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Guidance Manual

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for

**Sustainability requirements for
office and non-domestic furniture for indoor use
Edition 2023**



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Table of Contents

Note

Page numbers in this manual differ from the page numbers in the Standard

1	General.....	5
1.1	Scope	5
1.2	Purpose	5
1.3	Document History	5
1.4	Structure	6
1.5	Related Documents.....	7
2	Normative References	8
3	Definitions	9
4	Assessing Conformance, Evaluation and Assessment Criteria.....	15
4.1	Principles and Boundaries.....	15
4.2	Representative (worst-case) Sample Selection.....	16
4.3	Baseline and Normalization Values.....	16
4.4	Frequency of Conformity Assessment	18
4.5	Testing.....	18
4.6	Acceptance of other Certificates.....	19
4.7	Decision rules for laboratories.....	19
5	Materials	20
5.1	Wood and wood-based Materials.....	20
5.2	Plastic Parts	22
5.3	Surface Coating of Wood, Plastic or Metal parts	22
5.4	Adhesives and Glues	24
5.5	Textiles and Leather	24
5.6	Upholstery Materials.....	25
5.7	Flame Retardants	27
5.8	Phthalates	27
5.9	Packaging Materials	28
5.10	Life Cycle Assessment	30
5.11	Efficient Use of Materials.....	31
5.12	Recycled Content	32
5.13	Extended Producer Responsibility and Circular Economy	32
5.14	Product Compliance to EN/ISO Standards - Prerequisite	38
5.15	Waste Management.....	38
5.16	Water Management.....	40
6	Energy and Atmosphere	42
6.1	Energy Policy - Prerequisite	42
6.2	Building Energy Performance baseline	42
6.3	Sustainable Building Rating Systems.....	43

6.4	Energy Management System	44
6.5	Embodied Energy	44
6.6	Standby Energy Consumption - Prerequisite	45
6.7	Transportation	46
6.8	On-site and Off-site Renewable Energy	46
6.9	Carbon Footprint and Greenhouse Gas	47
6.10	Air Emissions	49
7	Management of Chemicals	50
7.1	Demonstration of Compliance - Prerequisite	50
7.2	Key Chemical and Risk Policies - Prerequisite	50
7.3	EMAS, ISO 14001 or Equivalent	51
7.4	Chemical Management Plan (CMP)	51
7.5	Assessment and Reduction of Chemical Impact	53
7.6	Reduction or Absence of Chemicals of Concern	55
7.7	Low Emitting Furniture	59
8	Social Responsibility	60
8.1	Employee Health and Safety Management - Prerequisite	60
8.2	Labour and Human Rights - Prerequisite	60
8.3	Policy on Social Responsibility	61
8.4	External Health and Safety Management Standard	61
8.5	Inclusiveness	61
8.6	Engage in Community Outreach and Involvement	62
8.7	Social Responsibility Reporting	62
8.8	Social Responsibility in the Supply Chain	63
8.9	Excellence in Social Responsibility	64
9	Annexes	66
	Annex 1 - Chemicals of Concern List	66
	Annex 2 - Candidate List of Substances of Very High Concern for Authorization	67
	Annex 3 - Contaminants in recycled wood (to 5.1.2)	68
	Annex 4 - Product classifications for surface coating (to 5.3.1)	69
	Annex 5 - Textiles and Leather (to 5.5.1 and 5.5.2)	71
	Annex 6 - Upholstery Materials (to 5.6.1 and 5.6.2)	76
	Annex 7 - List of EN and ISO technical standards	90
	Annex 8 - Inventory of air emissions (to 6.10.1)	91
	Annex 9 - Formaldehyde (to 7.7.1 and 7.7.2)	92
	Annex 10 - VOC in the finished product (to 7.7.3)	93
	Annex 11 - Scorecard	95

1 General

This Guidance Manual is intended to provide helpful advice, informational resources, references, etc. regarding evaluation and conformance strategies for each credit within the FEMB Standard on “Sustainability requirements for office and non-domestic furniture for indoor use”.

