

CCMC 08384-L

CCMC Standard compliance evaluation

CCMC number:	08384-L
Status:	Active
Issue date:	1989-03-06
Modified date:	2023-11-08
Evaluation holder:	<p>London Roof Truss Inc. 1941 Gore Road London ON N5W 6B9 Canada Telephone: 519-455-8787</p>
Product name:	ES-20
Criteria:	<p>CSA-O86-14, "Engineering Design in Wood" CSA-S347-14, "Method of Test for Evaluation of Truss Plates Used in Lumber Joints"</p>

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

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Product information

Product name

ES-20

Product description

The product is a hot-dipped galvanized G90, Grade SS255 steel truss connector plate that is 0.91 mm thick and stamped with 0.0099 teeth per mm². The teeth are 9.5 mm long and are spaced 15.9 mm on centre (o.c.) along the width of the plate and 25.4 mm o.c. along the length of the plate. The slots in adjacent rows are staggered.

Manufacturing plant

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

Product name	Manufacturing plant
	London, ON, CA
ES-20	☑

☑ 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-O86-14	Engineering Design in Wood
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 ⁽¹⁾

Nominal uncoated plate thickness requirement (mm)	Minimum coated plate thickness requirement (mm)	Minimum uncoated plate thickness requirement (mm)	Maximum plate thickness requirement for tests (mm)	Average uncoated thickness for test (t_{test}) (mm)	Ultimate tensile strength requirement (MPa)	Average test result for ultimate tensile strength (MPa)	Correction factor
0.912	0.965	0.889	0.957	0.914	360	371.3	0.943

Note:

¹ ASTM A 653/A 653M-13, "Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process," SS, Grade 255.

Table 2. Results of testing the lateral resistance of teeth

Direction of load	Limit states design, ultimate lateral resistance, n_u	Limit states design, lateral slip resistance, n_s
Units	MPa/plate	MPa/plate
Type of press	Hydraulic	Hydraulic
Species of wood	S-P-F	S-P-F
Load parallel to grain, plate length parallel to load	1.56	2.05
Load parallel to grain, plate length perpendicular to load	1.46	2.17
Load perpendicular to grain, plate length parallel to load	1.00	1.07
Load perpendicular to grain, plate length perpendicular to load	1.22	1.98

Table 3. Results of testing the tensile strength of the plate

Direction of load	Limit states design tensile resistance, t_p (N/mm/plate)
Plate length parallel to load	219

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Direction of load	Limit states design tensile resistance, t_p (N/mm/plate)
Plate length perpendicular to load	145

Table 4. Results of testing the shear strength of the plate

Angle (degree)	Limit states design for shear resistance, v_p (N/mm/plate)	Shear failure in tension or compression	Slots in plate axis
0	83	N/A	⊥
30	123	Compression	⊥
30	65	Tension	//
60	119	Compression	⊥
60	53	Tension	//
90	97	N/A	//
120	83	Compression	//
120	75	Tension	⊥
150	98	Compression	//
150	66	Tension	⊥

Legend for symbols

⊥ : Slots perpendicular to plate, long dimension.

// : Slots parallel to plate, long dimension.

Administrative information

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Language

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For more information, contact the CCMC by phone at (613) 993-6189 or by email at ccmc@nrc-cnrc.gc.ca

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