Fraunhofer WKI

Testing | Monitoring | Certification

Registration, **E**valuation, **A**uthorisation and Restriction of **CH**emicals | **REAC-H-CHO**

The abbreviation "REACH" is derived from the English title of the regulation "**R**egulation concerning the Registration, **E**valuation, **A**uthorisation and Restriction of **CH**emicals" and is considered one of the strictest chemical laws in the world. The REACH requirements are intended to ensure a high level of protection for human health and the environment. REACH is based on the principle that manufacturers, importers and downstream users take responsibility for the chemicals and products placed on the European market.

REACH CHO

Actual situation

The written vote of the Member States Committee on the ECHA restriction procedure regarding formaldehyde ended on February 10, 2023. Of the 26 participating states, only one country voted against the Commission's proposal.

The EU-wide new regulation „COMMISSION REGULATION (EU) 2023/1464 of 14 July 2023, amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council as regards formaldehyde and formaldehyde releasers" was signed on July 14, 2023 and published in the Official Journal of the European Union on July 17, 2023.

Transitional periods of three years for furniture and wood-based articles and four years for vehicles are foreseen for the implementation.

The new regulation will come into force as follows:

from August 6, 2026: Wood-based articles and furniture

from August 6, 2027: Interior of the road vehicles

Table 1: Limit values and areas of application according to Annex

Target substance	Formaldehyde and formaldehyde releasing substances
Limit	a) 0,062 mg/m³ for wood-based articles and furniture, the interior of the road vehicles; b) 0,080 mg/m³ for articles other than wood-based articles and furniture.
Exemptions	a) articles in which formaldehyde or formaldehyde releasing substances are exclusively naturally present in the materials from which the articles are produced; b) articles that are exclusively for outdoor use under foreseeable conditions; c) articles in constructions, that are exclusively used outside the building shell and vapour barrier and that do not emit formaldehyde into indoor air; d) articles exclusively for industrial or professional use unless formaldehyde released from them leads to exposure of the general public under foreseeable conditions of use; e) articles for which the restriction laid down in entry 72 applies (clothing, textile accessories, shoes); f) articles that are biocidal products within the scope of Regulation (EU) No 528/2012 of the European Parliament and of the Council; g) devices within the scope of Regulation (EU) 2017/745; h) personal protective equipment within the scope of Regulation (EU) 2016/425; i) articles intended to come into contact directly or indirectly with food within the scope of Regulation (EC) No 1935/2004; j) second-hand articles.

Table 2: List of regulated articles (selection)

Product group	Product
Solid wood and wood-based materials	Particleboard, fibreboard, plywood, glulam (glued laminated timber), laminated veneer lumber, cross laminated timber, blockboard and laminboard, solid wood
Floor coverings	Parquet, laminated flooring, sport floor
Furniture	Seating furniture, upholstered furniture, box furniture
Wall coverings	Wallpapers, tapestries
Wall elements	Acoustic panels, wall panels
Wood-plastic composites	Wood Plastic Composites (WPC)
Insulation material	Thermal insulation products – Wood wool Thermal insulation materials – Wood fibres
Other products	Doors, windows, skirting boards, curtains, car interiors, pallet blocks, foams, abrasives

Test method
According to Appendix 14, the tests for determining the formaldehyde release must be carried out according to a chamber method.

Table 3: Test parameter

Temperature	(23 ± 0,5) °C
rel. humidity	(45 ± 3) %
Air exchange	(1 ± 0,05) h-1
Loading rate	(1± 0,02) m^2/m^3; based on wood-based panel loading rate*
Analytic procedure	Suitable analysis method should be used (without specification
Sampling	Suitable method for sampling should be used (without specification
Determination of formaldehyde in the chamber	Sampling shall be done at least twice a day, the time interval between the two samplings shall be more than 3h
Test period	Sufficiently long to determine the compensation concentration and should not exceed 28 days
Assessment	Steady-state concentration measured in the chamber

* for other materials or products, if such a loading factor is clearly not realistic under the foreseeable conditions of use, loading factors according to clause 4.2.2 of EN 16516 may be used.

Note: The air change rate remains at (1 ± 0,05) h-1 according to the specifications

Correlations
If data from a test method under the above reference conditions are not available or not suitable for the measurement of formaldehyde released from a special article, data from a test method under non-reference conditions may be used if there is a scientifically verified correlation between the results of the test method used and the reference conditions.

Certification of products referring certification program "REAC-H-CHO" of Fraunhofer WKI

The certification »REAC-H-CHO« serves as proof of compliance with »COMMISSION REGULATION (EU) 2023/1464 of 14 July 2023, amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council as regards formaldehyde and formaldehyde releasers« and enables manufacturers of the regulated products to provide the prove of comliance to their customers, if necessary.

Table 4: Content ot the "REAC-H-CHO" certification of Fraunhofer WKI

Certification (Certificate)	Supervision (Attestation)
Initial examination Establishing of a correlation (QCL) On-site initial inspection	Annual supervision Quarterly examination

Table 5: Responsibilities for the criteria of certification "REAC-H-CHO" of Fraunhofer WKI

Fraunhofer WKI	Manufacturer
Establishing of a correlation based on a minimum 5 data pairs of the manufacturer´s FPC method and chamber method of Fraunhofer WKI Assignment of IDs for the samples shipped by the manufacturer Issue of test reports	Continious self-monitoring (FPC) of the product Providing the FPC results to Fraunhofer WKI Sampling, labeling and shipping of the samples

Further information

Fraunhofer WKI:
https://www.wki.fraunhofer.de

Quality Assessment:
https://www.wki.fraunhofer.de/en/departments/qa/profile.html

Testing | Monitoring | Certification:
https://www.wki.fraunhofer.de/en/departments/qa/profile.html

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