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PRODUCT(s): Seamless Post

REPORT HOLDER: CureWood Engineered Building Products Ltd.

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CSI DIVISIONS: 06 00 00 – Wood, Plastics, and Composites

CSI SECTION: 06 11 13 – Engineered Wood Products

APPLICABLE CODES: 2024, 2021, 2018 International Building Code (IBC)
2024, 2021, 2018 International Residential Code (IRC)

EVALUATED: Structural Capacity



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CODE EVALUATION REPORT

1.0 APPROVED FOR FOLLOWING:

APPROVED TYPES OF CONSTRUCTION:	IIIB, VB
APPROVED USE:	Columns and posts.
APPROVED INSTALLATIONS:	Interior and exterior (weather protected) load and non-load bearing applications.

2.0 DESCRIPTION:

2.1 General:

Seamless Post are engineered wood products manufactured from fingerjoined minimum Spruce-Pine-Fir (SPF) Stud Grade lumber, factory laminated to create vertical posts complying with Section 2303.1.10 of the 2024 / 2021 / 2018 IBC and R602.1.5 of the 2024 / 2021 / 2018 IRC evaluated in accordance with ASTM D5456. Seamless Post are available in cross-sections and lengths specified by the end user for non-load bearing applications. Load bearing applications Seamless Posts are limited to cross-sections and lengths outlined in Table 2 of this report.

Seamless Post can be installed in interior or exterior applications, where properly protected from weather and moisture absorption for use in dry condition as defined by the *National Design Specification (NDS) for Wood Construction*.

Seamless Post is intended for non-load bearing, and load-bearing applications, where Seamless Post service loads do not exceed values published in Section 8.2 Tables 2 of this report supported by Engineering Design.

2.2 Finger-Jointed Lumber:

Seamless Post finger-jointed lumbers are Spruce-Pine-Fir (SPF) Stud or better SPS 3 *Special Product Standard for Fingerjoined "Vertical Stud Use Only" Lumber* rated bearing the mark by an approved grading agency.

2.3 Adhesive:

Seamless Posts are manufactured with laminating adhesives that conform with ANSI 405-2018 for use in structural glued laminated timber and APA/ANSI PRG 320-18 for use in cross-laminated timber.

3.0 DESIGN:

Seamless Post are engineered wood columns requiring Engineering Design as outlined in the 2024 / 2021 / 2018 IBC and 2021 / 2018 IRC. Service loads are not to exceed load capacities outlined in Section 8.2 Table 2 of this report. Load capacities noted are based on Seamless Post being pin connected at top and bottom of post.

4.0 INSTALLATIONS:

4.1 General:

Installation of Seamless Post must comply with the manufacturer's published installation instructions, this report, the applicable code(s) and Engineering Design. Where differences are found between documents, this report and the applicable building code shall be followed. The manufacturer's published installation instructions are to be available at the jobsite during installation.

Seamless Post is intended for interior and exterior nonload-bearing and load-bearing applications in combustible construction. Seamless Post is to be protected from weather, water exposure and moisture absorption to ensure service at moisture content of 16% or less (dry condition) as specified by the NDS, unless supported by Engineering Design.

Seamless Post is intended for applications subject to axial load conditions. Use in applications as a force resisting element as bending, shear or torsion resisting member is outside the scope of this report.

Connection of elements to Seamless Post is outside the scope of this report and to be in accordance with Engineering Design subject to the approval by the Authority Having Jurisdiction determined in accordance with the applicable code.

5.0 LIMITATIONS

- Seamless Posts are to be installed in accordance with the manufacturer's installation instructions, Engineering Design, the applicable code and this report. Where differences exist between documents, the applicable code and this report shall be followed.
- Seamless Posts are intended for applications subject to non-load bearing, and axial loads. Applications as load resisting element for bending, shear and torsion are outside the scope of this report.
- Seamless Posts are intended for interior and exterior applications where appropriately protected from weathering, water exposure and moisture absorption for use in dry service conditions (< 16% moisture content).
- Seamless Post load capacities outlined in this report are determined based on pin connections at top and bottom. Actual connection details are outside the scope of this report and to be in accordance with Engineering Design determined in accordance with the applicable code.
- Seamless Posts are manufactured in Surrey, BC under an approved quality program with inspections by QAI Laboratories.

6.0 SUPPORTING INFORMATION:

The following data has been submitted for evaluation of Seamless Posts:

- Axial capacity in accordance with ASTM 5456
- Bending capacity in accordance with ASTM 5456.
- Allowable load determinations in accordance with ANSI/AWC National Design Specification (NDS) for Wood Construction.

7.0 MARKING:

Finished Seamless Post products include the following markings / information.

