

## ASSESSING WET PLASTERBOARD

This edition of OnBoard is a guide to assessing plasterboard once it has become wet.



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

Plasterboard may become wet via direct contact with water such as rain or a leak, or even condensation forming on a plasterboard surface and left for a period of time to cause damage.

Plasterboard can also become wet due to being left in conditions where it will absorb large amounts of moisture from the air. This can include constant high humidity caused by environmental conditions, or possibly from standing water close by, combined with poor ventilation.

Plasterboard that has become wet during its service life must be assessed for damage and then either repaired or replaced.

### Safety first

- Turn off all power to prevent electrocution.
- Use caution when drilling holes in sagging or saturated ceilings as it may collapse. Temporary props are recommended.
- Take precautions when in the vicinity of mould. Inhaling mould or mould spores can lead to sickness or make certain health conditions worse.

### Remove the source of water or moisture

Identifying and removing the source of water or moisture is the first step to addressing the problem. The earlier the source of water or moisture is found and removed, the more chance the integrity of the plasterboard will be maintained.

Removal of elevated moisture levels from the dwelling is also critical to reducing the chance of mould growth. Mould can grow on plasterboard and most other building materials in 24 to 48 hours after exposure depending on environmental conditions.

### Dry the plasterboard

Before an assessment can be made about the integrity of the plasterboard, it must be allowed to completely dry.

The affected area must be checked to ensure water is not still present in the wall and ceiling cavities. If water is present then drilling holes in the plasterboard may be required to drain trapped water.

Insulation in ceiling cavities may need to be removed to allow the plasterboard to dry. Insulation that cannot be readily removed, such as in a wall cavity, may prevent the cavity drying at all.

If condensation has formed on a plasterboard surface or the plasterboard is absorbing moisture from the air, the area must be ventilated to reduce humidity. Fans should be used to generate air flow and increase ventilation.

All windows and doors of the dwelling should be opened to reduce the humidity and speed up drying.

## Assess the plasterboard

It is not possible to give a definitive answer on whether plasterboard can be salvaged once it has become wet as it depends on factors such as:

- ▶ Extent of time and amount of moisture to which the plasterboard was exposed.
- ▶ Ability of the affected area to be identified, completely drained and dried.
- ▶ Presence of insulation in the wall or ceiling cavity.
- ▶ Whether or not the plasterboard was exposed to contaminated water.

Generally, plasterboard may be salvaged if adequate drying conditions are achieved, but if any of the following signs of water damage are present then the plasterboard may lose the ability to perform its intended function and may therefore need replacing:

- ▶ Corrosion to steel framing members or fasteners
- ▶ Distortion or sagging of the plasterboard
- ▶ Swelling or softening of the plasterboard core
- ▶ Plasterboard joint distortion
- ▶ Plasterboard liner paper delamination
- ▶ Fastener popping/pull through
- ▶ Adhesive de-bonded from plasterboard or frame
- ▶ Excessive mould growth

The fixing system used for the plasterboard, including fasteners, adhesive and also the frame, must be inspected and assessed for damage.

Knauf recommends that if doubt exists regarding the integrity of the installation then replace the affected area.

## Specialty plasterboards

With fire rated plasterboard and other specialty application products, some or all of the properties can be compromised once the product has been damaged. For these specialty products, Knauf can not validate performance after any water damage has occurred.

## Repairing and cleaning

Plasterboard and the associated framing must be dried to a normal equilibrium moisture content before conducting repairs.

If the assessment deems the plasterboard to be fit for purpose, then minor repairs like installing additional screws to secure it to the frame can be done.

If light surface mould growth has occurred without damaging the integrity of the plasterboard (including any of the water damaged signs mentioned previously) then a mould remover may be used. Allow the plasterboard to dry completely before and after the application of the mould remover.

To remove mould from plasterboard, treat the surface with a suitable proprietary mould remover and follow the directions of the manufacturer. Alternatively, a mould remover solution can be made in the ratio of 1 part household bleach (sodium hypochlorite) to 9 parts water. Use a soft brush or sponge to wash the plasterboard.

If the plasterboard is unpainted, be careful not to scrub it too vigorously as this may scuff the face paper.

Allow the solution to remain on the plasterboard for at least 15 minutes before rinsing it off thoroughly with clean water, using a clean cloth and allow the plasterboard to dry completely. Be sure to use both hand and eye protection, and only apply mould removal products in a well ventilated space.

Once cleaned and dried, patch any holes and cut-outs in the normal fashion.

If the plasterboard is to be painted, a mould resistant paint system is recommended. Never paint over mould as it will eventually grow through the paint.

To paint over plasterboard that has been cleaned of mould, use a high quality sealer undercoat (recommended oil based or enamel type) with added mould inhibiting agents. Then apply top coats of paint that are also mould resistant.

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