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PRODUCT STANDARD COMPLIANCE REPORT

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Evergreen CLT, LLC's Cross-Laminated Timber

Date of Issue: May 18, 2023

Manufacturer: Evergreen CLT, LLC
5061 Taylorsville Hwy
Stony Point, NC 28678
TP # 0023

Product: Cross-Laminated Timber V3 Grade

Basis of Compliance:

- ANSI/APA PRG 320-2019 Performance-Rated Cross-Laminated Timber
- TP Project 23-024 Pre-Qualification Report and Mechanical Properties Report

Product Description and Uses:

This Product Standard Compliance Report (PSCR) applies to V3 grade Cross-Laminated Timber (CLT) manufactured by Evergreen CLT at their Stony Point, NC facility in accordance with ANSI/APA PRG 320-2019 (the Standard) and with in-plant manufacturing and QC procedures approved by Timber Products Inspection, Inc. (TP). The CLT recognized by this PSCR is composed of Southern Pine lumber per the V3 grade specified in the Standard. Allowable design properties for lumber laminations used in V3 CLT are provided in Table 1 below. The CLT recognized by this PSCR is intended for use in floor, roof, and wall applications, and is available in widths up to 48 inches, thicknesses of 4-1/8 inches, and lengths up to 8 feet.

Product Design Properties and Capacities:

Design properties and capacities for the CLT recognized by this PSCR are provided in Table 2. The reference design values are intended for allowable stress design (ASD) and shall be adjusted in accordance with Chapter 10 of the 2018 National Design Specification for Wood Construction (NDS) and approved by the engineer of record. Lateral force-resisting systems using CLT recognized by this PSCR shall be consulted with a qualified designer and approved by the engineer of record.

Fire resistance of CLT shall be calculated using Section 16.2 of the NDS. Procedures specified in Chapter 16 of the 2018 NDS shall be permitted for use in designing CLT for a fire exposure up to 2 hours.

Product Installation:

If provided, CLT shall be installed in accordance with a qualified designer's recommendations. All engineering drawings shall be approved by the engineer of record.

Conditions of Acceptance of PSCR:

- The CLT recognized by this PSCR shall be limited to dry service conditions where moisture content is less than 16%, as in most covered/enclosed structures. CLT recognized by this PSCR shall not be used in higher moisture service conditions.
- The CLT recognized by this PSCR shall only be used in applications created by a qualified designer who is an engineering professional with a proper understanding of the mechanics of material principles using the design properties provided in Tables 1 and 2, as appropriate.
- The CLT recognized by this PSCR is manufactured only at the Evergreen CLT facility in Stony Point, NC under a quality assurance program audited by TP for compliance with the Standard.
- This PSCR shall be subject to reevaluation within 12 months from date of issue.

Product Identification:

- The CLT recognized by this PSCR shall bear the following:
 - a. The CLT grade
 - b. The CLT thickness
 - c. The TP-assigned plant identification number (0023)
 - d. The trademarked TP logo
 - e. The Standard identification (“ANSI PRG 320”)
 - f. The production lot identification
 - g. “TOP” on the tops of CLT panels if produced using unbalanced layups for floor/roof panels
- TP shall not consider any product to be a TP PSCR recognized product without the above-mentioned marks indelibly applied to the product.
- All other markings shall be at least 6” away from the TP quality mark

Table 1. ASD Reference Design Values^(a) for Lumber Laminations Used in V3 CLT (for use in the U.S.)

CLT Grade	Laminations (Major Strength Direction)						Laminations (Minor Strength Direction)					
	F _b (psi)	E (10 ⁶ psi)	F _t (psi)	F _c (psi)	F _v (psi)	F _s (psi)	F _b (psi)	E (10 ⁶ psi)	F _t (psi)	F _c (psi)	F _v (psi)	F _s (psi)
V3	750	1.4	450	1,250	175	55	450	1.3	250	725	175	55

For SI: 1 psi = 0.006895 MPa

^(a) Tabulated values are allowable design values and not permitted to be increased by the lumber flat use or size factor in accordance with the NDS. The design values shall be used in conjunction with the section properties based on actual layup used in manufacturing the CLT panel (see table 2)

Table 2. ASD Reference Design Values^(a) for V3 CLT (for use in the U.S.)

CLT grade	CLT Thickness, t _p (in.)	Lamination Thickness (in.) in CLT layup			Major Strength Direction				Minor Strength Direction			
		=	⊥	=	(F _b S) _{eff,1.0} (lbf-ft/ft of width)	(E) _{eff,1.0} (10 ⁶ lbf-in. ² /ft of width)	(GA) _{eff,1.0} (10 ⁶ lbf/ft of width)	V _{s,0} (lbf/ft of width)	(F _b S) _{eff,1.90} (lbf-ft/ft of width)	(E) _{eff,1.90} (10 ⁶ lbf-in. ² /ft of width)	(GA) _{eff,1.90} (10 ⁶ lbf/ft of width)	V _{s,90} (lbf/ft of width)
V3	4 1/8 (3-ply)	1 3/8	1 3/8	1 3/8	1,740	95	0.49	1,820	140	3.4	0.52	605

For SI: 1 in. = 25.4mm; 1 ft = 304.8 mm; 1 lbf = 4.448N

^(a) Tabulated values are allowable design values and not permitted to be increased by the lumber flat use or size factor in accordance with the NDS.

Disclaimer: Timber Products Inspection, Inc. (TP) only provides this PSCR for reference purposes to the values and general information as published in the product standard(s) referenced herein. This is not a product certification report. A qualified design professional is required to assure code compliance as well as construction and product performance requirements. TP audits the manufacturer on a routine basis as required by the referenced product standard(s) and therefore does not warranty or assume any legal liability or responsibility for the product's use or performance by way of publishing this PSCR.