This document is intended for applicants (and their suppliers) as they evaluate products and implement the Standard within their respective enterprises. If any inconsistencies exist between text in this Guidance Manual as compared to the actual FEMB Standard, the English version of FEMB Standard shall take precedence.

1.1 Scope

This document provides a scheme for assessing the sustainability of furniture products by establishing measurable performance criteria that address environmental and social aspects throughout the supply chain. Certification of furniture components is not possible.

It also provides requirements that aim at guaranteeing that products which have a reduced effect on the environment, have at the same time an equivalent performance to other products on the market.

This document has been conceived to be applied to office furniture, but its principles can be used to assess the sustainability of any kind of indoor furniture.

This document is not applicable to furniture designed to be used outdoor.

Examples of products covered besides office furniture:

School furniture, laboratory furniture, etc.

1.2 Purpose

Organisations that choose to assess their furniture products to this Standard can document their achievements by third-party verification of conformance. Certification is subject to ISO 17065 to which this Standard and the related Conformity Assessment Scheme are accredited.

1.3 Document History

This document has been developed by FEMB, the European Office Furniture Federation, using as a basis the first version 2017 of this standard, the US-American standard ANSI/BIFMA e3 version 2019 together with the European criteria for green or sustainable public procurement (GPP, SPP) and specifications for the award of several voluntary European ecolabels. Convergence between this Standard version 2023 and ANSI/BIFMA e3 version 2019 has decreased but all broad aspects of sustainability are mutually covered.

1.4 Structure

The introductory part comprises terms and definitions, references and general methods.

The central part consists of the Standard criteria proper which are divided according to their physical form (materials, energy and chemicals/substances) respectively and the social impact as fourth field.

The annex part contains all specific information necessary in several criteria to define measurement methods, threshold and uncertainty values, etc.

1.4.1 Elements

The four central chapters of the Standard represent different criteria fields of sustainability, called elements in this Standard:

- Materials
- Energy and atmosphere
- Management of chemicals
- Social responsibility

The elements “materials”, “energy” and “management of chemicals” influence the environmental impact, the fourth element “social responsibility” comprises the social impact criteria. Finally, all elements have direct or indirect impact on human health and safety.

Elements consist of prerequisites and requirements that have to be matched when seeking conformance to the Standard.

1.4.2 Prerequisites

Each element has one or more prerequisites that are required as the minimum performance against the Standard. Applicants and their products shall meet all prerequisites of the entire Standard in order to proceed. Once all prerequisites are met, products may obtain additional points toward multiple levels of achievement in each element by meeting the specified performance requirements.

This document does not cover compliance to all national or local regulations which are in force in the different countries where products can be manufactured or sold. Nevertheless, all the applicable mandatory legal requirements shall always be considered as prerequisites by any product claiming compliance to this document. This includes all requirements for electrical components that may be part of the certified product.

Additional information

All legal mandatory requirements with regard to the purpose of this Standard are prerequisites for this Standard. If a legal requirement is not met, the CB shall decide whether

1. the Applicant is able to meet this requirement in the future; and
2. to continue with the assessment if no remedy is feasible.

1.4.3 Credits

Beyond the prerequisites, there is no minimum number of credits from any of the four major elements required to demonstrate conformance to this document. The required credits can come from any of the four elements. If a legal requirement is stricter than the respective requirement in a credit of the Standard, the points for this credit will be awarded notwithstanding the legal requirements' status of a prerequisite.

1.4.4 Points

Each credit has one or more points that accumulate toward a level of conformance. In addition to a minimum number of total points required for each conformance level, there is also a minimum number of product related points for each level.

See Annex 11 for a listing of product related credits and points. The maximum number of points is 100 and is the maximum level of conformance that can be reached.

1.4.5 Levels of conformance

Level 1: 35 to 47 total points, with at least 5 product points.

Level 2: 48 to 66 total points, with at least 14 product points.

Level 3: 67 to 100 total points, with at least 20 product points.

