

## Qualified Laminated Veneer Lumber With Low Formaldehyde Emissions

PR-E720  
Revised February 23, 2017

Product: Laminated Veneer Lumber (LVL) 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 D5456-13, D5456-09 and D5456-05a recognized by the 2015 IBC and IRC, 2012 IBC and IRC, and 2009 IBC, respectively
  - APA Report (see Table 2) and other qualification data
  
2. Product description:
 

LVL is made with wood veneers of various species laminated with grain parallel to the length of the member in accordance with the in-plant manufacturing standard approved by APA. LVL is available in a variety of thicknesses and sizes.
  
3. Formaldehyde emission level:
 

The G-5 rating is a formaldehyde emission level as defined in Table 1. LVL 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. LVL 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<sup>(a)</sup>

Average	0.20 mg/ℓ
Individual specimen	0.30 mg/ℓ

<sup>(a)</sup> LVL products meeting ASTM D 5456 are not within the scope of the CARB rule or HUD regulations. The tabulated formaldehyde emission level in the G-5 standard is more stringent than the E<sub>0</sub> of AS/NZS 4357.4:2005 and F☆☆☆☆ of JAS Standard for Laminated Veneer Lumber, MAFF Notification 701.
  
4. Limitations:
  - a) LVL shall be designed and installed in accordance with the applicable provisions of the code and the recommendations provided by the manufacturers.
  - b) LVL trademarked in North America is limited to dry service conditions that result in the average moisture content of sawn lumber of less than 16 percent.
  - c) LVL 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:
 

LVL 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	APA Test Report
Boise Cascade Company	Lena, LA	1106	T2015P-32
Boise Cascade Company	White City, OR	1110	T2015P-32
Pacific Woodtech Corporation	Burlington, WA	1047	T2010Q-08
Roseburg Forest Products Co.	Riddle, OR	1055	T2012Q-38

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