

Don't turn up the heat!

Why moisture is probably the leading cause of wood flooring callbacks

I'm increasingly getting complaints about wood flooring situated over underfloor heating (UFH). The most common complaints, in no particular order, are to do with gaps, splits, delamination and cupping. I've written about this issue before, but am still getting more and more complaints.

Most complaints are unavoidable owing to the consumer just simply turning up the heat regardless of having been advised by the retailer or contractor of what not to do.

We have to remember flooring people aren't specialists in UFH and as such should limit their involvement and simply ask the consumer to seek information from the specialist UFH manufacturer which installed the system. There are many different types with different claims so why put yourself in that position?

Let's discuss what it is that makes UFH so intimidating and potentially trouble-prone: It can be summed up in one word: moisture. Even without UFH/radiant heat, moisture is probably the leading cause of wood flooring callbacks.

Add UFH, and the potential for moisture problems is greatly increased, because radiant heat dramatically exacerbates moisture fluctuations in a wood floor.

To understand that, it helps to know a little bit about how radiant heat systems work. The concept is familiar: the heat we feel from the sun or from a fireplace is radiant heat. Radiant energy travels through a space without heating the space itself (unlike a typical forced-air heating system, which actually warms the air).

When radiant heat comes across a cooler surface, it attempts to equalise the temperature difference, giving off its heat.

A radiant heat system heats the materials around it, in the process drying everything else as well. It drives moisture from the joists, the slab, the subfloor – and the flooring.

Wood flooring contractors who typically get

away with not playing by the moisture rules will find their luck has run out when they attempt to do an installation over UFH.

Just as important as what you do on the job site is what happens after you leave. Even the most stable product with the best installation, sanding and finishing job can have problems if the homeowners don't maintain the environment of the home.

Stabilising humidity, whether that means adding moisture in winter, dehumidifying in summer or whatever else, is critical to the success of the floor. And homeowners need to understand that even with humidity controls, it's natural for the floor to shrink and swell.

The problem I come across is the lack of technical knowledge with UFH, which leads to issues with gaps and, in the worse cases, delamination, and splits, which I have to say, are the most common issues.

As previously stated I don't believe it should be the responsibility of the contractor but the UFH company or both to get the correct info to the consumer on what type of floor is suitable in terms of thickness and after-care.

The installation over UFH needs a lot more detail and knowledge on such things as surface temperature and types of subfloors associated with UFH. I see many gaps in floating wood floors owing to insufficient adhesive applied or incorrectly applied.

The retailer or contractor argues with my findings occasionally. I've even set the calipers to the dimension of the product and shown them the set calipers against the large gaps. I indicate to them that the floor hasn't shrunk below the milled product they've installed but the glue joint has failed, yet they still argue, clearly not understanding the cause.

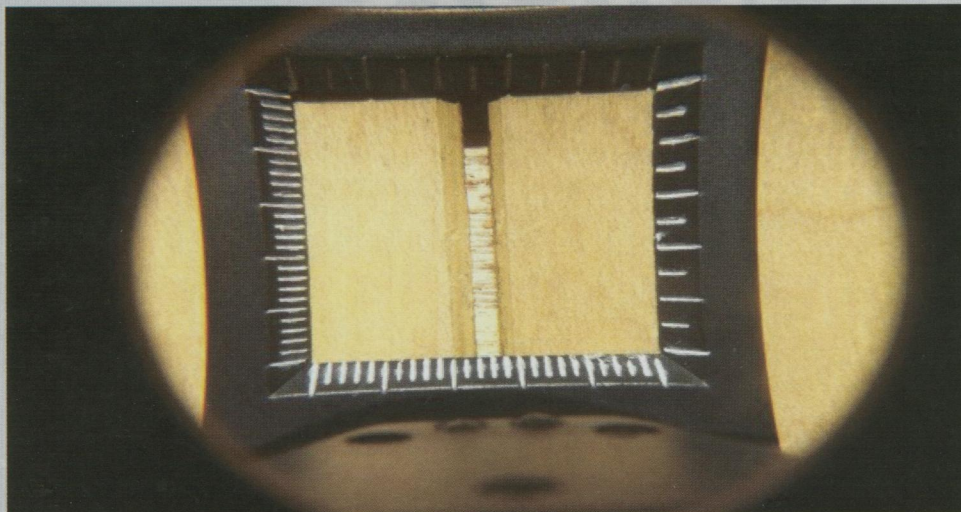
I've tried to help many retailers with this but they don't listen or learn from the mistakes.

