

MOULD ON TIMBER

Have you noticed that in general there are certain items that tend to come up in clusters; giving rise to sayings such as *"Things happens in threes"*? If you really look at each of the individual events, how coincidental are they? One of these that as timber specifiers and suppliers is easily explained but somehow tends to catch us off guard is mould and algal growth on structural timber during construction. Is it a structural issue, is it a health issue, and do you have the correct knowledge to answer these inevitable questions?

To start off with we should get a general understanding of what mould is? The mould that grows on timber is a form of fungi that generally belongs to the class Fungi Imperfecti. They are variable in colour, ranging from white, through pinks and blues to greys and black. The colour is a result of the pigmented mycelium (fine threads that make up the fungi) and the mould can exist as spots, have a furry appearance or even a cobweb like appearance. Mould will only grow if the substrate contains the simple sugars it uses as a food source, there is oxygen present, the temperature is right, and most importantly if there is sufficient moisture. This moisture can be either as background humidity or in the substrate itself.

ALL TIMBER IS PRONE TO MOULD.

This includes H2 treated framing and even CCA treated outdoor timber if the conditions are suitable. Mould spores are present almost everywhere in the environment. They are in the air we breathe, on all the surfaces we touch, and in most organic substances to some extent including food, soil, timber and furniture. They only become active and start growing when they come in contact with the right environment. Mould is only a surface effect and does not affect the strength of the timber. The fungi feeds on the sugars within the cells but not on the cell walls that provide strength and stability to the timber.

It is not unusual for mould to occur during the building process, especially during periods of wet weather. More humid areas such as Far North Queensland exhibit this every year during the hot humid Summer months. Framing becomes damp before being covered over by the

roof and this creates an environment for mould spores to grow. Once the timber is protected however, the moisture content should quickly drop below the 19% required for mould development and it will stop. The discolouration may remain and any flowering parts will fall or brush off. It is important to leave suitable time for the timber to 'dry out' before installing the final linings otherwise you could trap moisture inside the wall and create future mould issues. It should be noted that if timber is exposed to extended periods above 20% moisture content this will tend to cause fungal decay rather than mould, which does affect the timber strength and requires attention.

How do we remediate the building once mould has been encountered and the timber has been allowed to dry out? As the mould will be encapsulated within the wall and conditions are not conducive to further growth (moisture is not present) no further work is really needed. Builders may brush off any flowering or fluffy areas just for aesthetic reasons, noting that the discolouration will probably remain. In cases where people have increased sensitivity the inactive spores can be wiped or brushed off using common cleaning agents such as mild detergent, vinegar, bleach, or oxalic acid. Mould spores cannot be permanently eradicated by cleaning or disinfecting. If conditions become suitable again the mould will regrow.

A well-designed and well-constructed home will not support conditions suitable for mould growth. The mould that can occur during construction will become inactive once the timber is protected from moisture and allowed to dry out and will stay dry enough to prevent the spores from becoming active again. If there is continuing mould growth this leads to issues of moisture ingress which could be from plumbing or air conditioning system leaks and involves further investigation. The appearance of mould during construction is solely based around moisture, so as it is weather dependant you will not usually only have one query. It is important to educate the builders who can then pass this information on to the home owners and put their minds at ease.