truss plate has an uncoated nominal thickness of 0.91 mm and is stamped with 0.0124 teeth per square mm. The teeth are approximately 8.3 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

MiTek Canada, Inc.
100 Industrial Road
Bradford, ON L3Z 3G7

Telephone: 1-800-268-3434
Fax: 905-952-2903
Web site: www.mitek.ca

Plant(s)

Bradford, ON

Disclaimer

This Listing is issued by the Canadian Construction Materials Centre, a program of the NRC Construction Research Centre at the National Research Council of Canada. The Listing must be read in the context of the entire CCMC Registry of Product Evaluations.

Readers must confirm that the Listing is current and has not been withdrawn or superseded by a later issue. Please refer to http://www.nrc-cnrc.gc.ca/eng/solutions/advisory/ccmc_index.html, or contact the Canadian Construction Materials Centre, NRC Construction Research Centre, National Research Council of Canada, 1200 Montreal Road, Ottawa, Ontario, K1A 0R6. Telephone 613-993-6189. Fax 613-952-0268.

NRC has evaluated the material, product, system or service described herein only for those characteristics stated herein. The information and opinions in this Listing are directed to those who have the appropriate degree of experience to use and apply its contents. This Listing is provided without representation, warranty, or guarantee of any kind, expressed, or implied, and the National Research Council of Canada (NRC) provides no endorsement for any evaluated material, product, system or service described herein. NRC accepts no responsibility whatsoever arising in any way from any and all use and reliance on the information contained in this Listing. NRC is not undertaking to render professional or other services on behalf of any person or entity nor to perform any duty owed by any person or entity to another person or entity.

Date modified:
2018-03-13

Metal Truss Connector Plates [Annex]

MASTERFORMAT: 06 05 23.07
Issued: 2015-02-03

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.