



# Healthy Homes IAQÔ

BUILDING INSPECTION SERVICES IAQ REPORT.



## CRAWL/ ATTIC SPACE REMEDIATION FOR NON-TOXIC/ NON-PATHOGENIC FUNGI

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Blackening/ browning discoloration or staining may be a form of fungi/mould from the ongoing development of excess moisture in the space. Black staining can occur around bathroom exhaust penetrations at the roof membrane level, or occur in a general fashion over larger patches of plywood due to moisture leaks or vapour transmission from the living space. Discoloration can be in the form of black dots. The more prevalent version of this has the black dots forming a black mat of discoloration.

In some cases, a dark brown stain can cover large portions of the roof plywood, but seldom stains the roof trusses/ rafter; although the trusses/ rafters can have some black spotting.

Each of these cases tends to occur with incorrectly sealed dryer and bathroom exhaust piping, leaks in roof membrane, and under ventilated attic spaces. As such, these surface discolorations appear to be caused by excess moisture in the attic space over time. Coincidentally, the occurrence of the general brown/ black plywood staining more often than not develops in electrical baseboard heated homes that have little to no ongoing mechanical ventilation (as provided by code in air exchange heating systems – forced air electric, gas, or oil furnaces). To inhibit future stain growth, provide ventilation to roofing standards.

Determining if the surface discoloration is a mould requires laboratory testing. Although the furry type richly colored growths are most likely mould, laboratory testing is required to determine if the product is toxic to humans or not.

In any event, where the fungi/ mould is not toxic, protective clothing should always be worn with an approved full fitting respirator for clean up. The services of a Professional mould remediation Expert – such as flood restoration companies, should be obtained if the product is found to be pathogenic (subject to causing disease in humans); or toxic. If you are the

homeowner, you should refer to your home insurance policy for coverage and Professional references. All insurance claims with flood damage utilize these Professionals for remediation purposes.

Should the home owner decide to conduct a remediation program on their own, there are some simple procedures that can be done to limit or destroy fungi/ mould growth.

The stained areas should be cleaned with a 10 % bleach, 90% water solution, with two drops of liquid dish soap (in a one gallon mixing bucket). This solution can be sprayed on using an easily available garden spray bottle. For more extreme circumstances, commercial grade disinfectants, such as "Sanicide" which is used for livestock building disinfectant, can be applied – but only by Professionals. This is toxic stuff, but it kills all bacteria, moulds, growths, etc. In most cases, the bleach solution would be adequate. Further laboratory and air sampling testing may be required to ensure the removal of all airborne fungi/moulds in the attic space.

If the stained areas are not cleaned, seal all openings in the ceiling; such as, light fixture penetrations and attic access hatches. Hatches should be weighed down and sit on a good quality foam gasket material. Plastic "boots" can be purchased from hardware stores that fit over electrical penetrations. These "boots" should be caulked and mechanically fastened per manufacturers recommendations. Consult a Professional prior to any remediation program being undertaken.

This is a work in progress. The information contained herein was compiled by Healthy Homes IAQ from sources believed to be credible. This information is provided to help less informed home owners take appropriate steps towards verifying their health and safety during the process of restoration and in determining the scope of the impact. While a reasonable effort has been made to ensure accuracy, the user takes responsibility for the use of this material and will conduct their own assessment of all pertinent information that they can obtain.