

# MAXIMO™

## TECHNICAL BULLETIN Wood Acclimation / Handling and Storage

### Wood Acclimation

Wood dries through the movement of free water within its fiber cavities and walls, as well as water vapor movement through the wood. Due to its non-homogeneous nature, wood shrinks more along the growth rings (radially) than across them (tangentially). Tangential (width) dimensional change is often nearly twice that of radial (thickness) movement for most wood species, while longitudinal (lengthwise) dimensional change is almost always negligible. These shrinkage variations can lead to drying defects such as warping and checking.

Shrinkage and swelling cease once the wood's moisture content reaches equilibrium with its environment. Different wood species have varying rates and extents of shrinkage. To minimize shrinkage, warping, checking, and splitting in the finished product, lumber must be acclimated to the middle of the range of expected in-use moisture content. This acclimation can be achieved through air drying or kiln drying. The extent of drying defects depends on the species and the drying rate.

In much of the United States, the point of equilibrium in the exterior environment is between 12% and 18%. For the seasonal EMC levels in your region, refer to the US Forest Products Laboratories document titled "Equilibrium Moisture Content of Wood in Outdoor Locations," available in our PDF library.

### Pre-Installation Handling and Storage

Wood products should be stored in a manner that protects them from direct sunlight, rain, or snow, ensuring they remain clean, dry, and elevated off the

ground before installation. To prevent condensation inside the packaging while stored on-site, place a moisture barrier on the ground beneath the wood. Allow the wood decking to acclimate and stabilize to equilibrium humidity levels before installation to reduce post-installation movement.

### Reinstallation Handling and Storage

Naturally durable wood decking removed after years of use will likely have reached equilibrium moisture content. To prevent condensation inside the packaging while stored on-site, place a moisture barrier on the ground beneath the wood. Allow the wood decking to acclimate and stabilize to equilibrium humidity levels before reinstallation to reduce post-reinstallation movement.

Store the removed wood away from direct sunlight, rain, or snow, keeping it clean, dry, and off the ground before reinstallation. Stack the wood in a well-ventilated location with dry wood stickers or slats, not less than 1/2" in thickness or more than 1.5" in width, placed no more than 24" apart between each row of wood decking. Avoid dense packing of the wood decking after removal, as any trapped surface moisture can cause de-equalization, potential mold growth, or water stains. Be aware that the likelihood of sticker marks increases the longer the wood is stored between removal and reinstallation.

It is reasonable to expect some movement of the wood upon removal, as tension addressed during initial installation will be released. Reinstall the wood decking following the fastener manufacturer's instructions.

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