



Construction Drying Recommendations: Zone 4/5 Mixed Marine Climate (Pacific NW)

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General:

During the construction process, the contractor shall safeguard installed materials from high humidity conditions resulting from construction moisture sources such as (but not limited to):

- 1) Standing water
- 2) Uncontrolled rain runoff from incomplete roofs and wall assemblies, and their interfaces
- 3) Placement of interior gypcrete, gypsum joint compounds, concrete, topping slabs, concrete filled steel pan decks, or other high water content construction materials
- 4) Improperly stored construction materials that have become saturated or elevated in water content beyond that recommended by the manufacturer

Roof should be applied as soon as practical in the construction process to begin the drying cycle. Care should be exercised in application of required vapor retarders and the potential for trapping moisture in roof assemblies during construction. Do not apply sheet vapor barriers like ice and water SAM to wet materials. Ensure that intended ventilation provisions are functional. If using corrugated ridge vent, those provided with a filter fabric liner are not suitable due to limitations of net free area and accumulation of construction debris/dust.

During the construction dry down process in winter and shoulder periods (late fall, early spring), maintain appropriate interior ambient conditions with desiccant dehumidification systems to a target of 60 degrees F minimum and maximum relative humidity of 65%. Temporary construction heating shall not be supplied by direct fired appliances, as they contain large amounts of water vapor as a by-product of combustion.

Construction during other warmer periods may rely on natural ventilation (no addition of heat) by opening windows, doors, entry vestibules, etc. to equalize the interior conditions to relatively dry exterior conditions. Rely on fan driven air units to ventilate spaces, without adding additional heat.

Permanently installed building HVAC systems shall not be used to provide construction drying. Mechanical systems shall be isolated from construction activities until substantial completion and commissioning.

Apply additional considerations to exterior ambient conditions below freezing where vented roof assemblies may exhibit blockage by ice. More robust dehumidification may be needed to maintain target relative humidity levels and lessen the moisture load on the roof venting mechanisms prior to in service commissioning.

Interior insulation (batt, plural component polyurethanes) ,wall finishes, or ceiling finishes shall not be applied over wood framing elements until the moisture content drops to 16% by weight or below. Periodic monitoring of sill framing, sheathing, and other moisture sensitive assemblies will be documented throughout construction by contractor. BEE strongly recommends that building materials are checked for appropriate moisture levels as they are delivered to the site, in an effort to identify any offsite material storage procedures that may result in excessive moisture content.

Contractor shall monitor the construction activities for signs of excessive water or humidity exhibited by:

- 1) Interior condensation on windows
- 2) Warping, staining, or delamination of fiber cement, gypsum or wood based products (i.e. construction products that are absorptive)
- 3) Observed organic growth (mold, fungi, mildew)