

Background

BREEAM sections HEA2 and HEA 9 prescribe the limits for Volatile Organic Compounds (VOC) emissions of internal finishes for the appropriate BREEAM credit to be awarded.

BREEAM requirements relating to floor finishes and adhesives and demonstration of compliance are as follows:

1. Floor finishes – demonstration of compliance with EN14041:2004 in relation to declaration of Formaldehyde emissions. Class E1 tested to BS EN717-1.

2. Adhesives - verification that carcinogenic or sensitising volatile substances are absent with evidence being provided by testing to EN13999 parts 1, 2, 3 and 4.

Demonstration of Compliance - Floor coverings:

In respect of the requirements for Formaldehyde emissions BS EN 14041:2004 section 4.3 Formaldehyde Emissions states:

“When formaldehyde-containing materials have been added to the product as a part of the production process, the product shall be tested and classified into one of two classes: E1 or E2, as specified in Table 4 and Table 5.

NOTE Products of class E1 can be used without causing an indoor air concentration greater than 0.1×10^{-6} (0.1 ppm) of formaldehyde.

The test requirement does not apply to floor coverings to which no formaldehyde-containing materials were added during production or post-production processing. These need not be classified, but may, without any testing, be declared as E1.”

The test method used to measure Formaldehyde emissions requirements of class E1 of EN14014 is: EN 717-1, Wood-based panels – Determination of formaldehyde release – Part 1.

As can be seen above, EN717- 1 is applicable to wood based panel products. The only Forbo floor covering requiring a declaration under this requirement is Marmoleum Click (2mm Marmoleum sheet linoleum bonded to a HDF and cork backed panel) which meets class E1.

In accordance with the requirements of BREEAM sections HEA 2 or HEA 9, we can confirm that no Formaldehyde containing materials are added to any other Forbo Floor coverings, so no declaration are required nor made under EN14041.

However, if additional evidence is required in relation to Formaldehyde content, Forbo linoleum and vinyl floor covering are certified as low emission products to the AgBB standard which has thresholds

Product Fact Sheet: BREEAM VOC requirements (HEA2 and HEA9)

to BS EN ISO14184:2001 part 1 Determination of Free and Hydrolysed Formaldehyde content (water extraction method) and all products also show no Formaldehyde emissions above detectable levels.

Copies of AgBB or EN14184 certificates are available per product on request.

Demonstration of Compliance - Adhesives:

Forbo Eurocol offers a range of low emission adhesives which are tested to the GEV test method - Determination of Volatile Organic Compounds for Control of Emissions from Products for Flooring Installation.

It is a requirement for EC1 classification that "Carcinogenic, mutagenic, reprotoxic substances as well as those under suspicion to cause such defects are not permitted to be used in the manufacturing of this flooring product." Products are tested for Carcinogens, Formaldehyde and TVOC's using the following standards: ISO 16017 part 1, EN ISO 16000 parts 3, 6, 9, 10, 11, EN 13999 parts 1, 2 and 3, ISO 1625.

Tested to this method and classified in accordance with the GEV EMICODE classification systems the following Forbo adhesives are classified EC1 – very low emission, which is the highest classification under this system:

542 EUROFIX TACK PLUS – Carpet tile tackifier adhesive

640 EUROSTAR SPECIAL – for PVC / Polyolefin backed floor coverings and permanent fixing of carpet tiles

641 EUROSTAR SPECIAL EL – for Conductive PVC floor coverings

614 EUROSTAR LINO PLUS – for Linoleum / Corkment

615 EUROSTAR LINO EL – for Conductive Linoleum

646 EUROSTAR PREMIUM – for linoleum and vinyl tiles

Please note, if HEA 2 or HEA 9 compliance is required EC1 adhesives must be used.

Copies of product data sheets and GEV certificates are available on request.

For copies of product specific certificate mentioned above contact:

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