Product packaging is marked with the following information:

- a) Company Name: Curewood Engineered Building Products
- b) Product Name: Seamless Post
- c) Date of Manufacture.
- d) CER_{US}-1064
- e) QAI logo shown here:



Figure 1. Seamless Post Finished Product Markings



CODE EVALUATION REPORT

8.0 RESULTS / RATINGS:

8.1 Seamless Post Geometrical and Mechanical Properties

Table 1. Seamless Post Mechanical and Geometrical Properties

SIZE	NET AREA in ² (mm ²)	RADIUS GYRATION in (mm)		MOMENT INERTIA in ⁴ (mm ⁴)		COMPRESSIVE STRENGTH Parallel to Grain psi (MPa) F _c	BENDING STRENGTH psi (MPa) F _b	MODULUS OF ELASTICITY psi (MPa) E _{min}
		r _x	r _y	I _x	I _y			
Nomina I C	A	r _x	r _y	I _x	I _y	1,625 (11.2)	1,300 (9.0)	1,210,000 (8,343)
8 x 8	24 (15,484)	1.6 (39.5)	1.6 (39.5)	73 (3,037)	73 (3,037)			
	34.5 (22,258)	2.0 (49.9)	2.0 (49.9)	203 (8,443)	203 (8,443)			

8.2 Allowable Load Capacities

Table 2. NDS 2024 Allowable Axial Loads^{1,2,3,4}

SPAN ft (m)	LOAD RESISTANCE FACTOR DESIGN (LRFD) kips (kN)		ALLOWABLE STRESS DESIGN (ASD) kips (kN)	
	6 x 6	8 x 8	6 x 6	8 x 8
	4	65.0 (289)	95.1 (423)	37.9 (169)
6	60.0 (267)	92.1 (410)	35.6 (158)	53.8 (239)
8	48.5 (216)	85.8 (382)	30.3 (135)	51.0 (227)
10	35.2 (157)	73.8 (328)	22.9 (102)	45.5 (202)
12	25.5 (113)	58.7 (261)	16.8 (75)	37.6 (167)
14	19.1 (85)	45.7 (203)	12.7 (57)	29.8 (133)
16	14.8 (66)	36.0 (160)	9.9 (44)	23.7 (105)
18	11.8 (53)	28.9 (129)	7.9 (35)	19.1 (85)
20	9.6 (43)	23.6 (105)	6.4 (29)	15.7 (70)

1: Allowable loads are determined based on uniform concentric loading.

2. Loads consider top and bottom supports as pin connections.

3. Factors used in above determination per NDS are as follows:

C_D = 1.0 (Occupancy Live Load 10 years ASD only)

C_M = 1.0 (< 16% Seamless Post moisture condition)

C_t = 1.0 (< 150°F / 65°C service temperatures)

C_P = Column stability factor determined with c = 0.9

K_F = 2.40 (LRFD Only)

φ = 0.90 (LRFD Only)

λ = 0.8 (Occupancy LRFD Only)

4. Conditions outside the factors outlined above are to be evaluated in accordance with Engineering Design and approved by the authority having jurisdiction.

11.0 ELIGIBILITY OF REPORT

QAI's Code Evaluation Report complies with the 2024 IBC Section 104.2.3.6.1 *Evaluation Reports* and 2021 / 2018 / 2015 IBC Section 104.11 *Alternative materials, design and methods of construction and equipment* subsection 104.11.1 *Research Reports*. Supporting data has been evaluated by QAI for compliance of the noted materials and assemblies to the applicable code by QAI, and *approved* source as detailed below.

The attached report has been reviewed by a QAI Registered Professional Engineer approved by the specific state Board of Professional Engineers noted on the specific P.E. seal(s).

Per section 1703 of the IBC, QAI is an independent third-party testing, inspection and certification agency accredited by the International Accreditation Service, Inc. (IAS) for this specific scope (see IAS PCA-118). QAI can confirm that based on its IAS accreditation it meets IBC Section 1703.1 on Independence, Section 1703.1.2 on Equipment and Section 1703.1 on Personnel.

This Evaluation report has been designed to meet the performance requirements of IBC Section 1703.4 and contains the required information to show the product, material or assembly meets the applicable code requirements.

The product is labeled per section IBC 1703 and subject to follow-up inspection per IBC 1703.6 using QAI IAS accredited ISO/IEC 17020 inspection program (see IAS AA-723).

For more information regarding QAI Laboratories, please visit www.qai.org.



The above is an example of the QAI registered Listing mark. The Listing mark may only be used by the Report Holder per the QAI service agreement on products defined in this report. The 'us' indicator in the 4 o'clock position indicates the product complies with the properties evaluated with limitations outlined in this report for use in the US market. A 'c' indicator in the 4 o'clock position indicates the product has been evaluated for use in the Canadian market.