

## **TECH TIPS**

(By Steve Marley)

### **THIS FLOOR DOESN'T MATCH THE SAMPLE I LOOKED AT, AT THE STORE!!!**

*Nature of Complaint (color issue):*

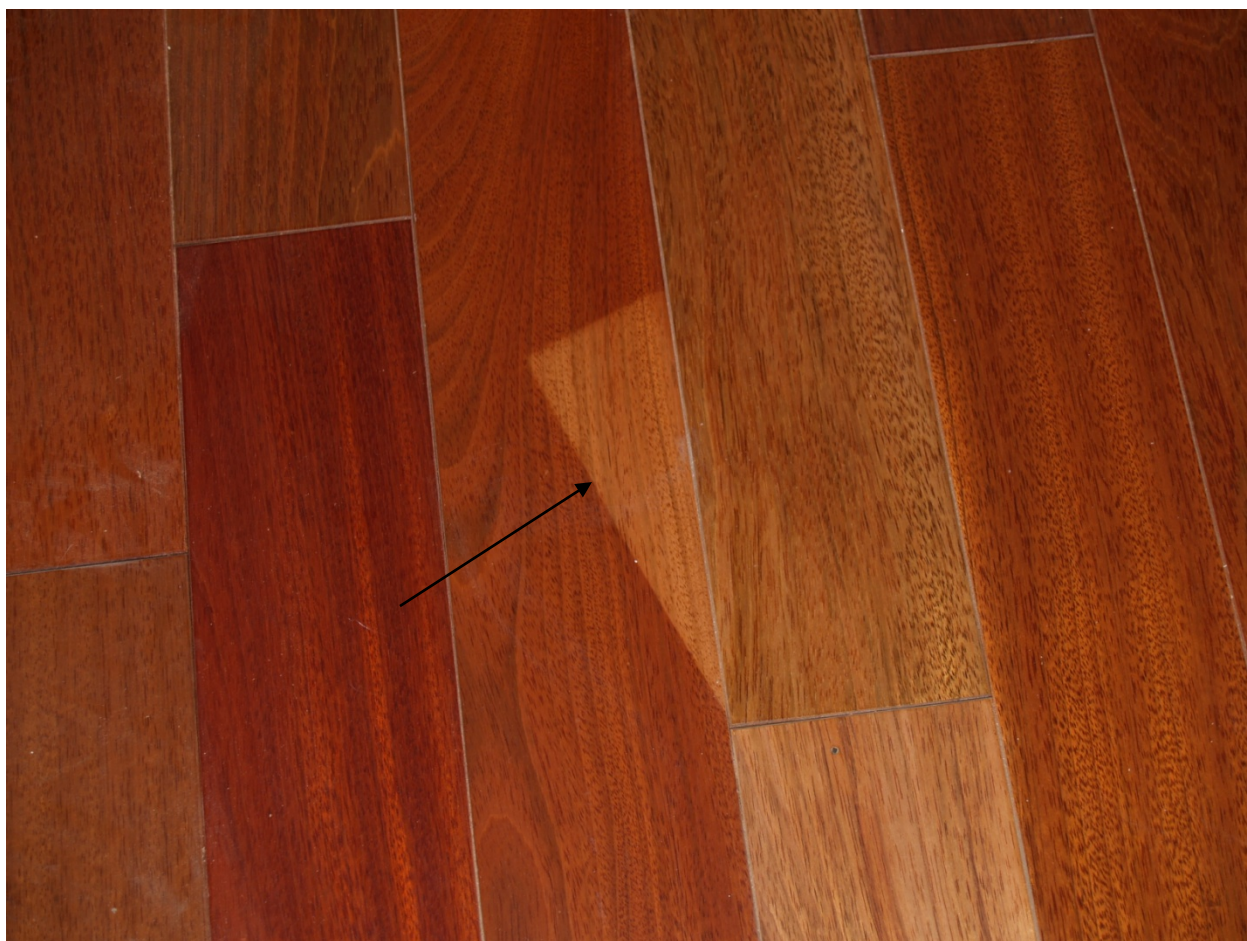
Could this have been prevented?

A typical scenario is one in which the end-user goes to their local wood flooring retailer and picks out a floor based on a sample in a display rack. So far so good; right? In most cases I would say yes (i.e., the installation goes without a hitch, the color is perfect and the end-user is happy). That being the norm there will be times when you'll receive a call from your customer complaining that the "recently" delivered/installed floor looks different (with regards to color) than the sample they looked at while at the store choosing their floor. They are convinced that the stain used on the floor is different than what was used on the display sample. Moving forward, you (the sales person) go to the job site with the display sample in hand, place it on the floor and notice a difference in color tone (i.e., lightening/fading or darkening) between the sample and the floor. At this point, you are left wondering why??? I've sold thousands of sq. ft. of this material without any complaints until this one...I'm beginning to think my customer is right, maybe it is a manufacturing related issue!

Okay, now let's take a look at what could have caused the floor and sample to take on a noticeable difference in the overall color tone.

- First we need to recognize that most all wood is "photosensitive," which simply means that when exposed to UV light it can/will affect the color of wood (i.e., it can/will cause the wood to lighten or darken). A perfect example of this is with Jatoba/Brazilian Cherry...Brazilian Cherry when freshly cut exhibits a color tone close to a light salmon pink and/or light cinnamon/orange. When exposed to UV light it can change to a deep

reddish gold, to orange gold, to cinnamon brown gold. **Please refer to the following picture:** (Notice the clearly defined area of lighter to darker wood within the same board. The lighter area was protected from direct UV exposure by a piece of flooring that was simply laying on the surface of the floor).



- We also need to understand that the dyes we use to color wood are not color fast. This is because dyes are subject to photodegradation. This simply means that when exposed to light (i.e., UV light, florescent light, natural light etc.,) it will begin to break-down the molecules that make up the dye. Dyes are also sensitive to heat. Heat can also break-down dyes...The end result regardless of causation is a fading away from the original color produced at time of color application. **Please refer to the following picture:**

**Note:** The board leaning against the display sample was taken from a newly opened box of material. The display panel (in Johnson's COI showroom) has been exposed to UV light for the past year. Notice the degree of fading with the display board as compared to the board protected from the effects of UV light.



Educating the dealer/end-user about the effects that UV light has on dyes:

- Explain to them that wood and dyes are photosensitive and that they can/will change color over time, especially when exposed to UV light
- Explain to them that UV filters (i.e., UV tints/films placed on windows) don't STOP fading, it simply slows down the process

- Explain to them that research shows that 40% of fading/color loss can be attributed to UV light. An additional 25% of fading comes from heat, with 25% linked to normal visible light and 10% associated to artificial lighting
- UV light/rays cause more long term damage to wood furnishings (i.e., wood floors and furniture), fabrics, carpet and wall coverings

Educating the dealer/end-user about the effects that UV light has on wood:

- Some woods will darken or lighten when exposed to UV light. These changes may be subtle or severe as illustrated in the photos above
- Recommend that East and South facing windows (where wood flooring will be installed) provide protection from UV rays. In addition, provide heat shield protection.
- Dealer should assume that their display sample can/will change color over time and as a result it should be standard practice (prior to installing the floor) to open a box of material and compare it to the display sample. By going through this step and allowing the end-user to give their final approval before installing the floor, can/will avoid a potential claim down the road

Steve Marley  
Technical Director  
Johnson Hardwood