

Help and advice



Peter Grant on measuring dampness

This time we take the fun out of fungus!

YOU have heard of dry rot, wet rot and tomy rot. They are all the same aren't they? Well, unsurprisingly, no actually.

Dry rot (*Serpula lacrymans*) and wet rot (*Coniophora puteana*) are moulds which are a type of fungi, there being four others, namely mildews, mushrooms, slimes and rusts.

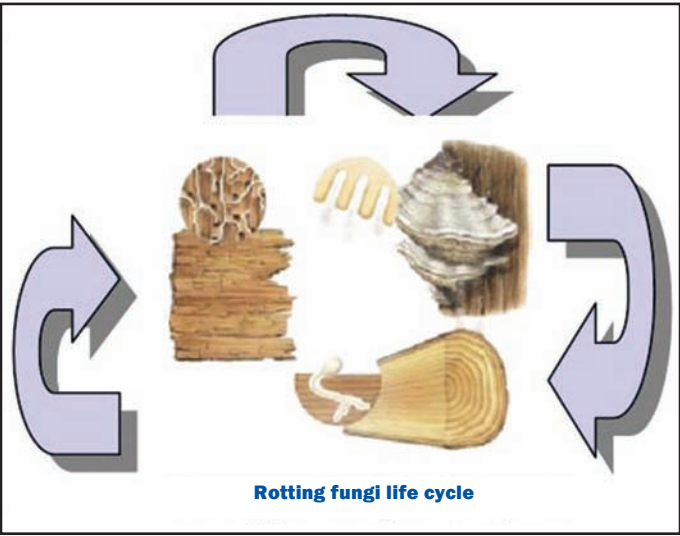
What is common to all, though, is the requirement of moisture in excess and a food source, which in this case is cellulose or lignin. So how much is too much I hear you ask?

This depends on whether we are looking at dry rot or wet rot. Dry rot typically demands a moisture content slightly in excess of 20% or more by weight in timber; those of you who have been following this series will know that 20% moisture content in timber equates to an equilibrium relative humidity value of about 75%.

The reason it is called 'dry rot' is because the timber is not at what we call fibre saturation. Wet rot, on the other hand, develops in timber under conditions of fibre saturation in which moisture contents of 50% to 60% are the norm.

Under these conditions we would also experience equilibrium relative humidity's of 100%, in other words very wet indeed and, for this very good reason, wet rot is also sometimes known as the 'cellar fungus' – no moisture meter required to confirm these conditions then!

So which is the more important to detect and guard against? Most experts agree that it is the dry rot fungus which can cause the most damage for two main reasons.



Firstly the moisture content at which the fungus can thrive and complete its life cycle is below that of fibre saturation in timber species and timber will look dry and feel dry to the touch.

Secondly, this fungus is malignant in nature in that it can travel through masonry in its quest to reach new food supplies (more timber).

As a floorlayer, should you be bothered about these fungal infections? Does their presence influence the course of actions you should take when preparing the subfloor and fitting the floor proper? Yes and yes!

Firstly their presence will confirm either the moisture content was, or still is, at a high level, high enough to give you concerns regarding the performance of adhesives and the movement of timber products.

You should also be aware that the structural integrity of the subfloor may be severely compromised and the last thing you want is a call back to say

that the new floor you have fitted has now collapsed in the middle of the lounge!

Secondly, you have a duty of care to the property and its occupiers to alert them to these conditions so that appropriate remedial measures can be taken.

Where are you likely to

find these problems, old buildings or new? Well, both can be affected but it is probably true to say one is more likely to come across problems in older properties, particularly Victorian terraces with timber suspended floors and in some cases, cellars.

What do you look for? For a start it is imperative that timber suspended floors have a good uninterrupted air flow from the front of the property to the rear. For this to be the case, air vents must be clear and not impeded by any objects such as garden waste, vegetation, bin bags etc.

Also, it is not unknown for ground levels to be raised above the DPC and sub floor vents where driveways and hard standings have been put in. I have also come across many cases where the vents have been deliberately blocked in an effort to reduce drafts coming up between the floorboards – call me old fashioned but what's wrong with a few rugs?!

So having done the outside survey and found all of the vents in good working order, do you need to lift floor boards inside? Some would say that a satisfactory outside inspection is as far as you need to go, however for peace of mind I personally would want to take up a few boards, inspect visually

and take readings with a hygrometer and moisture meter.

More discretely this can also be accomplished by drilling a small access hole and using a borescope or endoscope to make the visual inspection together with the insertion of an RH sensor remotely linked to the hygrometer.

If the humidity recorded is in a normal range, say 50% to 70%, and any moisture meter readings in the timbers are not exceeding say 16 to 18%, then one can be confident that conditions at the time of inspection will not support the growth of these moulds, but that is not to say that they might have been damp before.

By the way, whilst carrying out inspections which focus on dry rot, it is a sound idea to install dry rot sensors which can remain in the building and passively monitor for the presence of dry rot inoculums.

These sensors are manufactured by Fugenex (see website: www.fugenex.com for details), and are available from a



number of specialist re-sellers in the UK. They can be installed in both timber and masonry.

A colour change from blue to yellow indicates the presence of dry rot in good time to enable effective remedial measures to be taken.

So there you have it – and just when you thought it was safe to get on your knees again - excess moisture can have more effects than simply emulsifying adhesives and swelling timbers, it's hot to rot! **CFJ**

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