1.5 Related Documents

The Standard is usable on its own for an overview of the requirements. For performing a full certification process all documents in the CAS Document Set have to be adhered: The Standard (this document), the CAS Requirements, the Brand Manual, the Guidance Manual, the Technical Documents normative and the Technical Documents informative.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Number	Title
EN 717-1	Wood-based panels – Determination of formaldehyde release – Part 1: Formaldehyde emission by the chamber method
EN 16516	Construction products: Assessment of release of dangerous substances - Determination of emissions into indoor air
EN 1014-3	Wood preservatives – Creosote and creosoted timber – Methods of sampling and analysis – Part 3: Determination of the benzo(a)pyrene content of creosote
ISO 16000-3	Indoor air – Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air – Active sampling method
ISO 16000-6	Indoor air – Part 5: Sampling strategy for volatile organic compounds (VOCs)
EN ISO 16000-9	Indoor air – Part 9: Determination of the emission of volatile organic compounds from building products and furnishing – Emission test chamber method (ISO 16000-9:2006)
EN ISO 16000-11	Indoor air – Part 11: Determination of the emission of volatile organic compounds from building products and furnishing – Sampling, storage of samples and preparation of test specimens (ISO 16000-11:2006)
EU 995/2010	Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market relevance
ISO 11469	Plastics – Generic identification and marking of plastics products
ISO 14001	Environmental management systems – Requirements with guidance for use
ISO 14024	Environmental labels and declarations – Type I environmental labelling – Principles and procedures
ISO 14025	Environmental labels and declarations – Type III environmental declarations – Principles and procedures
ISO 14040	Environmental management – Life cycle assessment – Principles and framework
ISO 14044	Environmental management – Life cycle assessment – Requirements and guidelines
ISO 26000	Guidance on social responsibility
ISO 45001	Occupational health and safety management systems — Requirements with guidance for use
ISO 50001	Energy management systems – Requirements with guidance for use

3 Definitions

Applicant

Any natural or legal person which falls under the definition of "manufacturer" and applies for one or more of its products to be certified against this FEMB Standard.

Additional information

Reference in the Standard to the "applicant's" facilities or organisation always includes the facilities or organisations of companies that design or manufacture products which are marketed under the applicant's name or trademark. Also see definition of "Manufacturer" below.

Biodegradable

Capable of decomposing under natural conditions.

Chemicals of concern

A chemical that makes a significant contribution to one or more of the following life cycle impact categories:

- persistent, bioaccumulative, and toxic (PBT)
- reproductive toxicant
- carcinogen

Refer to Annex 1 and see also "Substance of Very High Concern - SVHC"

Child labour

Exploitation of workers under the minimum legal age for employment in the country where the facility operates.

Circular Economy

Circular Economy aims at keeping all resources necessary for production and product in a cycle of use and re-use without loss or waste.

Component

A Component is not usable in itself as furniture but is a part of a furniture product. In differentiation to a furniture product, it cannot be certified to this Standard.

Cradle-to-gate

A term used to describe the LCA boundary encompassing the life cycle stages of raw material extraction and conversion to a bulk form or a generic shape.

Design for the environment (DfE)

The systematic integration of environmental attributes into the design of products and processes. There are three unique characteristics of DfE:

- The entire life cycle is considered;
- Point of application is clearly in the product realization; and
- Decisions are made using a set of values consistent with industrial ecology, integrative systems thinking or another framework.

Environmental policy

A statement by the organisation, of its intentions and principles in relation to its overall environmental performance, which provides a framework for action and for the setting of its environmental objectives and targets.

Forced labour

Compulsory prison or debt bondage labour. Lodging of deposits or identity papers by employers or outside recruiters for the purpose of restricting or preventing the individual from leaving employment.

Furniture product

A furniture product in the scope of this standard is commonly labeled as seating, table, storage, partition or room system (see extra definition). Product type selection can be extended upon decision of standard owner.

Gate-to-gate

A term used to describe the product boundary encompassing the fabrication and assembly of the furniture. For purposes of the assessment, the entry gate is the receiving dock of the first facility where basic materials used in the manufacture of the furniture (e.g. steel, particleboard, fabric, laminate, etc.) begins the conversion to furniture components. The end gate is the shipping dock where the ready-to install furniture is transported for distribution to the end user. The gate-to-gate assessment will include transportation of intermediate materials and components between facilities where more than one physical location is included in the manufacturing process.

