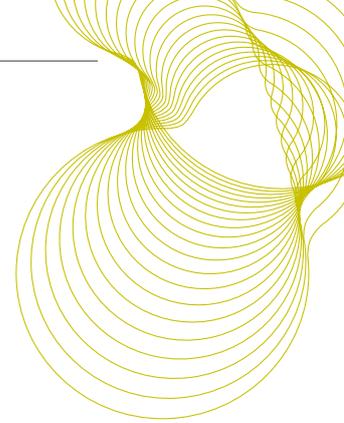
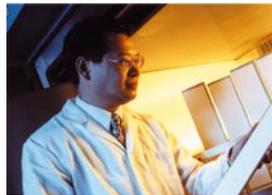


VOC emissions from building and consumer products



bre

Building materials, furnishings, paints, office equipment and consumer products are significant sources of volatile organic compounds (VOCs) in buildings, motor vehicles, aircraft and other environments. These chemicals can have an adverse effect on health and comfort, including eye and airway irritation, headaches and tiredness. There is increasing demand, backed by standards and voluntary testing schemes, to reduce VOC emissions from indoor sources.



Our testing of VOC emissions from materials can be an important evaluation tool for manufacturers for their development of 'low emissions' products.

How BRE can help

BRE provides a comprehensive air quality testing and consultancy service that is used by:

- **product manufacturers** to ensure the safety of their products prior to putting them on the market
- **specifiers and buyers** to select low-emission materials to ensure the products meet the fitness criteria for their intended applications
- **building managers** to test materials in response to complaints from occupiers
- **environmental and occupational health professionals** to assess the health and safety implications of emissions from materials, including the use of solvent products and biocides.

Testing methods

Our facilities include 1 cubic metre and room-sized environmental test chambers, bench top microchambers and emission cells, supported by a comprehensive analytical laboratory. Test samples, scaled to match the size of an average room, are put into a chamber and the appropriate combination of temperature, relative humidity and ventilation conditions is selected to simulate room conditions. We also perform full-scale testing of products in our test houses.

We undertake emissions testing of building products according to the International standard, EN ISO 16000-9:2006 (environmental chamber method) and EN ISO 16000-10: 2006 (emissions cell method) and the determination of VOCs by EN ISO 16000-6. For testing of formaldehyde emission from wood based products, BS EN 717-1: 2004 is used. Other test methods, such as BS EN 717-3 (flask method) can also be carried out for routine testing of formaldehyde release from products.

We can also provide certification of products based on the EU Construction Products Directive (CPD) requirements.

Results are assessed against our extensive, continuously updated database of VOCs. If emission rates or concentrations in the air are found to be too high, we can advise on remedial measures.

For further information on emission testing and other aspects of BRE's indoor air quality service, please contact Dr Chuck Yu:

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