I also blame some manufacturers, as



Contractors who ignore the 'moisture rules' will find their luck has run out when they try to do an installation over UFH, warns Sid Bourne

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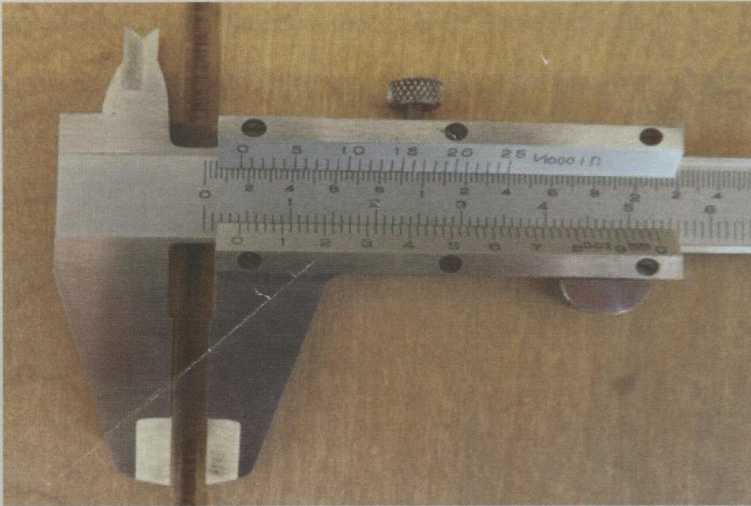


This photo shows a typical joint that has broken down owing to thermal movement and insufficient adhesive. The joint was completely void of adhesive. Eventually, Sid took the planks up and found part adhesive applied into grooves.

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This photo shows the gaps at 4mm random space throughout the floor. The milled dimensions are the same, so the breakdown of joints is obvious owing to insufficient adhesion and thermal movement.

opposed to suppliers, who don't update their instructions when applying adhesive to flooring joints with respect to UFH.

When to apply more adhesives

At the BWFA (Wood Flooring Association) we've carried out many installations on UFH with floating floors using different application of adhesive to joints and have discovered applying adhesive to the top or the tongue of the groove leaves the joint amazingly strong and able to withstand thermal movement.

We also say, if in doubt, apply adhesive to the top of the tongue and base of the groove for an even better joint. Other causes of gaps with UFH include installing the wood floor at higher moisture content. This inevitably will result in the floor shrinking.

I find most installers apply adhesive into the groove. Some apply plenty of adhesive while others just apply bits of adhesive. Because they get away with it on non-UFH subfloors they think it will work on UFH. Unfortunately, in many cases this doesn't work and causes the joint to breakdown owing to insufficient grab.

I've demonstrated this hundreds of times to retailers and contractors who've attended BWFA courses. I get many calls saying they've had no more issues since adhering the joints this way when installing over UFH.

Splits and delamination are another point I should mention with respect to UFH. I regularly find the consumer will automatically say it wasn't them – they deny having turned their heating up, or insist it was set to 18degC or some other silly figure.

All this tells me is they've done a bit of research after the event and, knowing an independent is visiting to inspect the floor, they scramble for any excuse they can find.

Most splits I discover are in the rustic grades and are, in my opinion, obvious suspects for further splitting to occur. And when the heating is

rammed up – hey presto! – the floor splits.

Delamination is another issue. I don't have sufficient space in this column to fully describe the causes, but I will tackle them in a forthcoming column.

At the BWFA we run courses associated with flooring and UFH so installers, suppliers and retailers can see the issues, the causes of the issues and how to detect them.

The most common cause of splits and delamination is down to the consumer turning the heating up beyond what it should be. The consumer will turn the heating thermostat up to 27degC, which they believe is the maximum. Sadly, depending on the system, all they're doing is roasting the floor.

I have to go to site to determine the cause, which I can easily do. But all too often either the consumer or the retailer don't believe me – even though I've physically identified the cause. Frustratingly neither party wants to take responsibility.

I always offer my help to amicably resolve issues and, in most cases, both parties listen and learn. Sometimes, though, there are those who just refuse to take advice.

It baffles me why retailers and contractors don't compile a simple A4 paper with obvious things to avoid – such as ramming up the heating – and get it signed by the consumer. Any additional information gleaned from the UFH manufacturer all helps as it will help avoid the blame game.

I often get the consumer telling me the retailer or contractor never advised them not to ram up the heating, then I get the retailer or contractor telling me the opposite. With all due respect, I can only go by what is put in front of me, which would be helped by a signed document from the consumer with all the instructions of what not to do.

Simple really.

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