

Condensation Remedies

Page 1 of 2

1.0 CONDENSATION NOTES

Moisture is created all the time within the flat through normal human activities; washing, bathing, drying of cloths, cooking, and even simply by breathing. The moisture created is absorbed into the air but the air is only able to retain a finite amount of moisture, dependant upon its temperature - the warmer the air the more moisture it is able to hold.

Where warm moist air is cooled as occurs when brought into contact with the colder parts of the building it is forced to give up the excess moisture in the form of dew or condensation.

If this depositing of condensate occurs frequently, so that the parts of the building or the contents of the flat are damp for lengthy periods, this will allow mould to grow on the surface of the building elements and in more severe cases the cloths, linen and leather wear of the occupants. The problem normally occurs only during the winter months when the windows tend to be kept closed raising the relative humidity of the internal atmosphere.

2.0 REMEDIES

The principle to be adopted in reducing the internal humidity is to allow the moist warm air within the flat to be exchanged for cooler dryer air outside.

In other words the flat should be regularly ventilated.

In practice this means leaving the windows at least part open for a period each day and ideally windows at opposite ends of the property should be opened simultaneously in order to encourage a cross flow of air through the accommodation.

Where furniture is placed abutting the wall the drying effect will be hampered and by leaving a small gap the air is able to circulate and dry out accumulations of condensate more effectively.

2.2

In order to make this general process more efficient the internal atmosphere should be maintained at a reasonable temperature throughout so as to permit the air to absorb the excess moisture before it is evacuated.

If the inside of the flat is damp but little different in temperature from the outside, the evacuation of moisture or drying effect will be minimal.

In practice this entails providing regular background heating throughout the flat.

Continued

Condensation Remedies

Page 2 of 2

- 2.03 It is also recognised that the building should be insulated in order that the surface temperature inside is maintained at a higher level. In this way the internal air coming into contact with the wall surfaces is least cooled, so minimising the release of condensate.

To a large extent this is a matter is defined by the original design and construction of the building and with buildings of this period the thermal resistance is generally well below current standards.

However, the surface temperature of the external walls could be raised by applying insulation to the inside face. The simplest method would be to apply a thin layer of polystyrene which is marketed under the trade name of (Kotina) and this then covered with lining paper and painted with a fungicidal emulsion.

A higher level of insulation could be achieved by fixing a composite insulation board and plasterboard lining to be finished with a skim coat or by installing cavity wall insulation to the block as a whole.

This will serve to raise the surface temperature of the walls but not to dry the air and the condensate will tend then to be deposited elsewhere in the flat unless ventilated in the meantime.

- 2.04 So as to reduce the overall problem it follows that care should be taken by the occupant to minimise the release of moisture within the flat.

In practice this will entail care when washing, drying, cooking etc. For instance by keeping the bathroom door closed when bathing so that the moisture released has less opportunity of disseminating through the flat.

Ideally cookers should be provided with mechanically vented hoods to the outside of the building and mixer taps to the sanitary fittings which reduces the amount of steam released. Drying clothes in the flat will also release large quantities of moisture into the internal atmosphere.

The use of a small domestic de humidifier will remove much of the excess humidity from the internal atmosphere. This is a device which electro mechanically removes moisture from the air and collects it for periodic emptying.

It is probable that such a solution would only be needed for the worst months of the winter but to work efficiently the inside temperature of the building needs to be maintained at a reasonable level.