Specifications

Indoor Air Comfort®
and
Indoor Air Comfort Gold®

Version 6.0
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Introduction

This document contains the specifications for certification and labelling of building materials, decorative coatings and furniture with the labels Indoor Air Comfort® or Indoor Air Comfort Gold®.

This certification program is an additional quality tool for improving Indoor Air Quality, providing more security to consumer and to industry. The most efficient tool to ensure continuous low VOC emissions of a product is a combination of product testing, factory production control, and external surveillance of the emission relevant processes and parameters during production.

Therefore, Eurofins launched the "Indoor Air Comfort" (IAC) certification scheme that ensures manufacturers, retailers and end-users that product quality in terms of emission of volatile organic substances meets the relevant legal and most voluntary requirements for the involved product groups.

The core value of IAC certification by Eurofins is:

- Simplifying life by complying with all relevant emissions specifications in use in Europe if certification criteria are fulfilled;
  - As European VOC emissions specifications are not harmonized sufficiently in Germany and in Finland, this cannot be guaranteed 100% for a small number of products.
- Allowing use of a low emission label for products and in countries where no such label exists;
- Increasing public trust by high control intensity (external surveillance and re-testing);
- Establishing a management tool for monitoring and - if relevant - for reducing VOC emissions from certified products by external surveillance in combination with factory production control.

The approach of the label is to create a harmonized umbrella standard for various materials, combining the mandatory and most voluntary requirements in Europe into one single specification. The same methodology and analytical techniques, as specified in international standards, are used in testing procedures for all involved products. This approach is another step towards harmonization and simplification in contrast to earlier, industry or national specific testing methodologies.

You can obtain a license for an IAC label for your products upon application. After a successful emissions test there will be a contract as well an initial inspection before granting the license. Re-inspections and re-testing will follow afterwards.

Hamburg / Galten, February 2017

Thomas Neuhaus
Head of certification body VOC
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1 Scope and application

This document contains specifications for building materials, decorative coatings and furniture with respect to certification and labelling with the labels Indoor Air Comfort® or Indoor Air Comfort Gold®.

The following materials are covered:

- Textile floor coverings (according to EN 14041);
- Resilient floor coverings (according to EN 14041);
- Wood-based floorings, panels and doors (e.g. according to EN 14342);
- Insulation materials (e.g. EN 13162-13171, EN 14303-14309, EN 14313-14320, EN 14063-14064);
- Gypsum boards (EN 520);
- Adhesives, levelling compounds, primers, sealants, sealing, acoustic sub-floors;
- Paints, varnishes, coatings (used indoors);
- Resin based liquid applied floorings;
- Combined product systems;
- Furniture;
- Mattresses;
- Other products.

2 Specifications

Classification of a product and issue of a certificate are based only on the results of emission testing and of the inspections at the manufacturing sites. The emission test is performed after 3 days and after 28 days in a ventilated test chamber following CEN/TS 16516 or comparable international standards. Any test result is extrapolated to an air concentration in the European Reference Room (CEN/TS 16516).

3 Use properties / Declaration

Any Indoor Air Comfort labelled product shall meet the legal requirements within the EU. Prohibited or restricted SVHC in REACH Annexes XIV and XVII shall not be used or not exceed the maximum allowed content as specified by REACH.

Indoor Air Comfort labelled products shall meet the criteria of fitness for use as specified in the relevant European standards or comparable international standards. This shall be shown for the product, e.g. by correct use of a CE mark if available. Furthermore, a technical data sheet and installation instructions shall be available.
4 Emissions testing

4.1 Taking a sample

Determination of emission behavior shall be performed on freshly produced material at the earliest point of time when the product is ready for dispatch or application - this date may include essential storage periods.

Taking a sample of a product for testing shall be performed according to CEN/TS 16516, ISO 16000-11 or equivalent international or national standards. The product sample shall be packaged, as specified below, as soon as possible after collection and, in any case, within the same working day. The product sample shall arrive in the laboratory not later than 14 days after the date of sampling.

