Wood Acclimation, Storage and Handling

Wood Acclimation

Wood dries by the movement of free water through fiber cavities, fiber walls, and the movement of water vapor through the wood. Because wood is not homogeneous, it shrinks more along the growth rings (radial) than across the rings (tangential). Tangential (width) dimensional change is often nearly twice that of radial (thickness) movement for wood species, and (longitudinal) dimensional change in wood is almost always negligible. These shrinkage variations cause drying defects like warping and checking. Shrinkage and swelling cease as the moisture content of wood approaches equilibrium with its environment. Species of wood vary in the rate and amount 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 can occur by either air drying or kiln drying the lumber. The extent of drying defects depends on the species and the rate at which the lumber dries. For much of the United States and Central European countries, the point of equilibrium in the exterior environment is between 12% and 18%. These values can change according to your region/country. Please check accurate EMC levels in your region.

Pre-Installation
Handling and Storage

We cannot stress enough the importance of properly acclimating your exterior wood for the best performance. Wood products should be stored away from direct sunlight, rain, or snow and kept clean, dry, and off the ground before installation. A moisture barrier should be placed on the ground under the wood to prevent condensation inside the packaging while it is stored on-site. Allow 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 some years of use will likely have reached equilibrium moisture content. A moisture barrier should be placed on the ground beneath the wood to prevent condensation inside the packaging while it is stored on-site. Allow wood decking to acclimate and stabilize to equilibrium humidity levels before reinstallation to reduce post-reinstallation movement.

Keep boards dry stored wood decking in a dry location to prevent moisture absorption, which can lead to warping or mould growth. Choose an area that is protected from rain, snow, and excessive humidity.

Ensure proper airflow around the stored boards to prevent the build-up of moisture. Always use "spacers" or "stickers" between rows of decking or siding. This allows air flow between layers of wood, which will help the acclimation process along. Align these stickers directly over one another to keep wood straight

Avoid stacking the boards too tightly together.

If possible, store the wood decking in a shaded area to minimize exposure to direct sunlight, which can cause drying and potential warping. Always cover the top of your stack of wood decking.

Store the boards on raised supports, such as blocks or pallets, to keep them off the ground. This helps prevent moisture absorption from the surface beneath. Never store your wood directly on the ground, driveway or concrete.

The likelihood of sticker marks will increase the longer the wood is stored between removal and reinstallation. It is reasonable to expect some movement of the wood upon removal, as tension that was addressed during initial installation will be released upon removal. Reinstall wood decking as per the chosen fastener manufacturer's instructions.

Remember that wood decking is a natural material that can be affected by environmental conditions. By handling and storing the boards properly, you can minimize the risk of damage and ensure that the decking remains in good condition for installation.

Always refer to the manufacturer's recommendations and guidelines specific to the type of wood decking you are working with, as different species may have specific considerations.