

## HOW TO SPOT AND AVOID TROUBLE IN HARDWOOD FLOORS

In a comfortable home with slight humidity variation through the seasons, wood flooring responds by expanding and contracting. These changes may be noticeable. During warm, humid weather, wood expands. During dry weather, wood contracts. This seasonal movement is a normal characteristic of wood flooring, and it never stops, regardless of the age of the wood. One of the best ways to ensure that wood flooring will give the performance homeowners expect is to install humidity controls and ensure that they are functioning before the flooring is installed.

### **Working with Humidity Controls**

A home owner who chooses hardwood flooring is making an investment in a floor that will last 40 years or more, and he or she should protect that investment by installing humidity controls – a tool that helps the floor maintain a beautiful, trouble-free appearance.

### **Cracks and Separations Between Boards**

Nearly every floor endures some separation between boards. In winter, when homes are heated and the air is dry, wood flooring gives up some of its moisture and therefore shrinks. When that happens, thin cracks appear between. This is normal, and homeowners should be forewarned of this. It is acceptable, and customers should not be calling the installers at the first sign of cracks. Once the indoor heat goes off in the spring, and the indoor environment regains moisture, most of these cracks will close up.

Cracks in winter – in the drier months – may easily develop to the thickness of a dime (1/32 inch) for solid 2 ¼ -inch wide strip oak floors. Floors with light stained woods and naturally light woods like maple tend to show cracks more than darker, wood-tone finished floors.

The cure for cracks? Homeowners should add moisture to the air during dry periods. It's their choice – live with the cracks and wait until spring, or else add humidity by opening the dishwasher after a rinse cycle, switching off the bathroom fan or hanging laundry to dry in the basement near the furnace. Better yet, install a humidifier in the furnace, or an exterior air vent for the furnace burner.

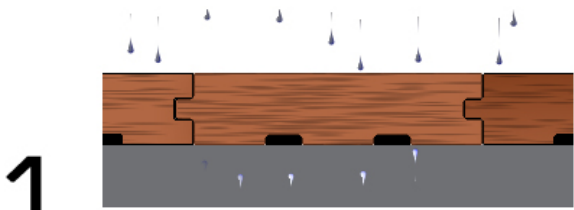
If cracks are a concern, laminated flooring moves less and shows fewer gaps.

## Cupping and Crowning

“Cupping and crowning” are common complaints that develop with high humidity. Both problems occur across the width of the flooring material

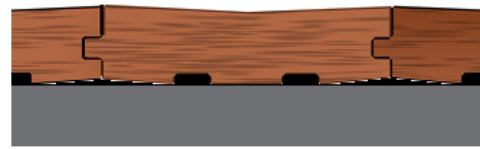
Cupping is when the edges of a board are high and its center is lower. It can occur after water spills onto the floor and is absorbed by the wood, but high humidity is more often the cause. If the wood expands significantly, compression set can result as the boards are crushed together, deforming the boards at the edges.

Cupping is caused by a moisture imbalance through the thickness of the wood: the wood is wetter on the bottom than on the top. The moisture imbalance can be proven by taking moisture meter reading at different pin depths.



1

Water spilled on the surface of the wood flooring or rising through the subfloor ends up trapped between the wood flooring and the subfloor.



2

Cupping occurs when the bottom of the wood flooring remains wetter than the top surface, which dries faster than the bottom.

3



If the floor is sanded before the boards have had a chance to thoroughly dry and flatten out on their own, the top surface will initially be flat, while the bottoms of the boards remain cupped.

4



Crowning occurs when the bottoms of the boards eventually dry and flatten out, leaving the tops of the boards with a convex profile.