



VOC Emissions

Indoor Air Comfort Certification

Certification body:

Eurofins CPT GmbH in Hamburg / Germany

Testing lab:

Eurofins Product Testing A/S in Galten / Denmark

Contact by email:

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- **Industry needs a pan - European approach**

- Many industries operate on an international level
- All regulation and most low VOC labels are national
- This means that the same property – low VOC emissions – needs to be shown several times in different manners



- **Similarities of testing methods and harmonized CEN/TS 16516 allow combination of all these tests into one test set-up**

- **Limit values remain different per regulation or label**
- **Payment of local license fees per label**
- **Indoor Air Comfort: One global label for Europe**





Combination of 4 issues:

1. Simplify life

by covering the lowest limit values of most relevant emissions specifications in use in Europe if certification criteria are fulfilled (no re-invention of the wheel)

(Finnish M1 is covered only partly)

- Combined testing only can also be performed as stand-alone service

2. Allowing use of low emission label where no such label exists, e.g. in Eastern and Southern Europe

3. Increase public trust by higher control intensity (auditing, re-testing)

4. Third-Party Auditing

will support reducing emissions from products



- **Certificate = VOC Emissions are sufficiently low**
that most national low VOC programs in EU can be applied for
- **Differentiation between good product and better product:**
 - **Indoor Air Comfort:**
Low emissions, conform with
all governmental specifications in EU:
AgBB, French class A or better, Belgium
 - **Indoor Air Comfort GOLD**
For "best of the class" products with very low emissions,
in addition to the above conform with most voluntary specifications
French class A+, EMICODE EC1 or EC1 Plus, GUT,
M1 and Blue Angel only partly, Austrian UZ, ...
 - **IAC covers only product emissions into Indoor Air**
(no content or sustainability aspects, except VOC content for coatings)



European Reference Room (CEN TC 351 – TS 16516)

	Dimensions
Length x Width x Height	4 m x 3 m x 2,5 m
Surface of floor or ceiling	12 m ²
Surface of all walls	31,4 m ²
Surface of a window	2 m ²
Surface of a door	1,6 m ²
Volume	30 m ³

Loading factor for construction and decorative products

Application area	Loading factor
Floor or ceiling	0,4 m ² /m ³
All walls	1,0 m ² /m ³
Ceiling and walls	1,4 m ² /m ³
Ceiling and walls and floor	1,8 m ² /m ³
Small surface, e.g. 1 door or 1 window	0,05 m ² /m ³
Very small surface, e.g. sealants	0,007 m ² /m ³

Air change rates: 0,25 – 1,5 per h during testing; reference 0,5 per h for calculation (as in CEN/TS 16516);

Preparation of test specimens: ISO 16000-11, or product specific standards and methods

	INDOOR AIR COMFORT GOLD (may vary per product group)			INDOOR AIR COMFORT		
	After 3 days	After 28 days	Unit	After 3 days	After 28 days	Unit
TVOC (TS 16516)	1000	100	µg/m ³	10 000	1000	µg/m ³
R _{BE} value (with Belgian LCI values)		1			1	
R _{DE} value (with German LCI values)		1				
Sum of VOC without LCI (DE) + not identified		50	µg/m ³		100	µg/m ³
TSVOC		50	µg/m ³		100	µg/m ³
Sum of carcinogenic VOC (C1, C2)	10		µg/m ³	10		µg/m ³
Each carcinogenic VOC (C1, C2)		1	µg/m ³		1	µg/m ³
4 CMR compounds, French regulation		1	µg/m ³		1	µg/m ³
French emissions class		A+			A or better	
Formaldehyde		10	µg/m ³		60	µg/m ³

There are different limits for IAC GOLD for some product groups

Product specifications (as of December 2014):

- Floor coverings
 - Textile
 - Resilient
 - Wooden
 - Laminate
 - Bamboo
- Insulation material (inorganic and organic)
- Gypsum boards
- Installation products (adhesives, sealants etc.)
- Paints and coatings
- Product systems
- Furniture