Green Public Procurement (GPP)

Public procurement that includes environmental (green) aspects in its decision process, see also "Sustainable Public Procurement".

Greenhouse gas (GHG)

Gases related to human activities that accelerate the greenhouse effect.

The seven GHG included in this edition of the standard:

- Carbon Dioxide (CO₂)
- Methane (CH₄)
- Nitrous Oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur Hexafluoride (SF₆)
- Nitrogen trifluoride (NF₃)

The GHG emission sources are classified into three so called "scopes":

- Scope 1: emissions are direct emissions from owned or controlled sources
- Scope 2: emissions are indirect emissions from the generation of purchased energy
- Scope 3: emissions are all indirect emissions not included in scope 2 that occur in the value chain of the reporting company, including both upstream and downstream emissions

Hazardous substances or mixtures

A substance or a mixture fulfilling the criteria relating to physical hazards, health hazards or environmental hazards, laid down in Parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008 is hazardous and shall be classified in relation to the respective hazard classes provided for in that Annex.

Where, in Annex I, hazard classes are differentiated on the basis of the route of exposure or the nature of the effects, the substance or mixture shall be classified in accordance with such differentiation.

Hazardous waste

Waste which displays one or more of the hazardous properties listed in Annex III of Directive 2008/98/EC.

High risk supplier

Suppliers are considered as high-risk suppliers with regard to chapter "Supply Chain" if any of the following circumstances are appropriate:

- Commercial high risk
 - applicant does a lot of business with the supplier
 - the supplier is the sole supplier and it would be difficult and time-consuming to replace
 - the supplier handles products bearing the applicant's name or trademark
- Risk of violating social and environmental issues
 - the supplier is located in a country where respect for human rights and labour standards is low or where the enforcement of environmental standards is similarly low
 - the supplier is used by sectors employing large numbers of low-paid workers or hazardous materials or scarce natural resources
 - the supplier employs migrant or seasonal workers

Maintenance chemical

A chemical not directly used in the manufacturing of the product (e.g., forklift engine oil).

Manufacturer

„Manufacturer" is any natural or legal person who, irrespective of the selling technique used, and including selling to resellers and end consumers, manufactures or assembles new ready-to-use furniture within the scope of the Standard under its own name or trademark, or has furniture designed or manufactured and markets it under its name or trademark. Organisations that sell furniture under a name or trademark that is not their legal name or trademark, are not manufacturers and cannot apply for certification.

Primary sources and data

Data that have been collected at the initial source by direct measurement or assessment.

Process chemical

Used in the direct manufacturing of the product and is not intended to be incorporated into the product as shipped (e.g. prep solvent prior to powder coat).

Product chemical

Incorporated in or on the product as shipped (e.g. wood finish).

Public availability

Disclosure may be on a website, company report, social responsibility report or available upon request.

Public disclosure

Information or data that is readily accessible and available to all interested individuals and institutions. The information or data shall be written and posted on a public and unrestricted website. Information or data available upon request is not considered public disclosure.

Recovered material

Waste materials and by-products that have been recovered or diverted from solid waste, but does not include materials and by-products generated from, and commonly reused within, an original manufacturing process.

Recyclable

Capable of minimizing waste generation by recovering and reprocessing usable products that might otherwise become waste.

Recycle

To minimize waste generation by recovering and reprocessing products that otherwise become waste (e.g., aluminium cans, paper and bottles, etc.).

Recycled content material

Materials that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process or after consumer use.

Refurbishing

The term is used in this standard in the same sense as "remanufacturing". Restore or rebuild a used product and bring it up to a specified (as-new) state using a combination of reused, repaired and new parts.

Information

In ESPR Article 2 (18) the term refurbishment is defined as:

(18) 'refurbishment' means actions carried out to prepare, clean, test, service and, where necessary repair an object that is waste or a product in order to restore its performance or functionality within the intended use and range of performance originally conceived at the design stage at the time of its placing on the market;

This definition will be used, if at all necessary, in the next standard version if the regulation remains as is and a delegated act for furniture copies this definition.

