



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

### **KEIM Ecosil-ME, Sensitive Environments for Chemically Sensitive People**

#### **1. The Issue**

Some people, such as chronic asthma sufferers and people with other respiratory conditions, are particularly sensitive to airborne pollutants and the chemical effects of paints. There are many types of buildings and internal spaces where it is imperative that special care is taken, such as nursing and care homes for elderly and disabled people, hospitals and medical environments, as well as special schools for vulnerable children and young people. Whilst air quality in general, particularly internally, is not necessarily a contributory issue to health problems, fumes from conventional paints can exacerbate pre-existing health problems.

Conventional acrylic based paint systems contain volatile organic compounds (VOC). VOCs are chemicals which become a gas at room temperature. As a result, products made with harmful VOC components release the gases into the air as they are used. This is called off-gassing. If high concentrations of harmful chemicals are off-gassed and breathed in, it can cause health problems and is a specific issue to people with sensitive health issues. The health effects of exposure vary from one person to another. The most common symptoms are eye, nose and throat irritation, coughing, headaches, dizziness, and nausea.

#### **2. The Solution**

Whilst measures can be taken to ventilate internal areas, it is also possible to use materials such as mineral paints which are made with only natural materials. Mineral paints do not contain any petrochemicals or additional solvents and are both environmentally friendly and sustainable. Mineral paints are odourless and since they do not off-gas any chemicals, rooms can be occupied very quickly, as soon as the paint is dry without being a danger to health. This means that rooms can be decorated and re-decorated as required, quickly and effectively without needing to relocate occupants.

Keim Ecosil-ME is a particularly beneficial paint as it is a photocatalytic high quality interior paint. Photocatalytic paints contain a catalyst, in this case titanium dioxide, which when activated by light, enables a reaction converting harmful air pollutants into harmless substances. The pollutants which Keim Ecosil-ME helps to reduce include formaldehyde and acetaldehyde, as well as other VOCs such as benzene and toluene. Nitrogen oxides and ammonia can also be reduced by the photocatalytic reaction.

The photocatalytic reaction also inhibits and kills bacteria. Independently tested it is proven to reduce living bacteria by 99% and dead cells completely. With regards to sanitation and health care the reduction and removal of dead and living biomass is very important to prevent infections. Dead cells can still have a toxic and allergic potential and Keim Ecosil-ME is proven to improve interior hygiene more effectively than a conventional film forming paint.

Keim Ecosil-ME offers all the features and benefits of Keim Mineral Silicate interior paints:

- High breathability (moisture vapour permeable) for dry walls and healthy room climate
- Non-combustible to avoid toxic gases in case of fire
- No solvents or plasticisers added, therefore no pollutant emissions
- Proven suitability for people with allergies – Allergy UK Friendly Product Award
- Excellent ecological profile
- Mineral matt surface appearance, increases light reflectivity
- Lightfast and UV stable, no fading of colours and Class 1 wet abrasion resistance

For further information regarding Keim Ecosil-ME and its features and benefits please contact our sales office [sales@keimpaints.co.uk](mailto:sales@keimpaints.co.uk) or 01952 231250.

