

how to certify formaldehyde low emission

Staff CQA

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**Formaldehyde
Low emission
Certified by Catas**

Formaldehyde is a **volatile organic compound (VOC)**, a gas at room temperature and an odorless molecule.

It is particularly soluble in water and this means that when we breathe it, it can easily dissolve on our mucous membranes, making us feel a sense of irritation in the upper airways.

From a chemical point of view, it is the simplest of the aldehydes, its formula is CH_2O . It is a very reactive molecule, widely used by the chemical industry. For what concerns the wood furniture sector, formaldehyde is used to produce resins, polymeric materials for impregnating the laminate papers or as a component of the adhesives used in the production of various kinds of wood-based panels. It is an effective antiseptic and therefore finds application as a biocidal, antibacterial or anti-mold agent.

From a toxicological point of view, formaldehyde is a ubiquitous substance, present in interstellar space, within our cells and even in wood. In its use, the limits must consider its presence in Nature and the threshold below which it is not dangerous for human health.

Formaldehyde endangers the healthiness of indoor environments, as evidenced by its classification among group 1 of carcinogenic substances listed by **IARC, the International Agency for Research on Cancer**.

Its use in the furniture field is currently still the most relevant and “pervasive” of the areas governed by mandatory laws and regulations. For example:

- in Italy the Decree of the Ministry of Health of 10/10/2008 is in force which sets the limits for the emission of formaldehyde from wood-based panels and manufactured goods: 0.1 ppm (class E1 equal to 0.124 mg/m³); this limit resumes what indicated in 1989 by the WHO.
- in Germany from 01/01/2020 it was decided to keep the WHO limit but at the same time to change the test method in consideration of the fact that houses have increasingly limited spaces and air changes are increasingly reduced. The variation consists in doubling the result obtained from the emission test by effectively reducing the limit by half.
- the United States refer to the EPA regulations for the whole Union and CARB for California, which since 2009 has promoted different limits depending on the type of panel (particleboard, MDF, thin MDF and plywood).
- Japan adopted a classification which considers the quantity of panels and the volume of the premises containing them. A class F **** panel, the most restrictive even in the world, can be used in any context.

The wood-based panel, or the product made by it, can **NOT be placed on the market** if not complying with these limits.

Nowadays, **product certification** has become in effect the assessment, check and statement **tool necessary** for sales and exports.

Since 1993 Catas had set up **five certification schemes** referring to formaldehyde emissions.

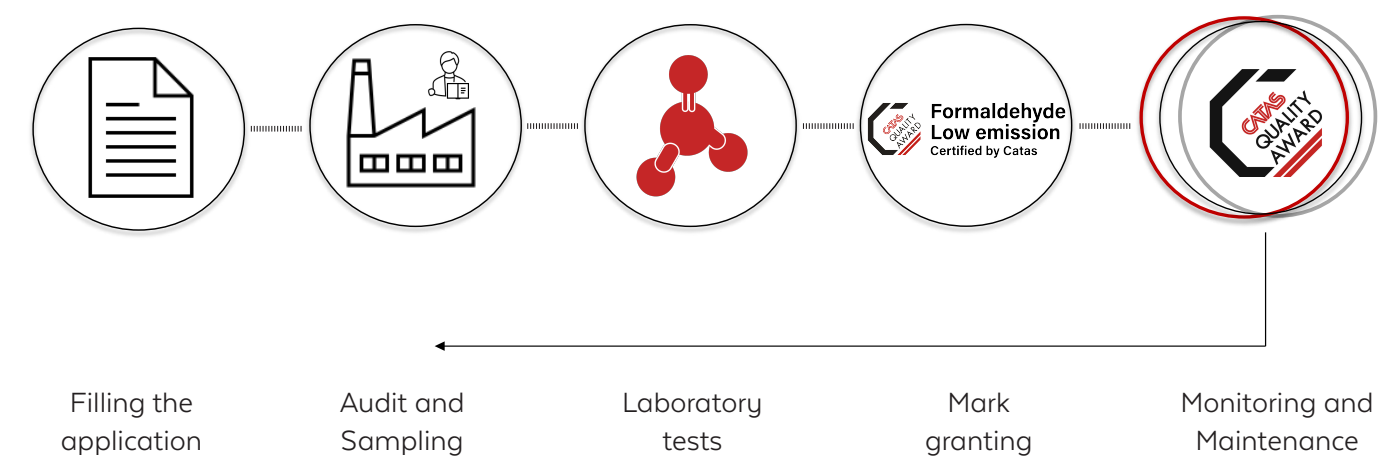
The CQA certifications relating to formaldehyde are **applied to wood-based panels**, but **what is the certification iter?** CATAS inspectors visit the company’s warehouses every six months and sample the certified panels that will be tested in the laboratory. At the same time, the company carries out periodic tests in its own laboratory for each type of certified product, sending the results regularly to our reference technicians for final approval.

Compliance is verified by considering the standards related to the scheme and those of the reference country.

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Getting certified **is easy**:



..... only 5 steps:

1. Filling the application
2. Audit and sampling
3. Laboratory tests
4. Mark granting
5. Monitoring and maintenance

For any further information or clarification, we kindly ask you to contact us please.

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