siniat

the siniat guide to **indoor mould**

etex inspiring ways of living

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about **us**

Siniat is one of the Etex Group's flagship commercial brands, and one of the leading global manufacturers of interior and exterior materials for drywall construction.

In Australia, Etex has Siniat manufacturing facilities located in Sydney, Melbourne, Bundaberg and Brisbane. Etex supplies Siniat branded plasterboard, compounds, cornice, steel profiles and associated products and systems to the Australian building industry through its national distribution network.

Siniat's comprehensive range of quality wall and ceiling lining products are developed with specific characteristics to enhance performance and provide fire, water, acoustic and decorative solutions to all construction projects.

The Siniat team is committed to providing excellent technical service and sales support to help with innovative solutions for your next project.

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introduction

Excessive mould in a property is always bad news.

Mould makes its presence known by a musty, earthy odour and unsightly white, green, dark grey, dark green, black or brown spots and stains.

Mould can also have a serious economic impact. A mould infestation can lead to damage to material and costly remediation, the loss of tenants and decrease the value of a property.

Mould spores may cause some people to experience allergic reactions, and are suspected of causing health issues in some people with a compromised immune system or pre-existing health condition.

These are all valid reasons to make mould a very unwelcome house guest!

where does mould come from?

Mould and mildew are living organisms known as fungi. They are present virtually everywhere, indoors and outdoors.

It is estimated that there are over a million species of mould, and indoor air will normally contain thousands of mould spores in each cubic metre.[1]

It is only when conditions turn favourable that mould growth tend to get out of hand and cause a problem. Mould can then take hold and spread very quickly – from 24 hours to 10 days after the provision of growing conditions.

When the conditions are right, mould can grow on any surface – even glass and stainless steel.

A couple of factors are needed for mould to grow: a source of moisture; oxygen; the right temperature and a source of food.

Mould is not a fussy eater: any organic material such as the cellulose in wood, dead dust mites or the feces of cockroaches will do. But it cannot live without water - no water, no mould. Therefore attempts to remove mould will fail if the source of moisture is not addressed.

There are many ways in which moisture can enter a home. It can be due to a roof leak, a broken pipe or a blocked air-conditioner drain.

Often the actions of the occupants lead to the problem, e.g. drying clothes indoors without proper ventilation or not switching on the extractor fan when showering or cooking.

Such activities lead to condensation and dampness inside the building.

Also read our blog
Condensation and the NCC: What's changed?

In Australia a mould issue often occurs after flooding and subsequent water damage to buildings.

mould on plasterboard

When mould is spotted on internal (and painted)plasterboard surfaces such as the ceilings and walls in a bathroom, it is most often the result of poor ventilation and condensation.

In such situations thorough cleaning should do the trick. According to Dr Heike Neumeister-Kemp, co-editor of the first *Australian Mould Guideline (AMG, 2005)*[5], this type of mould growth is the least of your problems.

"If it's just condensation, it's cheap. If it sits on top, it's cheap," she told the Australian consumer advocacy group **Choice**. "But if the mould is growing into the ceiling and it's porous, then it's expensive."

(Refer to **'Getting rid of it'** for effective and cheap ways to get rid of surface mould.)

Painting over mould without cleaning it first is a bad idea. Painting may temporarily hide it, but it won't solve the problem and the mould will simply continue to grow under the paint and reappear after a while. If painting is required, the area will have to be thoroughly cleaned, allowed to dry and then painted with a mould resistant paint.

As with any other mould combating strategy, the source of moisture needs to be identified and addressed, or the mould will keep coming back.

When mould grows on unpainted plasterboard, the lining paper will provide good mould food because it contains cellulose, but unpainted plasterboard can also be cleaned and allowed to dry without the need to replace it. It is only when the mould starts growing inside the porous core of the board, or seep through to the other side, where it will have to be assessed and possibly replaced.

Siniat offers a range of mould-resistant plasterboards. These boards contain special additives that make them water and mould resistant, even under severe conditions.

Read more under 'Choosing smart products and systems'.

When plasterboard has been inundated with water for a prolonged time, the presence of mould is not the only problem. Any plasterboard that has been exposed to excessive moisture in its lifetime will have to be assessed and possibly replaced, because moisture may affect the integrity of the board.

(More about this under **'Flooding'**.)

health issues

Mould is generally harmless and will not cause health issues for the majority of the population, but a small number of people may experience allergic reactions or more serious effects through exposure to mould.[2]

Mould may impact the health of people with allergies, asthma, weakened immune systems and/or other health conditions.[3]

According to a 2018 Parliamentary report[4] the prevalence of a condition referred to as *Chronic Inflammatory Response Syndrome* (CIRS) has been described in Australia and internationally as a biotoxin-related illness. There are a range of views within the medical profession regarding the relationship between mould and the range of physical and cognitive symptoms identified as related to CIRS.

flooding

Excessive mould growth is always a risk after flooding in a building. High mould levels are likely if the building has been flooded for more than two days. The key to preventing mould growth is to clean up and dry out the structure as quickly as possible (within 24 to 48 hours).[6]

The risk of mould growth is not the only factor that necessitates assessment of the plasterboard after flooding. Damage than can occur to the board due to the water exposure itself.