The maximum time between date of sampling and start of a test in the laboratory (incl. storage at manufacturer, transport, and storage at testing laboratory) shall not exceed 8 weeks provided that the laboratory sample is stored in the specified packaging. On-site wet-applied products coming in a closed container (can, cartouche) shall be tested not later than 4 months after sampling.

Samples taken shall be packaged airtight and be protected against contamination. A detailed documentation including sampling protocol, product description and testing order shall follow the sample into the laboratory along with an order form and a chain of custody protocol (as a documentation of sample history from sample taking until start of test) – templates will be supplied by Eurofins.

4.2 Preparation of a test specimen

Test specimen preparation prior to testing shall be performed as specified for the respective product – especially as defined in the respective EN product standard, as far as available. Specifications in national and international standards such as CEN/TS 16516, ISO 16000-11, EMICODE, EN 16402, M1, DIBt test protocol shall be taken into account.

Multi-layer systems are built up such as the manufacturer specifies for use at the construction site, including the required intermediate drying periods. If the manufacturers prepare the test specimen, then at least the top layer shall be installed at the testing lab just before start of the test.

Furniture is tested as a complete unit. In the case of large pieces of furniture, a representative subsample can be cut out, where the cut edges shall be sealed airtight before starting the test. The test results then shall be re-calculated to the whole unit.
4.3 Emissions testing

Emission testing shall be performed in a test chamber made of stainless steel as specified in CEN/TS 16516 at 23 (± 1) °C in the test chamber and 50 (± 3) % RH in the inlet air. Ventilation rate shall be 0.5 air changes per hour.

Other ventilation rates are accepted in the range 0.25 - 1.5 air change per hour if the test result is recalculated to 0.5 air changes per hour. In line with European standardization and the normative European Reference Room for emission testing, the following loading factors shall be applied:

Table 1: European reference room (CEN/TS 16516)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length x width x height</td>
<td>4 m x 3 m x 2.5 m</td>
</tr>
<tr>
<td>Surface floor or ceiling</td>
<td>12 m²</td>
</tr>
<tr>
<td>Surface walls</td>
<td>31.4 m²</td>
</tr>
<tr>
<td>Surface window</td>
<td>2 m²</td>
</tr>
<tr>
<td>Surface door</td>
<td>1.6 m²</td>
</tr>
<tr>
<td>Volume</td>
<td>30 m³</td>
</tr>
</tbody>
</table>

Table 2: Loading factors for building materials (CEN/TS 16516)

<table>
<thead>
<tr>
<th>Intended use</th>
<th>Loading factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling or flooring</td>
<td>0.4 m²/m³</td>
</tr>
<tr>
<td>Walls <em>(after rounding the value)</em></td>
<td>1.0 m²/m³</td>
</tr>
<tr>
<td>Ceiling and walls</td>
<td>1.4 m²/m³</td>
</tr>
<tr>
<td>Ceiling, walls and flooring</td>
<td>1.8 m²/m³</td>
</tr>
<tr>
<td>Small surfaces e.g. a door or a window</td>
<td>0.05 m²/m³</td>
</tr>
<tr>
<td>Very small surfaces, e.g. sealants</td>
<td>0.007 m²/m³</td>
</tr>
</tbody>
</table>

Allowed deviation from these values in test chamber is 50% to 200% of required loading. In case of such a deviation, the test result shall be re-calculated to the above specified value.
4.4 Air sampling

The emissions behavior is measured by sampling air from the outlet of the ventilated test chamber with sampling media and analytical procedures appropriate for the testing parameters as specified in CEN/TS 16516, ISO 16000-3 and -6. The limits of detection and quantification shall be applied as specified in CEN/TS 16516.

Note: Formaldehyde test results obtained by EN 717-1 can be accepted for wood-based products. Formaldehyde test results obtained by EN 717-2 can be accepted for factory production control.

The test specimens shall remain stored in the test chamber during the whole testing period and shall be removed only after final air sampling from test chamber.

