

Floor coverings - VOC emissions

Marketing of floor coverings may require showing compliance with several requirements on VOC emissions from the product in use. This is compulsory in Germany and soon also in France. It will give competitive advantages in other countries, especially with respect to LEED compliance

Resilient, textile, and laminate floor coverings need a CE mark before being sold in Europe. Assigning the CE mark requires compliance with a number of properties, as defined in EN 14041. However, emission of volatile organic compounds (VOC) is not processed in EN 14041. In some years, CE marking will include specifications on low VOC emissions. Today this is regulated by national provisions in Germany and in France.

Work was ongoing first for a European standard (and was expected to be EN 15052), but after that was not adopted there was developed an international ISO standard on VOC emission testing of floorings, ISO/DIS 10580, describing common testing procedures for both European and US purposes. In Germany, DIBt requires national approval based on low VOC emission, based on AgBB approach. France recently published regulations on limitation or compulsory labelling of VOC emissions for all construction and decorative products. In other countries, voluntary labels indicating low VOC emissions are helpful for marketing, such as LEED, FloorScore, Indoor Advantage and Green Label Plus in the USA as well as GUT (Europe), M1 (Finland), Blue Angel (Germany), Umweltzeichen (Austria), AFSSET (France).



Eurofins is operating the largest and most experienced laboratories for VOC emissions from any products.

Eurofins operates the pan-European product certification labels “Indoor Air Comfort®” and “Indoor Air Comfort Gold®” that combine this harmonized test with an auditing and certification procedure for ensuring on-going low VOC emissions. For details please see our website or our special flyer.

LEED

Often a test is performed with respect to LEED compliance. If it is possible to deliver appropriate documentation to end-user then he can earn points for fulfilling LEED Indoor Environment Quality credit 4.3. The different pathways of showing compliance are:

- **Carpets:**
CRI Green Label Plus testing and product requirements shall be met or exceeded. Often, CRI certificate is used for that, but it is not required, so also Eurofins can deliver that test, comprising just of VOC emission testing without certification.
- **Other flooring:**
Shall be Floor Score certified. Certification is performed by SCS in California, and Eurofins is one of the approved testing labs within that procedure.
- **Alternative path of showing compliance:**
Californian "Section 01350" testing and product requirements shall be met or exceeded. Eurofins offers such testing.

Testing

The VOC test is performed in a test chamber or with a test cell, and the test conditions simulate average conditions of indoor air in European or US buildings:

- 23°C temperature
- 50% relative humidity
- 2.5 metres height of room
- Ventilation with ½ air change per hour (in the USA: 1 air change per hour)

Eurofins is operating the largest and most experienced laboratories for VOC emissions from any products since more than 20 years, ISO 17025 accredited and approved by many organisations in several countries.



We use the most efficient techniques, mostly the Japanese seal boxes that look like a picture frame, however, made of steel and Teflon.

Eurofins is able to test any floor covering according to what ever of the mentioned requirements, among that the prEN 15052 testing standard and the ISO/DIS 10580 standard.

Although the test could be performed using FLEC cell, we recommend using one of our more than 70 stainless steel test chambers (both are allowed in the standard).

The VOC only test can be a sufficient test programme for PVC and polyolefin. However, if clients require formaldehyde test results, the VOC and formaldehyde option is the right choice. A 3 days test is only sufficient if the product has very low emission. Many floor coverings will require 3 days and 28 days testing.

When using the test chamber it is important to isolate the back and edges of the samples. We use the most efficient techniques, mostly the Japanese seal boxes made of steel and Teflon.

However, please note that in some countries like Germany, France, and Finland, a test following former prEN 15052 or ISO/DIS 10580 may not be sufficient. Authorities and ecolabels may require additional testing, like the German AgBB or the Finnish M1 test, not to forget the California Section 01350 specification.

It is easy to combine all these requirements into one test design - this will also be a more economic approach than ordering the tests separately.

This is even more important if you also need emission testing for both EU and US market.

Testing laboratory:

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