Remanufacturing

The term is used in this standard in the same sense as "refurbishing", see there.

Information

In ESPR Article 2 (16) the term remanufacturing is defined as:

'remanufacturing' means a process in which a new product is produced from objects that are waste, products or components and in which at least one change is made that substantially affects the safety, performance, purpose or type of the product;

This definition will be used, if at all necessary, in the next standard version if the regulation remains as is and a delegated act for furniture copies this definition.

Renewable energy

Energy from a source that is replenishable and replenished on some reasonable time scale. Potential renewable energy sources include, but are not limited to wind, solar, heat from the earth's interior, oceans, rivers, and biomass.

Re-logistic

Also called reverse logistic. Organization, collection, transport and informed treatment of used products, components or materials. May include aspects of remanufacture or refurbishment.

Renewable material

A material that is replenishable and replenished on some reasonable time scale. Renewable material sources include, but are not limited to wood, grass fibres, plant-based plastics, and bio-based fuels.

Room system

A "room system" is defined as a product that

- stands unsupported in a room and creates a fully enclosed space designed to be occupied by people that is part of the surrounding room

- consists of walls fixed to each other and typically including a door
- is with or without ceiling and floor panels
- can include technical installation or functional elements like lighting, air conditioning, etc.

Secondary sources and data

Data that have been processed from primary data by aggregation or evaluation.

Substance of Very High Concern (SVHC)

Chemical substance (or part of a group of chemical substances) that has hazards with serious consequences and for which it has been proposed that the use within the European Union be subject to authorization under the REACH Regulation (Regulation (EC) No 1907/2006.)

Substances meeting these criteria may be placed on one or both of two lists that are defined in the REACH Regulation: the so called 'Candidate List' (see Annex 2) and the "Annex XIV List".

Sustainable Public Procurement (SPP)

Public procurement that includes sustainability aspects (environment and social aspects) in its decision process, see also "Green Public Procurement (GPP)".

Type I Environmental label

Voluntary, multiple-criteria based, third party programme that awards a license which authorizes the use of environmental labels on products indicating overall environmental preferability of a product within a particular product category based on life cycle considerations (see ISO 14024). The LEVEL certificate is a Type I label.

4 Assessing Conformance, Evaluation and Assessment Criteria

4.1 Principles and Boundaries

In this Standard the scope of conformance is the product as it is distributed, not a part of it or a component. This is necessary because potential purchasers of the product want a trustful information whether the distributed product satisfies the sustainability approach of this Standard or not. The purchaser is not able to differentiate between multiple places of production, which may be used for some products.

If the product is produced at different locations by the same legal entity, then all credits that are based on "facility" or "organisation" characteristics (e.g. energy use, water use, health and safety management) shall be evaluated at each location. Prerequisites have to be fulfilled at each location. To calculate the total sum of points at the end of the assessment only the worst of these facilities (expressed in gained points with regard to the credits) can be taken into account. The choice of a suitable method for worst-case analysis of the facilities remains in the responsibility of the certification body. Under the condition of a reliable identification of the worst-case facility and with an appropriate documentation of the applied methods and its findings, no onsite evaluation of the other facilities for that selection is necessary.

Additional information

"produced at different locations by the same legal entity" includes locations, where products are produced by a different legal entity for sale by the applicant under its name or brand; see definition of "manufacturer".

The text shall therefore read for interpretation: "If the product is produced at different locations by, or for the name or brand of, the same legal entity, then"

The scope of assessment is gate-to-gate unless otherwise specified within the individual credit. The applicant shall clearly specify cut-off criteria for inclusion of inputs and outputs and the assumption on which the cut-off criteria are established in the scope of assessment.

At least 80% of its total direct material spend for the product have to be covered, measured using actual annual spend data for a consecutive 12-month time period within the previous 2 years. Applicants are free to choose that 80% of the material spend, so that 20% do not need to be considered in the assessment. Notwithstanding this exemption the prerequisites shall be met by the total material spend.

Additional information

- This definition will become important when choosing the suppliers to be evaluated.

