



## **KEIM Mineral Paints – Technical Digest**

### Breathability and Moisture Movement

#### **1. Breathability**

When the term breathability is referred to with reference to building materials, it is not concerned with air, but with water in both liquid and gas form. Breathability tends to be used to describe the passage of water vapour and there are a variety of related terms that are used to quantify breathability.

For more information about how breathability works and the relative values please see our separate 'Breathability & Moisture Vapour Permeability' technical digest.

#### **2. Reinstating Substrate Breathability**

Keim Mineral Paint systems are highly breathable and allow free passage of moisture vapour through the substrate and paint coating. Where buildings have previously been decorated using unsuitable, acrylic based coatings which do not allow moisture vapour movement, it is likely that there will have been a build up of moisture within the substrate, resulting in high levels of saturation and/or blistering and flaking paint coatings.

When the surfaces are prepared prior to redecoration, all of the loose and flaking materials will be removed and/or the surfaces stripped of the existing coatings. This will resintate the original substrate breathability, either over all surfaces or just over the worst affected areas. Moisture movement will then commence as the surfaces attempt to dry themselves out – this process can continue for quite some time after the preparation (and subsequent decoration) as the amount of moisture which has been trapped can be quite considerable.

Following a decoration with Keim Mineral Paints it is not uncommon, especially in buildings which have suffered moisture problems in the past (even in some circumstances if the surfaces weren't previously painted), for darker patches to appear in the painted surface – this is moisture which is being drawn through the capillaries of the substrate to the surface of the paint i.e. breathing through the coating. This process is beneficial to the building and in most instances will not compromise the applied paint finish. Please note that capillary action can track moisture from one area to another and therefore it does not always seem logical from the point of moisture ingress.

Once the moisture has been allowed to evaporate the paint coatings will return back to their original colour. This phenomenon can also happen at any time during the lifetime of the paint if there is a significant ingress of moisture into the substrate (i.e. flood damage/faulty rain water goods) which then in turn needs to be released/evaporate.

In some instances, where the amount of moisture is excessive and/or paint coatings applied whilst there was too much moisture present, then the paint coatings might suffer some damage.

For assistance with redcorating projects and any issues or concerns with an applied Keim Mineral Paints finish please contact our sales department on 01952 231250 or email [sales@keimpaints.co.uk](mailto:sales@keimpaints.co.uk).