Air sampling shall be performed after 3 days and after 28 days in test chamber using Tenax TA adsorption tubes for determination of VOC emissions, on DNPH impregnated silicagel adsorption tubes for determination of volatile aldehydes, and on XAD-II sampling tubes for phthalates.

In case of unknown emissions behaviour, a complete test is mandatory. If the limit values are respected at an earlier stage (e.g. already after 3 days), the test results after 3 days can be considered as reference value for re-testing. If re-testing shows that emission behaviour of the product after 3 days is significantly different from the initial test result, or if higher emissions are observed at the early testing time, e.g. due to a change of recipe or of manufacturing process, then the emissions test shall be performed over the whole testing period of 28 days. At least every five years a complete test shall be performed.

4.5 Air analysis

All measured concentrations in the test chamber air are extrapolated to air concentrations in the European Reference Room.

4.5.1 VOC, SVOC

The analytical determination is performed as specified in CEN/TS 16516. Identification and individual quantification shall be performed for all appearing VOCs and SVOCs – but only at an air concentration in the European Reference Room of minimum 5 μg/m³ (as far as technically feasible), resp. of minimum 1 μg/m³ (as far as technically feasible) for carcinogenic VOCs (C1A and C1B).

Substances with a limit value are calibrated with their authentic calibration. Substances without a limit value are quantified in toluene equivalents.
4.5.2 CMR substances for French regulations

Benzene and trichloroethylene are determined in the same manner as the other VOCs. But determination of the phthalates DBP and DEHP requires a supplemental air sampling and analysis with adsorption on XAD-II tubes, extraction and GC/MS analysis to achieve a reasonable detection limit.

4.5.3 Aldehydes

The analysis is performed in line with CEN/TS 16516 / ISO 16000-3. Test results for formaldehyde obtained with the analytical procedure specified in EN 717-1 can be accepted (acetyl acetone method).

4.5.4 Sum and evaluation parameters

Calculation of TVOC, TSVOC, R value and "sum of all VOCs without German LCI" shall be performed as specified in CEN/TS16516.

TVOC is calculated by addition of all individual results of 5 µg/m³ or above in the interval from n-hexane to n-hexadecane (n-C6 - n-C16) on a slightly polar GC column, but after calculation of all individual substances in toluene equivalents, as specified in the harmonized test method CEN/TS 16516.

TSVOC is calculated by addition of all individual results of 5 µg/m³ or above in the interval from n- hexadecane to n-docosane (> n-C16 - n-C22) on a slightly polar GC column, after calculation of all individual substances in toluene equivalents.

The individual concentrations of the substances with an LCI value shall be divided by the respective LCI value, and the sum of these quotients is the risk value R, which is different for the Belgian or the German list of LCI values, respectively:

\[
R_B = \sum_{i=1}^{n} \left( \frac{c_i}{LCI_i} + \cdots + \frac{c_n}{LCI_n} \right)
\]

\[
R_D = \sum_{i=1}^{n} \left( \frac{c_i}{LCI_i} + \cdots + \frac{c_n}{LCI_n} \right)
\]
5 Evaluation

5.1 Indoor Air Comfort
Indoor Air Comfort specification requires that air concentrations extrapolated for the European Reference Room do not exceed the following limit values:

Table 3: Limit values Indoor Air Comfort

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>10 000</td>
<td>1 000</td>
<td>µg/m³</td>
</tr>
<tr>
<td>R₆ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>R₆ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>-</td>
<td>A or A+</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>-</td>
<td>60</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>200</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods

5.2 Indoor Air Comfort Gold
Indoor Air Comfort GOLD specification requires that air concentrations extrapolated for the European Reference Room do not exceed the following limit values for all products, if not specified otherwise in the Annex:

Table 4: Limit values Indoor Air Comfort GOLD

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT GOLD</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>1 000</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>R₆ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>R₆ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>50</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>-</td>
<td>A+</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>-</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>200</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods
6 Certification contract
A contract is signed by manufacturer and certification body including scope and content of certification, and agreements on maintaining low VOC emissions from labelled products, e.g.

