

wood flooring has a comfort level too

Wood is a porous material with a natural cellular structure that expands (swells) and contracts (shrinks) depending on the amount of relative humidity present in the surrounding atmosphere. As a result, the moisture content of the wood is a function of the atmospheric conditions and depends on the relative humidity and temperature of the surrounding air.

Wood flooring performs best in a controlled environment with a consistent room temperature between 60–75 degrees Fahrenheit and relative humidity between 35%–55%.

Fortunately, that is about the same comfort range most humans enjoy.

Wood flooring is manufactured to required moisture content, then acclimated to each individual job site's requirements before installation. Some movement can be expected as the wood's moisture content changes with different seasons. This movement is natural to all wood products and will manifest itself as gaps between the floor boards in dry winter months, and in turn, close during more humid summer months. Windows, doors and cupboards that are difficult to open and close in wet or humid months and operate freely in the drier months are also examples of the natural movement in wood.

When job site conditions move beyond the recommended parameters, major problems can occur. The more the site deviates from the recommended relative humidity of 35-55% the more dramatic the problems with the wood flooring product may be.

This includes even more dimensionally stable wood flooring like engineered floors. **Engineered flooring with a thick-sawn wear layer, such as the BR-111™ Dolomites and Triângulo® lines requires a controlled room environment of 35%–55% relative humidity. If the relative humidity drops below 35%, the top wear layer of sawn face wood will shrink and the floor will exhibit dry cupping, face checking or cracking.**

If the relative humidity increases above 55%, the top wear layer of sawn face wood will swell and exhibit crowning.

In drier desert areas like Nevada and Arizona and high altitude areas such as Colorado, the danger is usually from too dry an environment causing the relative humidity to drop below the recommended 35%. The same problem occurs in the colder climates where we use central heat in winter and dry out the interior environment. Areas like the northeast and mid-west are well known for floors shrinking during the winter heating season. The use of a humidifier is highly recommended and will help keep movement and shrinkage to a minimum by controlling the low relative humidity. Proper use of a humidifier not only makes for a more comfortable condition for the floor but may also create a greater comfort level for the inhabitants. Installing a humidifier is a recommended action and a good "insurance policy" for the consumer who has already invested a large amount of money in a wood floor system.

In more humid areas such as Florida, the Gulf Coast, South Texas and Southern California, the danger is from too high a humidity causing the wood to swell. This is best controlled with the use of an AC system.

The continental US has dramatically different climates. Some regions have extreme variation in climates within the four seasons. Throughout these changes, wood will move to meet the conditions present. The best way to control movement of a wood floor is to control the conditions in which it exists.