

With particularly porous materials, it is often impossible to completely remove all traces of the mould, particularly if it has caused staining. If you do not obtain total removal after reasonable time, it may be the best result that can be achieved.

In the past, mouldy objects were often placed outside in the sun in the belief that they would be sterilised. Unfortunately, only a small section of the wavelength of sunlight will sterilise mould. In fact, sunlight can actually increase the melanin production in mould that will cause greater staining of the object. The strength of sunlight will also contribute to fading of materials.

preventing future mould growth

When you have finished all the cleaning up for the year, the key is to be prepared to face another Wet. Luckily you have a bit of a break during the Dry, but don't forget to start taking precautions before October/November.

If your display or storage space is particularly prone to mould growth, consider the following:

- Air circulation minimises mould growth. Paintings or any artworks hanging on the wall, should therefore have a spacer behind them so that they are not in direct contact with the wall. External walls particularly transfer dampness from outside.
- Keep the fans on, especially at night, not just for your comfort but for your artworks' benefit. Highest levels of humidity are reached during the early hours of the morning.

- Borrow an additional fan/s. Oscillating fans are more effective than overhead fans (remember that there is a 'dead' spot just directly underneath the ceiling fan where air movement is minimal).
- Avoid placing objects in corners of rooms or closed cupboards where there is minimal air circulation.
- Maintain a clean environment by vacuuming to prevent dust. Mould settles and thrives on dust (which explains the mouldy laminex phenomenon).
- Regularly inspect artworks for signs of mould.

If you have a persistent mould problem, you may have to 'disinfect' the room before taking any of the above steps. Unfortunately, this means washing down of walls with a strong product such as Exit Mould™. At the same time, use Glen 20™ spray to disinfect other surfaces after they have been cleaned.

If mould is growing in particular areas of the building or room, even during the Dry Season, it usually indicates the presence of localised high humidity which may be caused by faulty plumbing or damp walls.

All of the above are measures to try and minimise mould growth, but they cannot guarantee outbreaks won't occur. Hopefully, they will contribute to protecting your valued artworks.

Materials Conservation

2005

combating mould

during the Wet Season

Anyone who lives in the tropics, even if just for one Wet Season, will be all too familiar with the dreaded mould problem. By the beginning of the Dry Season you would have finished discovering most of the outbreaks, in hidden corners of rooms or back of cupboards. The discovery is often accompanied by that frustrated moan “not that leather belt/shoes/basket again....”

Mould not only looks offensive, but can be very damaging to our health and to a wide range of materials. The extent of the damage to materials ranges from disfiguring and staining of surfaces to penetrating through the whole structure of material.

Mould spores are always present in the air, however only become active in particular environmental conditions. Mould growth is activated by continuous levels of relative humidity (RH) above 65% (which is practically most of the wet season). They also thrive in stagnant, dusty, acidic and oily/greasy environments, which explains why, the older the shoes, the mouldier the shoes.

Mould especially affects organic materials which absorb moisture during high humidity, such as paper, gelatine on photographs, canvas, textiles, glues, wood, bark and leather. It is unfortunate that these materials tend also to be porous and therefore, that much more difficult to clean.

coping with the damage

There are certain things you will need before attempting to clean mouldy objects or artwork:

- Dust mask from the hardware store – remember that mould is dangerous to your health and you should always wear a dust mask when dealing with it (3M® 8812 and 3M® 9913 are recommended).
 - If the object or artwork is insured, it may be worth taking a photograph (just in case....).
 - Check that the object or artwork is in a stable condition. Make sure that its surface is intact and that it does not have any poorly adhered material, such as peeling paint or friable pigments. **If in doubt, talk to a conservator.** In some cases, cleaning mould from unstable objects will have a more detrimental effect than leaving the mould on. For example, it is impossible to clean mouldy photographs as the image will be removed with the gelatine emulsion.
 - Equip yourself with the following items:
 - clear industrial methylated spirits (IMS) from hardware store
 - cotton wool swabs
 - blotter or cotton fabric
 - small soft or medium bristle brushes
 - small glass jar
 - an aerosol product Glen20™ – from local supermarket
- ...and don't forget the dust mask.....**

There are two steps involved in cleaning mould; removing the physical presence and sterilising the mould spores that are left. The method you use will depend on the condition of the mould.

1. Wet mould is swabbed off with the following solution. Mix in a small glass jar 7 parts clear industrial methylated spirits (IMS) to 3 parts water. Using a cotton wool swab, **first test an inconspicuous area to be cleaned.** If there is no smudging on the object and no object (colour) residue on the swab, clean off the mould with *damp* swabs or brush (removing excess moisture from the dipped swab or brush onto the blotter/fabric). Try to lift the mould off by rolling the swab instead of rubbing it in. Change swabs and rinse the brush at regular intervals. Wash and disinfect used brushes with IMS afterwards.

2. Dry mould can be brushed off, using a soft or medium bristle brush (depending on the surface). To prevent the spread of mould spores to other items in the same area, work outside (in the shade) or brush the mould towards the nozzle of a vacuum cleaner (held a safe distance from the surface) *fitted with a HEPA filter* (other filters will not trap mould spores which will be passed out in the exhaust). To sterilise any remaining mould spores, swab in the same manner as described above.

There is a commercially available product that can effectively kill mould. It is an aerosol spray called Glen 20™, containing 68% alcohol (ethanol) and 32% water.

Unfortunately, it has not been tested on all types of material, but it has been recommended to kill mould spores on the back of paintings and barks and on packaging or surrounding materials that are used to transport or store artworks.

Glen 20™ should not be sprayed directly on any surfaces that may be soluble in ethanol, such as acrylic paints, PVA binders, some wood finishes and dyes. To check the effect of Glen 20™ on the artwork, spray the aerosol into a small jar and test an inconspicuous area with a damp swab in the same way as described above. When using the product, spray only lightly but ensure complete coverage.