- Details and control of production process,
- Details and control of product composition and recipes,
- Raw materials checks and control,
- Factory production control,
- Internal laboratory tests,
- Traceability,
- Handling of customer complaints.

7 Inspection and surveillance
An independent and approved inspector shall inspect the production processes on-site as far as relevant for the emission of volatile organic compounds from the finished product. The inspection shall cover all parameters influencing the emission behavior of the product, as specified in clause 6. This includes the availability of an archive of recipe changes to trace any changes that can be relevant for product emissions. If emission tests are part of factory production control, these test results shall be reviewed during the inspection as well.

During the inspection, samples of products for emissions testing shall be taken, in accordance with the product specific requirements for sampling.

An inspection report will be compiled containing all findings, recommendations and non-conformities.

The surveillance report combines the inspection report and the analytical test report of the tested sample. The surveillance report will be an essential element of the certification of the product.

8 Certification
The certification is the final step in the application procedure for the labels Indoor Air Comfort and Indoor Air Comfort Gold.

This final step consists of an evaluation of the available documents such as the test report of the laboratory and the inspection report.

All emission test results are checked for plausibility. Based on all available facts the final decision on granting a certificate is made.

If a lab report shows deviations of the product emissions from the required specifications, then a laboratory test report may be issued but a certificate then must not be granted, or an earlier granted certificate may be withdrawn.
Validity of a certificate is 5 years from the date of issue if the repeated inspection and testing did not show critical non-conformities.

9 Repetition of testing and inspections

To maintain license and certificate, repetition of product emission testing and inspection of production facilities is required on an annual basis for both Indoor Air Comfort and Indoor Air Comfort Gold. In case of long time certified products and production sites, inspections and re-testing can be performed on a biannually basis. The scope of inspection and of retesting shall be the same as for the primary inspection, but the duration of the test can be reduced as described above. Use of appropriate short-term tests and simplified tests is possible upon prior acceptance by the certification body.

10 Use of the label

After successful first certification, Indoor Air Comfort and Indoor Air Comfort Gold labels can be used by the customer as discrete label - especially useful in areas and for products for which no other label is available. The label shall be used together with a certificate number as long as it refers to specific products.

Furthermore, the test reports are accepted by many organizations and can be used for applying for other labels. A list of labels that accept test reports issued by Eurofins Product Testing A/S can be supplied upon request.
11 Summary of the procedure

- Testing of sample in a ventilated test chamber.
- Reporting and evaluation of test results (the specifications may differ by product group).
- Contract between manufacturer and certification body, including agreements on actions for maintaining low VOC emissions from labelled products, e.g. on details of production, exclusion of certain raw materials, factory production control, quality documentation.
- Surveillance contract, initial inspection of relevant manufacturing site(s); inspection report including the relevant documentation.
- Certification process, including evaluation of test and inspection reports, granting or denying the certificate according to the criteria.
- Periodic external inspections by Eurofins incl. survey of emission relevant elements of quality documentation.
- Periodic re-testing for ensuring reliability of claims on low emissions.
- Continuous monitoring and improvement of specifications, testing and inspection methodology.
13 Literature

www.eurofins.com/agbb

Belgian VOC regulation, http://www.eurofins.com/belgien-voc:
 o Koninklijk besluit tot vaststelling van de drempelniveaus voor de emissies naar het binnenmilieu van bouwproducten voor bepaalde beoogde gebruiken, 2014/24239.

