

# How to Acclimate Wood Flooring

Before installing wood floors, the flooring needs to reach a moisture content (MC) level that is in equilibrium with the surrounding environment. This process is known as acclimation. Failing to properly acclimate wood flooring may cause excessive expansion, shrinkage, dimensional distortion or structural damage.

The wood flooring acclimation guidelines below are based on the guidelines of the [National Wood Flooring Association](#).

## The Ideal Temperature and Humidity for Wood Floors

Just like humans, wood is most comfortable within an ideal range of temperatures and relative humidity. In general, relative humidity in the building should be between 30-50 percent year-round for optimal wood flooring performance. Temperatures should be kept between 60° and 80° Fahrenheit. There are geographic exceptions to these guidelines, so be sure to ask your flooring professional and check the product specifications.

## How to Store Wood Flooring at a Job Site

Wood flooring should not be stored at the jobsite under uncontrolled environmental conditions. Make sure wood is stored in an enclosed building. Garages and exterior patios are not acceptable areas to store wood flooring.

Verify the temperature and humidity in the building are maintained at normal living conditions. The best conditions for storing wood flooring will vary from region to region; ask your flooring installation professional about the ideal climate conditions for your floors.

## Measure the Moisture Content of Wood Flooring

Immediately upon delivery, check the moisture content of your wood flooring with a moisture meter. This measurement will establish a baseline for acclimation. To ensure a more accurate measurement, check the moisture content of multiple boards – typically 40 boards for every 1,000 square feet of flooring.

Next, you'll need to calculate the optimal moisture content. To begin, determine the expected seasonal change of wood moisture content for your location.

Acclimation may not be required if wood flooring is delivered and recorded at the baseline moisture content for your geographical location and if proper relative humidity conditions are maintained. On the other hand, if the moisture content of the wood is well outside of the optimal moisture content range, it may be very difficult to acclimate the product properly. In these circumstances, excessive shrinkage, bowing, and cupping of the wood may occur.

## Before Installation: Operate Heat and/or Air Conditioning Systems

Permanent heating and/or air conditioning systems should be operating at least five days before you install your wood floors. This will allow the wood to acclimate to actual living conditions

inside the building. Heating and A/C systems should continue to operate at normal conditions during and after installation.

If it is not possible to operate the permanent heating and/or air conditioning system before, during and after installation, a temporary heating and/or dehumidification system can be used to allow the installation to proceed.

## **Reaching Equilibrium Moisture Content**

Prior to installation, wood flooring should be within acceptable range of moisture content with the wood subfloor.

- Solid strip flooring (less than 3" wide) should have a moisture content no more than 4 percent different from the moisture content of your subflooring materials
- Wide plank solid flooring (3" or wider) should have no more than 2 percent variance in moisture content compared to subfloor materials.

When wood is neither gaining nor losing moisture, equilibrium moisture content (EMC) has been reached. The chart below indicates the equilibrium moisture content of wood flooring at various temperatures and humidity conditions. Most flooring manufacturers use a 6-to-9 percent range for equilibrium moisture content – any higher or lower and wood flooring can shrink or swell dramatically.