When plasterboard is exposed to elevated levels of moisture for an extended period, it may affect the integrity of the plasterboard and its ability to perform its intended function.[7]

Read more in our blog
Wet plasterboard: Repair or replace?

An added risk introduced by flooding in a home, are contaminants (including raw sewage) that may be in the water. This can lead to further health risks in the building, such as the growth of harmful bacteria.

Ceilings that have been inundated with water will often need to be replaced if it's been in contact with saturated insulation. Water will likely have pooled for a long period and compromised the fixings too. A sagging ceiling is a usually an indication that replacement will be necessary.

Depending on the situation and the duration of inundation, plasterboard may have to be replaced after flooding, whether severe mould growth is yet present or not.

hidden mould

Sometimes mould growth can go unnoticed for a long time because it is hidden. It is unlikely that even hidden mould growth will be unaccompanied by the tell-tale musty odour and therefore all mouldy odours need to be investigated.

Examples of hidden mould growth are infestations behind appliances such as fridges, in and behind plasterboard, in ceiling cavities and under carpets and floorboards.

If damage has occurred to materials, or if the mould has settled into porous structures such as a timber frame, mould removal and remediation can be very expensive and require replacement of material and building structures.

getting rid of it

Regardless of the situation, the earlier a mould problem is identified and treated, the better. If the mould is visible, tackle the problem head-on with proper cleaning and removal of the source of excess moisture, which often includes improving the ventilation.

If mould is invisible (as described under 'Hidden mould'), it is important to find out where it is growing and evaluate the situation.

Most often vinegar or bleach or household products containing these ingredients will be effective in getting rid of surface mould. Disinfectants that contain dilute sodium hypochlorite (bleach) are effective in killing mould on building materials and are practical to use.[8]

If surface mould is treated by proper cleaning and the source of moisture is removed (often by improving ventilation) the mould will not return.

excessive mould growth is always a risk after flooding in a building

choosing smart products and systems

The intended use of a building or room may require using special mould and water resistant plasterboard products to combat or avoid mould growth. It is always best to choose the right product from the start, or alternatively during remediation of an existing mould problem.

Indoor pools and communal showers

In areas such as indoor swimming pools and communal showers it is obviously not an option to remove the source of moisture, or always possible to facilitate proper ventilation to avoid the growth of mould.

We do not recommend the use of plasterboard on these ceilings. watershield, multishield, trurock or trurock hd completely covered with a waterproof membrane complying with AS/NZA 4858:2004 Wet Area Membranes may be used.

Vertical junctions and wall-to-floor junctions must also be waterproof.

Intertenancy party walls

Mould growth can occur on plasterboard during construction of the building, and it is often found in the internal barriers of party wall systems of adjoining townhouses.

Mould can form on the internal structures of a separating wall system before the structure is roofed over. In the event of rainy weather during this phase, water damage can also impact on the performance of the plasterboard. Contractors often have to wait for boards to dry out before continuing with the project.

This is a serious problem for builders, because it can result in costly delays and mould removal costs.

Siniat recently introduced **inter**shield, with added mould and water resistance to address this problem. **inter**shield is used in Siniat's Interhome system - a separating wall system suitable for adjoining residential dwellings such as duplexes or townhouses. Interhome is a trusted system wellknown for its ease of installation and the simple solution it provides when it comes to installing penetrations for electrical and plumbing services.

intershield forms part of central fire barrier of this system. It is a 25 mm fire resistant plasterboard made with a gypsum core with recycled blue liner paper that offers fire and acoustic performance with the added benefit of superior mould and water resistance.

The mould inhibitor used in **inter**shield has been carefully tested in our labs and onsite. It offers months of protection against mould and water damage, even in severe weather conditions.

More about intershield **here or read our latest case study.**

choosing the right design

Moisture control is the only effective strategy for preventing mould growth in buildings. Contemporary eco home design, such as Passive House design, favours airtightness as a means to improve energy efficiency.

When considering such strategies, it is important to consult a home designer or architect who specializes in this type of construction. Without a proper ventilation system, an airtight building can lead to a serious mould problem.

Read more in our blog Does Passive House design increase the risk of indoor mould?

Wet areas for public use

Wet areas such as public bathrooms, showers, toilets and laundries that are expected to be exposed to high traffic, require a special board that is impact, water and mould resistant.

Mould is obviously a menace in public bathrooms and healthcare facilities. Besides the health concerns mould creates a dirty and unhygienic impression, and that's the last thing you need in a hospital bathroom, for instance. Unfortunately such areas can be very susceptible to mould infestations due to high traffic. Consider how many times a shower in a public bathroom is used compared to one in a private home.

In such applications we recommend Siniat's **Tru**rock hd.

Trurock hd offers mould resistance and enhanced impact performance. In addition to its heavy duty paper, **Tru**rock hd has a continuous fibreglass mesh embedded in the high density core limiting damage even under large impact forces. **Tru**rock hd provides premium impact protection and the superior mould inhibitor protects the surface and the core against mould growth, even under severe conditions.

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siniat

Etex Australia Pty Ltd
ABN 61 003 621 010

31 Military Road
Matraville NSW 2036

siniat.com.au

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AU 1300 724 505

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