French VOC regulations, www.eurofins.com/frankreich-voc:
 o Arrêté du 30 avril 2009 relatif aux conditions de mise sur le marché des produits de construction et de décoration contenant des substances cancérigènes, mutagènes ou reprotoxiques de catégorie 1 ou 2. JORF n° 0122 du 28 mai 2009 page 8840 texte n° 2, NOR: DEVP0908633A.
 o Arrêté du 28 mai 2009 modifiant l'arrêté du 30 avril 2009 relatif aux conditions de mise sur le marché des produits de construction et de décoration contenant des substances cancérigènes, mutagènes ou reprotoxiques de catégorie 1 ou 2 JORF n° 0124 du 30 mai 2009 page 8940 texte n° 12, NOR: DEVP0910046A.
 o Arrêté du 19 avril 2011 relatif à l’étiquetage des produits de construction ou de revêtement de mur ou de sol et des peintures et vernis sur leurs émissions de polluants volatils. JORF du 13 mai 2011 texte 15 sur 192, NOR : DEVL1104875A.

EMICODE specifications. www.eurofins.com/emicode
Blue Angel specifications. www.eurofins.com/blauer-engel


ISO 16000 – Indoor Air
 o ISO 16000-3: Determination of formaldehyde and other carbonyl compounds - Active sampling method (2011)
 o ISO 16000-6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA® sorbent, thermal desorption and gas chromatography using MS/FID (2011)
 o EN ISO 16000-11: Determination of the emission of volatile organic compounds from building products and furnishing - Sampling, storage of samples and preparation of test specimens (2006)

M1: Emission classification of building materials. www.eurofins.com/m1

EU research report ECA no 29 (EUR 26168) "Harmonisation framework for health based evaluation of indoor emissions from construction products in the European Union using the EU-LCI concept" (2013): http://ihcp.jrc.ec.europa.eu/our_activities/public-
Italy: Piano d’Azione Nazionale sul Green Public Procurement (PANGPP)
Sweden BVB: Byggvarubedömmningen Assessment Criteria 4.0 from 2016
EU Ecolabel: www.ecolabel.eu
ECO product (Norway): http://byggtjeneste.no/ecoproduct/
DGNB Kriterium ENV 1.2 “Risiken für die locale Umwelt”; Version 2015.2
### Annex: Product specific requirements

A classification as compliant with Indoor Air Comfort GOLD requires that the emissions, after being extrapolated to room air concentrations in the European Reference Room (CEN/TS 16516), comply with the following limit values. Table 4 is valid for any products that are not listed in the following tables.

#### A.1 Textile floorings

Loading factor: 0.4 m²/m³.
Back and edges are sealed airtight.

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT GOLD</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>1000</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>R₉ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>R₀ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Limit values of the PRODIS/GUT system, see <a href="http://www.pro-dis.info/emission-test00.html?&amp;L=0">http://www.pro-dis.info/emission-test00.html?&amp;L=0</a></td>
<td>-</td>
<td>Below all limit values</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>50 **</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>30 **</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>-</td>
<td>A+</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde, Acetaldehyde, each</td>
<td>-</td>
<td>4</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Octanal</td>
<td>-</td>
<td>5</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Other aldehydes, each***</td>
<td>-</td>
<td>8</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4-Vinylcyclohexene</td>
<td>-</td>
<td>2</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Styrene</td>
<td>-</td>
<td>2</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Naphthaline</td>
<td>-</td>
<td>3</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4-Phenylcyclohexene</td>
<td>-</td>
<td>5</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>-</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>2-Ethylhexanoic acid</td>
<td>-</td>
<td>15</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Toluene</td>
<td>-</td>
<td>20</td>
<td>µg/m³</td>
</tr>
<tr>
<td>1,4-Dichlorobenzene</td>
<td>-</td>
<td>40</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Vinylacetate</td>
<td>-</td>
<td>40</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Xylene</td>
<td>-</td>
<td>40</td>
<td>µg/m³</td>
</tr>
<tr>
<td>NMP</td>
<td>-</td>
<td>40</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>-</td>
<td>40</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Phthalates: DBP, DEHP, DEP, BBP, DOP, DMP, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods
** These limit must be kept already after 3 days for the EU ecolabel.
*** Special requirement of the Blue Angel RAL UZ 128.
These limit values include the requirements of: AgBB, Belgian and French VOC regulations, M1, GUT/PRODIS, Blue Angel RAL UZ 128, Austrian ecolabel UZ 56, Green Public Procurement (Italy), LEED outside North America, BREEAM International, BREEAM NOR, BVB Byggvarubedömningen Assessment Criteria 4.0, ECO product (Norway), DGNB.

