



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

### **BREEAM Certification & Keim Mineral Paints**

#### **1. Introduction**

BREEAM (Building Research Establishment Environmental Assessment Methodology), first published by the Building Research Establishment (BRE) in 1990, is the world's longest established method of assessing, rating, and certifying the sustainability of buildings.

The BREEAM rating is not directly applicable to Keim Mineral Paints and treatment products as they are less than 150microns in thickness which, when applied to substrates, will not significantly affect the environmental rating of the building.

#### **2. BREEAM**

A lot of queries are raised whether specific coatings are compliant under BREEAM (Building Research Establishment Environmental Assessment Method).

Essentially, BREEAM is a complex scoring system to assess the eco-friendliness of any new building, in terms of energy efficiency, sustainability etc. The only part of a BREEAM document where paint is stated is in relation to VOCs (Volatile Organic Compounds) in the Health & Wellbeing section of the assessment. This section states that building designers must try to consider sourcing materials and specify internal finishes and fittings which contribute low VOCs where practical.

In practical terms any coating that is compliant under the PPD (Paint Product Directive) is considered to be BREEAM compatible. On this basis, any paint with VOC levels below 140gms / litre will be BREEAM compatible.

#### **3. Keim Mineral Paints**

Keim Mineral Paints have no added solvents. Where reference is made to a low VOC content or to content less than 1g/l, this is due to the REACH classification system used. The classification can be either low, medium or high however those products that fall below the 'low' levels still have to be classed as low. (not zero) There are also the practicalities in measuring small/miniscule VOC content as manufacturing process' which employ plastics, for example UPVC pipes and buckets will invariably have a very small acrylic content, which can lead to a false VOC measurement.

**All Keim Mineral Paints have VOC contents below 140gms/l, and are therefore, on this basis, BREEAM compatible.**

This includes the following products:

Exterior Paint Systems:

- Keim Granital: 0-1g/l VOC
- Keim Royalan: 0-2g/l VOC





- Keim Soldalit: 0-2g/l VOC
- Keim Soldalit ME: 0-2g/l VOC
- Keim Concretal C: 0.8g/l VOC
- Keim Concretal Lasur: (up to 0-1g/l VOC)

Interior Paint Systems:

- Keim Ecosil ME: 0-1g/l VOC
- Keim Optil: 0-8g/l VOC

### **Environmental Certificates for Keim Mineral Paints**

All Keim Mineral paints are manufactured under ISO 9001:2008 and ISO 14001:2004 - Certificate Registration No. 12 100/104 7631 TMS

ISO 9001:2008 is the International Standard for Quality Management Systems (QMS). It provides a company with a set of principles that ensure a common sense approach to the management of business activities to consistently achieve customer satisfaction.

ISO 14001:2004 is an internationally accepted standard that sets out how you can go about putting in place an effective Environmental Management System (EMS). The standard is designed to address the delicate balance between maintaining profitability and reducing environmental impact; with the commitment of your entire organisation.

## **4. VOC Regulations for Coatings on Buildings**

Current European legislation for VOC emissions is covered by the following EC directives:

Directive 1999/13/EC – Otherwise known as the Solvent Emissions Directive (SED), implemented in the UK by the Process Guidance Note PG6/23 of the Environmental Protection Act. This legislation essentially covers solvent emissions from permanent painting installations, and compliance is determined by the paint user submitting data to their local authority regarding the weight ratio of paint solids to VOC, which must fall within stated limits. The painting installation is deemed 'compliant', rather than the coatings themselves.

Current limits as follows:

1. Installations using below 5 tonnes VOC per annum: Exempt from SED (but must still keep records of inventory to prove consumption levels)
2. Installations using between 5 – 15 tonnes VOC per annum: Weight ratio of paint solids to VOC shall be below 1:0.60
3. Installations using over 15 tonnes VOC per annum: Weight ratio of paint solids to VOC shall be below 1:0.37

For non-SED applications, an amendment to the SED has been issued, namely: Directive 2004/42/CE – Otherwise known as the Paint Product Directive (PPD), implemented in the UK as Statutory Instrument 2005 No 2773.





This act applies VOC limits to paints applied in-situ to buildings, their trim, fittings and associated structures for decorative, functional or protective purpose.

The PPD sub-divides coatings into a number of categories, VOC limits are imposed for solvent based and water based coatings within each category, in much the same way that we applied VOC limits to all coatings up to 2005, i.e. before 'compliant coatings' were replaced by the SED.

The main categories of interest within the PPD are:

Category (i) "One pack performance coatings" – defined as coatings designed for applications requiring a special performance such as primer and topcoats for plastics, ferrous and nonferrous metals, floor coatings, graffiti resistance, flame retardant and hygiene standards. (This is now generally taken to include fire protection).

Category (j) "Two pack performance coatings" – as category (i), but with a secondary component added prior to application.

For both category (i) and (j), the maximum VOC content as from 1st Jan 2010 is:

Water based <140gms / litre  
Solvent based <500gms / litre

The technical data sheet values for practical VOC content in grams per litre will indicate whether any particular product is compliant within the limits of the PPD.

For further information regarding Keim Mineral Paints please contact our sales office [sales@keimpaints.co.uk](mailto:sales@keimpaints.co.uk) or 01952 231250.