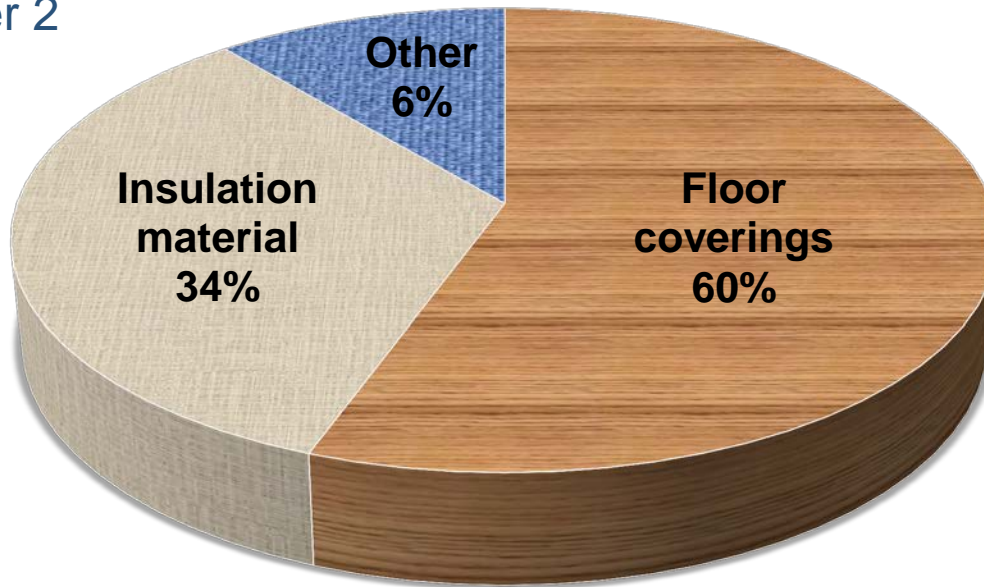


Market demand decides on which next products will be involved.

Status: End 2013 – next update: January 2015

37 product families, each one containing several products

- Floor coverings 23
- Insulation material 13
- Other 2



www.eurofins.com/iac-certified



Indoor Air Comfort - Gold

Next update of this list will occur in January 2015.

The certificates have a validity of 5 years, as long as the annual auditing and retesting show continuous compliance.



Search: X

Company	Product group	Certificate No.
BASF plc	Ucrete Industrial Flooring	2012-IACG-036
Debolon	Kompakt	2012-IACG-031
Debolon	Akustik	2012-IACG-032
En-Design	mFlor PU Blue	2012-IACG-26
Forbo Flooring GmbH	Allura 0,4 + 0,55; Allura Premium 0,7; Allura Form; Novilon Design Planks & Tiles; LVT 0,55	2013-IACG-062
Forbo Flooring GmbH	Colorex SD, EC, Plus EC, Concept, Basis Plus; R11 Plus; Allura Ceramic	2013-IACG-0623
Gerflor Mipolam GmbH	Mipolam Troplan, Mipolam Troplan Sport	2012-IACG-056
Gerflor Mipolam GmbH	Mipolam Esprit, Accord, Cosmo, Elegance, Taraflex Surface Conceal	2012-IACG-057
Gerflor Mipolam GmbH	Mipolam Symbioz, Taraflex Surface Mask	2012-IACG-058
Gerflor Mipolam GmbH	Mipolam Accord EL7, Robust EL7, Symbioz EL7, Accord HPF, Elegance EL5	2012-IACG-059
Karndean International GmbH	Lightline, Conceptline, Projectline	2012-IACG-044
Karndean International GmbH	Freeline	2012-IACG-048
Karndean International GmbH	Pure Wood 0.55, Pure Wood 0.30, XL Plank 0.55, XL Plank 0.30	2012-IACG-050

1. Initial Type Testing in test chamber

Testing schedule will be product type specific

2. Evaluation of test result

Criteria will be product type specific

3. Contract between manufacturer and certifier

including agreements on exclusion of certain raw material, production parameters, factory production control, QC documentation

4. Third party auditing of production sites on regular basis

including control of emission relevant documentation in QC

5. Certificate

6. Database of certified products in the Internet

7. Eurofins test reports are accepted by most EU labels

8. Repeated audits and tests on a regular basis

for more reliability of forecast of continuous low emissions

9. Continuous review and improvement

of specifications, testing procedures and audit procedures



- **Indoor Air Comfort was updated in December 2015:**
 - Now version 5.2
 - Harmonization with CEN/TS 16516 for testing (e.g. TVOC).
 - Substitution of reference to French LCI against Belgian LCI values (on top of reference to German LCI values).
 - This includes the European LCI values.
 - Paints and coatings:
 - Either single products can be certified, or multi-layer systems.
 - VOC content requirements were added.
 - Product systems (e.g. a complete flooring structure) can be certified.
 - Reference to Finnish M1 was skipped for small and very small surfaces.
 - Longer validity of certificates (5 years), but still annual or biannual audits and re-testing.

■ In planning:

- Update with AgBB 2015 list, when officially available

■ In longer term:

- A supplemental IAC class covering most relevant specifications for low emitting products world-wide
 - First by integration of specifications in the USA