M1 label requires additional testing of ammonia and odour. GUT, RAL UZ 128 and UZ 56 also require odour testing. But these requirements are not part of IAC Gold label.
A.2 Resilient floorings

Prohibited or restricted phthalates as specified in REACH shall not be used, resp. they shall not exceed the content restrictions as specified in REACH Annexes XIV and XVII).

Loading factor: 0.4 m²/m³.
Back and edges are sealed airtight.

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT GOLD</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>1 000</td>
<td>160</td>
<td>µg/m³</td>
</tr>
<tr>
<td>R₈ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>R₀ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>30</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>-</td>
<td>A+</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>-</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>200</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods

These limit values include the requirements of: AgBB, Belgian and French VOC regulations, M1, Blue Angel RAL UZ 120, Austrian ecolabel UZ 56, Green Public Procurement (Italy), LEED outside North America, BREEAM International, BREEAM NOR, BVB Byggvarubedömningen Assessment Criteria 4.0, ECO product (Norway), DGNB.

M1 label requires additional testing of ammonia and odour. But these requirements are not part of IAC Gold label.
A.3 Wood-based floorings, panels and doors

Loading factor: 
- Floor or ceiling: 0.4 m²/m³
- Walls / Pitched roof: 1.0 m²/m³
- Doors: 0.05 m²/m³

Back and edges are sealed airtight partly, and joints are included for wooden floorings, as specified in DIBt testing protocol. Size of the test chamber: Minimum 225 liters.

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT GOLD</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>250</td>
<td>160</td>
<td>µg/m³</td>
</tr>
<tr>
<td>R₈ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Rₒ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>50 **</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>30 **</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>-</td>
<td>A+</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>-</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>200</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods
** These limit must be kept already after 3 days for the EU ecolabel.
*** A test using EN 717-1 can be accepted.

These limit values include the requirements of: AgBB, Belgian and French VOC regulations, M1, Blue Angel RAL UZ 176, Austrian ecolabel UZ 56, EU ecolabel (2009), Green Public Procurement (Italy), LEED outside North America, BREEAM International, BREEAM NOR, BVB Byggvarubedömningen Assessment Criteria 4.0, Nordic ecolabel, ECO product (Norway), DGNB.

M1 label requires additional testing of ammonia and odour. Blue Angel RAL UZ 176 requires a supplemental measurement of ammonia of 100 µg/m³, but only if the wood has been treated with ammonia. But these requirements are not part of IAC Gold label.
A.4 Insulation material

Loading factor:  
- Ceiling or floor: 0.4 m²/m³  
- Walls / Pitched roof: 1.0 m²/m³  
- Ceiling and walls: 1.4 m²/m³  
- Tubes, channels, cables, tanks, each: 0.4 m²/m³  

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT GOLD</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>1 000</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>$R_B$ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>$R_D$ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>20</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>A+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>-</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>200</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods

These limit values include the requirements of: AgBB, Belgian and French VOC regulations, M1, Blue Angel RAL UZ 132, LEED outside North America, BREEAM International, BVB Byggvarubedömningen Assessment Criteria 4.0, ECO product (Norway).

M1 label requires additional testing of ammonia and odour. But these requirements are not part of IAC Gold label.
A.5 Gypsum boards

Loading factor:

- Ceiling or floor (subflooring) 0.4 m²/m³
- Walls / Pitched roof 1.0 m²/m³
- Ceiling and walls 1.4 m²/m³

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT GOLD</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>1 000</td>
<td>60</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Rₚ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Rₒ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>40</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>20</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>-</td>
<td>A+</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>50</td>
<td>50</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of form- and acetaldehyde</td>
<td>50</td>
<td>-</td>
<td>ppb</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods

These limit values include the requirements of:
AgBB, Belgian and French VOC regulations, M1, Blue Angel RAL UZ 132 (suspended ceilings), EMICODE EC1 PLUS (for sub flooring), Green Public Procurement (Italy), LEED outside North America, BREEAM International, BREEAM NOR, BVB Byggvarubedömningen Assessment Criteria 4.0, ECO product (Norway).

