

Moulds on Timber

July 1999

Occurrence

Moulds and algal growths occur on both treated and untreated timber and on timber that was kiln dried at the sawmill. Their presence is related to temperature, humidity, wetting and the presence of atmospheric mould spores.

The mould growth can be sooty black, unsightly and spread rapidly in favourable circumstances, especially warm humid weather.

Moulds and algae are a surface effect and do not penetrate the wood structure. Sapstain and decay fungi penetrate the wood and actively grow within the wood section.

Both sapstain and moulds can be black in colour. Some moulds are green in colour but algae are associated with surface water as compared to high moisture content timber.

Moulds occur on both kiln dried, untreated timber and on H1 and H3.1 treated (Boric and LOSP treated framing). Moulds will occur on CCA treated timber and algae on wet outdoor CCA timber. Wet boron treated framing has effective short term mould resistance when exposed to weather. After about three months this dissipates and mould or sapstain may occur.

Kiln dried framing where anti-sapstain chemicals are not used, ie, Laserframe, may develop surface moulds in wrapped block stack if the timber becomes damp. The conditions under the wrap have become ideal. If the spores are around, it may develop on frames exposed to weather and in suitable warm, humid conditions where the timber has become wet.

Effect of Moulds

Moulds are a surface effect. The wood is not weakened by their presence even for lengthy periods. In wet situations, e.g. decking, moulds or algae can be slippery, which becomes a safety issue. With appropriate treatment these are not a decay hazard.

At high moisture contents for long periods, fungal decay is a hazard and may require investigation. Surface moulds do not result in damage to the wood structure or loss of strength during normal construction periods. Where weather exposure becomes gross, they may become associated with fungal attack and some elements, e.g. bottom plates, may require investigation.

Termination

Below about 18% moisture content, mould development will cease. In the case of mould on framing, close in and dry out will eliminate its presence although there will be discolouration. The flowering parts will fall or brush off and will have no effect on dry cavities. Similarly, dry out eliminates surface algae.

Action

Surface mould on Laserframe or H1 treated framing during normal construction does not require specific action by the builder.

Cutting out of bottom plates at doors and windows early and provision for floors to drain in wet weather is strongly recommended as is early close in. Investigation may be required if building is interrupted and framing is exposed for exceptional periods. Where concern is raised, specialist investigation for the presence of significant decay fungi may be required. It is not possible to generalise on how long an exceptional period is, and local conditions would be important.

Remediation

Although moulds do not affect the performance of the timber, the application of proprietary products, such as 30 SECONDS or Wet & Forget®, can restore the appearance of the product.