

Qualified Structural Composite Lumber With Low Formaldehyde Emissions

PR-E720
Revised February 23, 2023

Product: Structural Composite Lumber (SCL) Qualified for Low Formaldehyde Emissions

1. Basis of the product report:
 - APA Custom Product Specification E-720
 - Test method follows the principles of ISO 12460-4, Wood-Based Panels – Determination of Formaldehyde Release, Part 4: Desiccator Method, and AS/NZS 4357.4:2005, Structural Laminated Veneer Lumber, Part 4: Determination of Formaldehyde Emissions
 - ASTM D5456-18, D5456-14b, D5456-13, and D5456-09 recognized in the 2021 International Building Code (IBC) and International Residential Code (IRC), 2018 IBC and IRC, 2015 IBC and IRC, and 2012 IBC and IRC, respectively
 - APA Test Reports (see Table 2) and other qualification data

2. Product description:
Structural composite lumber (SCL) defined in this report is any of laminated veneer lumber (LVL), laminated strand lumber (LSL), and oriented strand lumber (OSL). SCL is made with wood strands or veneers of various species oriented or laminated, respectively, with wood fibers primarily oriented along the longitudinal axis of the member in accordance with ASTM D5456 and the in-plant manufacturing standard approved by APA. SCL is available in a variety of grades, thicknesses, and depths.

3. Formaldehyde emission level:
The G-5 rating is a formaldehyde emission level as defined in Table 1. SCL has been qualified for low formaldehyde emissions following the principles of ISO 12460-4 and AS/NZS 4357.4:2005, and the performance requirements of ASTM D 5456. SCL products meeting the formaldehyde emission level specified in Table 1 in accordance with the APA Custom Product Specification E-720 are listed in Table 2.

Table 1. Upper formaldehyde emission level for G-5 rating following the principles of ISO 12460-4 and AS/NZS 4357.4:2005^(a)

Average	0.20 mg per liter
Individual specimen	0.30 mg per liter

^(a) SCL trademarked products are outside the scope and are exempted from CARB ATCM, U.S. EPA’s TSCA Title VI, CAN/CSA-O160, and Canada SOR/2021-148 for formaldehyde from composite wood products. The tabulated formaldehyde emission level in the G-5 standard is more stringent than the E₀ of AS/NZS 4357.4:2005 and F☆☆☆☆ of JAS Standard 0701 for Laminated Veneer Lumber.

4. Limitations:
 - a) SCL shall be designed and installed in accordance with the applicable provisions of the code and the recommendations provided by the manufacturers.
 - b) SCL trademarked in North America is limited to dry service conditions that result in the average moisture content of sawn lumber of less than 16%.
 - c) SCL products are produced by the manufacturing facilities shown in Table 2 under a quality assurance program audited by APA in accordance with the APA Custom Product Specification E-720.
 - d) This report is subject to re-examination in one year.

5. Identification:

SCL is identified by a label bearing the manufacturer's name and/or trademark, the APA assigned plant number, the product type, the APA logo, means of identifying the date of manufacture, the product report number PR-E720, and the formaldehyde emission rating G-5.

Table 2. Qualified Manufacturing Facilities for Low Formaldehyde Emission

Manufacturer	Location	Mill Number	Product Type	APA Test Report ^(a)
Boise Cascade Wood Products, LLC	Lena, LA	1106	LVL	T2015P-32
Boise Cascade Wood Products, LLC	White City, OR	1110	LVL	T2015P-32
Boise Cascade Wood Products, LLC	Thorsby, AL	1086	LVL	T2020P-07
Murphy Engineered Wood	Sutherlin, OR	1089	LVL	T2017P-22
Pacific Woodtech Corporation	Burlington, WA	1047	LVL	T2010Q-08
Pacific Woodtech Corporation	Golden, BC	1066	LVL	T2020P-08
Pacific Woodtech Corporation	Wilmington, NC	1071	LVL	T2020P-08
Roseburg Forest Products Co.	Chester, SC	1125	LVL	T2021P-27
Roseburg Forest Products Co.	Riddle, OR	1055	LVL	T2012Q-38
Tolko Industries Ltd.	Slave Lake, AB	1094	LSL	T2019P-11

^(a) Reports for the required periodic confirmation tests are not listed.

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