M1 label requires additional testing of ammonia and odour. But these requirements are not part of IAC Gold label.
A.6 Installation products

Scope:
Flooring adhesives, leveling compounds, primers, sealant, underlays.

Loading factor:  
Floor  \(0.4 \text{ m}^2/\text{m}^3\)  
Sealants  \(0.007 \text{ m}^2/\text{m}^3\)

Application of the ready-to-use mixture on glass with a trowel, in a model, or test as a plate, details and amount as specified in CEN/TS 16516, ISO 16000-11 and GEV testing protocol. Higher application amounts as for DIBt testing also are accepted.

<table>
<thead>
<tr>
<th>Indoor Air Comfort Gold</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516) **</td>
<td>750</td>
<td>60</td>
<td>µg/m³</td>
</tr>
<tr>
<td>R₆ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>R₀ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>40</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>30</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>-</td>
<td>A+</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>50</td>
<td>50</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of formaldehyde and acetaldehyde</td>
<td>50</td>
<td>-</td>
<td>ppb</td>
</tr>
<tr>
<td>Other aldehydes (detectable with ISO 16000-3)</td>
<td>-</td>
<td>60</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods
** Silanfunctional adhesives: TVOC includes emissions of methanol if these occur.
This requires a separate air sampling from the test chamber and analysis that needs to be ordered if relevant.

These limit values include the requirements of:
AgBB, Belgian and French VOC regulations, EMICODE EC1 PLUS, Blue Angel RAL UZ 113, RAL UZ 123, RAL UZ 156, Green Public Procurement (Italy), LEED outside North America, BREEAM International, BREEAM NOR, BVB Byggvarubedömningen Assessment Criteria 4.0, ECO product (Norway), DGNB.

Please note that DIBt testing may require a much higher application amount for certain flooring adhesives; therefore it may happen in rare cases that an IAC Gold certificate does not qualify for those requirements automatically.

M1 label requires additional testing of ammonia and odour. But these requirements are not part of IAC Gold label.

Attention: The M1 label has very low limit values for sealants that have not been included in Indoor Air Comfort GOLD.
A.7 Paints, varnishes, floor coatings for the interior

Additional requirements for a license for Indoor Air Comfort GOLD:

- Wall paints:
  VOC content ready-to-use max. 10 g/l, SVOC content max. 30 g/l and 40 g/l in tinted paints (ISO 11890-2).
- Parquet coatings:
  VOC content before application max. 5 %
- All coatings:
  Conformity with the EU Decopaint Directive (2004/42/CE), and EU ecolabel requirements for VOC/SVOC, if applicable.

Loading factor:  
- Walls: 1.0 m²/m³
- Ceiling or floor: 0.4 m²/m³
- Small surfaces: 0.05 m²/m³

Application of the ready-to-use mixture on glass with a trowel or brush, with the highest amount and number of layers specified in the technical data sheet, see EN 16402 (including preconditioning). Application on oak wood as for DIBt testing also is accepted.

In case of multi-layer coatings, either the individual constituents or the whole system can be subject to certification, depending on the intended use and the related testing scenario.

### INDOOR AIR COMFORT GOLD

<table>
<thead>
<tr>
<th></th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>1 000</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>R₉ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>R₀ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>50</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>50</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B)</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B)</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>-</td>
<td>A+</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>50</td>
<td>50</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods

These limit values include the requirements of: AgBB, Belgian and French VOC regulations, EMICODE EC1 PLUS, M1, Green Public Procurement (Italy), LEED outside North America, BREEAM International, BREEAM NOR, BVB Byggvarubedömningen Assessment Criteria 4.0, ECO product (Norway).
M1 label requires additional testing of ammonia and odour. RAL UZ 102 (2010) requires a VOC content determination using a testing method that is no longer available. But these requirements are not part of IAC Gold label.

