



Temperature and Moisture Content of Engineered Wood Products During Manufacturing

Laminated Veneer Lumber (LVL) is produced by Boise Cascade Engineered Wood Products for both VERSA-LAM[®] beams and the flanges (chords) of the BCI[®] Joists. Laminated veneer lumber (LVL) is manufactured in a manner similar to that of plywood. Veneers are peeled and dried in a conventional steam-fueled dryer to temperatures ranging from 330 to 400 degrees Fahrenheit. A traditional hot press adhesive is applied through a curtain coater and the veneers are pressed in a plywood press at temperatures ranging from 285 to 330 degrees Fahrenheit.

On average the moisture content of LVL directly after manufacturing is no greater than 7%. The oriented strand board that is used for the web of BCI and AJS[®] joists has a moisture content that averages approximately 3% at time of manufacturing.

BOISE GLULAM[®] products are manufactured with lamination stock that must be dried to a maximum moisture content of 16% per ANSI A190.1-2017 *Standard for Wood Products – Structural Glued Laminated Timber*. For comparison, the moisture content of kiln dry lumber can be as high as 19%.

Moisture contents of wood products within finished structures typically range between 7–13% in the U.S.⁽¹⁾. Published design values for BCI and AJS joists, VERSA-LAM, and BOISE GLULAM Douglas-fir beams and columns are valid for conditions where the in-service moisture content does not exceed 16%. Mold growth cannot be supported on wood dried to below 20% moisture content⁽²⁾.

References

(1) United States Forest Products Laboratory. 1987. *Wood Handbook: Wood as an Engineering Material*. Washington, D.C.: United States Department of Agriculture.

(2) Western Wood Products Association. 2002. *Mold & Wood Products, No. 3: Cleaning Mold on Wood*. Portland, OR: WWPA.