



BCI® / AJS® Joist, Versa-Lam® / Boise Glulam® Beam **Exterior Exposure Policy**

Boise Cascade products are only intended for dry service conditions. As stated at Article 3.2.5 of NBCC 2020, specified in clause 15.2.2.2, 15.3.2.2 and 3.1 of CSA 086-19 clause and underlined in Boise Cascade's CCMC product reports, service conditions are considered to be dry when the **average equilibrium moisture content is 15% or less over a year and does not exceed 19% at any time**. Products used in interior, open-protected applications, or wet only for short periods and dry most of the time, will have an equilibrium content of not more than 15%, and dry design strengths may be used. Short term duration (as per CSA 086) is not expected to last more than 7 days continuously or cumulatively throughout the life of the structure.

Wood contained within the interior, heated or unheated buildings, has generally been found to have a moisture content of between 6 and 14% according to the season and location.

Open-protected applications can be defined as areas where members are exposed to outside air but typically do not have contact with moisture when it rains. Such an application is a roof over a carport or deck where the members are protected from direct exposure to the weather above by a roof membrane and from the side by a fascia or overhang. Members supporting a deck constructed with a waterproof membrane would be another acceptable application.

In the unusual event that I-joists are exposed to abnormally high or rapidly changing moisture environments, research shows that the I-joists can undergo greater creep deflection and the strength may also be reduced. Estimating the amount of strength or stiffness loss for joists exposed to high humidity is difficult to quantify by visual inspection. Destructive testing of samples conducted at a certified laboratory is the only accurate method of determining the resulting structural properties. Therefore, if testing is not feasible, the product warranty of Boise Cascade I-Joists would be voided, and the products shall be replaced.

Boise Cascade engineered wood products are manufactured with adhesives which comply with ASTM D2559, "Standard Specification for Adhesives for Structural Laminated Wood Products for Use Under Exterior (Wet Use) Exposure Conditions". The purpose of exterior grade adhesives is to insure that the structural integrity of the product is not compromised while directly exposed to the weather during construction. The length of exposure is typically short term during this period.

Boise Cascade I-joists and beams are not intended, nor code approved, for permanent exposure to the weather. Permanent exposure to the weather voids Boise's warranty for the products. Typically, any permanent application that allows the members to get wet when it rains would be considered permanent exposure. Members used for roof or ceiling framing over high moisture areas, such as swimming pool covers, also void the product warranty.

Pressure treatment of our products for direct weather exposure is not allowed; with the exception of Boise Glulam beams (see *Boise Glulam Specifiers Guide* for more information). Painting the members and leaving them exposed to weather is not allowed. Wrapping the members in a waterproof material that allows moisture to build up on the members either through leakage or condensation is not allowed. Any of the preceding applications would again void Boise's product warranty.

As long as the installation protects the member from direct exposure to the wet-dry cycle of precipitation, the products will perform according to our published specifications. Boise Cascade joists and beams should be used in applications with proper ventilation, normal humidity levels and protection from rain and other sources of moisture, such as those applications that are allowed per the building official for un-treated dimension lumber and solid sawn timbers.