A.8 Resin based liquid applied floorings

Resin based floorings are liquid applied floorings.
Loading factor: Floor 0.4 m²/m³

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT GOLD</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>1 000</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Rs value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>R0 value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>50</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>4 CMR substances as specified in the French regulations, each</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>French VOC emission class</td>
<td>-</td>
<td>A+</td>
<td>-</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>-</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>200</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods

These limit values include the requirements of: AgBB, Belgian and French VOC regulations, M1, Green Public Procurement (Italy), LEED outside North America, BREEAM International, BREEAM NOR, BVB Byggvarbedömnlingen Assessment Criteria 4.0, ECO product (Norway).

A.9 Product systems

Scope:
- Floor or wall systems made of top covering, possibly underlay, installation products, and possibly subfloor.
- Access floors.

Loading factor: Walls 1,0 m²/m³
Ceiling or floor 0,4 m²/m³

Installation according to specifications of the manufacturer, including all intermediate drying periods. The test specimen can be prepared by the manufacturer, as long as at least the top layer is installed in the testing lab immediately before starting the test.

Criteria and limit values:
The specifications in the above table for the top layer apply to the whole system.
A.10 Furniture

Loading factor:
A complete piece of furniture is tested, e.g. a chair. The unit specific emission rates are calculated (µg / h per piece of furniture).

During certification, a realistic scenario is defined how many pieces of the tested furniture could be in the European Reference Room (with 12 m² floor area). If this results in more than one piece of furniture then the unit specific emission rates are multiplied with the number of furniture pieces. The air concentrations in the European Reference Room then are extrapolated from the resulting emission rates.

Size of the test chamber for wooden parts of furniture: Minimum 225 liters.

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT GOLD</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>1 000</td>
<td>100</td>
<td>µg/m³</td>
</tr>
<tr>
<td>R₈ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>R₉ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>40</td>
<td>µg/m³</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>50</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>-</td>
<td>10</td>
<td>µg/m³</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>200</td>
<td>µg/m³</td>
</tr>
</tbody>
</table>

* As far as detectable with CEN/TS 16516 / ISO 16000-3/-6 test methods

These limit values include the requirements of:
Blue Angel RAL UZ 38 und 117, and Belgian and German limit values (LCI), Nordic ecolabel and EU ecolabel.
### A.11 Mattresses

Loading factor: mattress $1 \, \text{m}^2/\text{m}^3$

<table>
<thead>
<tr>
<th>INDOOR AIR COMFORT GOLD</th>
<th>After 3 days</th>
<th>After 28 days</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVOC (CEN/TS 16516)</td>
<td>500</td>
<td>200</td>
<td>µg/m$^3$</td>
</tr>
<tr>
<td>$R_B$ value (based on Belgian LCI values)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>$R_D$ value (based on German LCI values 2015)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sum of VOC without German LCI and non-identified VOC</td>
<td>-</td>
<td>40</td>
<td>µg/m$^3$</td>
</tr>
<tr>
<td>TSVOC</td>
<td>-</td>
<td>40</td>
<td>µg/m$^3$</td>
</tr>
<tr>
<td>Sum of carcinogens (C1A, C1B) *</td>
<td>10</td>
<td>-</td>
<td>µg/m$^3$</td>
</tr>
<tr>
<td>Any individual carcinogens (C1A, C1B) *</td>
<td>-</td>
<td>1</td>
<td>µg/m$^3$</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>-</td>
<td>10</td>
<td>µg/m$^3$</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>60</td>
<td>µg/m$^3$</td>
</tr>
</tbody>
</table>

These limit values include the requirements of:
- Blue Angel RAL UZ 119
- Belgian and German limit values (LCI)