Interpretation

- If a product is assessed that is new to the market, the actual annual spend for a 12-month time period shall be calculated by comparing it with the spend for the most similar products already on the market.

The intent of the Standard is to encourage reduction in environmental impact. Points are not awarded if operations are in the scope of the credit but are excluded from the applicants' scope of assessment.

Additional information

If a manufacturer starts with an already optimized product, e.g. the piece of furniture is produced without addition of any hazardous materials, this is also in line with the scope of the Standard. This

means that product-related credits may also be fulfilled if full absence of critical substances with respect to the particular credit can be reliably demonstrated.

The scope of assessment can also be defined based on product options or characteristics. For example, wood/veneer options could be included while laminate/non-wood options are excluded, or vice versa.

4.2 Representative (worst-case) Sample Selection

For manufacturers wishing to demonstrate compliance for a specific product, only that product shall be evaluated.

A manufacturer may demonstrate compliance of a broad set of products by using the results from a limited number of representative models. A range, series or category of products with varying characteristics may be grouped together for evaluation purposes if the products can be expected to perform similarly during evaluation (e.g., having the same general construction, materials, and manufacturing processes). Evaluation model product shall be the product that can be expected to have the highest propensity for environmental impact. For this final selection, at least 80% of the material spend for the whole selected product set shall be regarded. Additionally, all prerequisites shall be regarded to 100% of the material spend of the selected product set. A case-by-case product line analysis by the manufacturer in consultation with the Certification Body is required, taking into consideration any special attributes, materials, methods of manufacture or construction, etc.

Additional Information

The choice of a suitable method for worst-case analysis remains in the responsibility of CB. Embodied (grey) energy, CO₂ footprint, not replaceable substances of concern, sales volume and other criteria might be useful depending on the specific product properties. Documentation of the applied methods and its findings is essential.

4.3 Baseline and Normalization Values

The baseline and normalization values selected for each credit shall be used consistently throughout the certification period for each credit. The baseline may only be recalculated as defined below.

4.3.1 Baseline values

For the purposes of this Standard, calculating a baseline shall be established by one of the following methods:

- The average of any 36 consecutive months within the previous 72-month period.
- Select a single year as the base year for which data are available. In no case shall the baseline year be set more than 10 years prior to the performance year under evaluation.

Additional Information

It is allowed to use different baselines and baseline calculating methods for different credits.

Applicants often undergo significant structural changes such as acquisitions, divestments, and mergers. These changes may alter baseline calculations, making meaningful comparisons over time difficult. To maintain consistency over time, historic baseline calculations need to be recalculated.

The following table provides basic guidance for base year recalculations.

Condition	Base year recalculation action
Mergers, acquisitions, divestitures	
1. Acquisition of (or insourcing) a facility that existed during the base year.	Add the new facility's energy, water, emissions, etc. generated during the base year to overall base year calculation, unless the now insourced operation was already included in the inventory as optional.
2. Acquisition of (or insourcing) a facility that did not exist during the base year.	No base year recalculation is needed.
3. Divestiture of (or outsourcing) a facility that existed during the base year.	Subtract the divested facility's energy, water, emissions, etc. generated during the base year from overall base year calculation, unless the now outsourced operation is still included in the inventory as optional.
4. Divestiture of (or outsourcing) a facility that did not exist during the base year.	No base year recalculation is needed.
5. Transfer of ownership/control of energy, water, emissions, etc... sources. This includes changes in lease status.	Increased ownership shall be treated the same as a new acquisition; decreased ownership shall be treated the same as a divestiture.
Organic growth and decline	
6. Organic growth: - increase in production output. - changes in product mix resulting in increased energy, water, emissions, etc.... - opening of new plants or operating units.	No base year recalculation is needed.
7. Organic decline: - decrease in production output. - changes in production mix resulting in decreased energy, water, emissions, etc... - closing of plants or operating units.	No base year recalculation is needed.

Condition	Base year recalculation action
Changes in quantification methodologies / errors	
8. Changes in items such as GHG emission factors or methodologies that reflect real changes in energy, water, emissions, etc. (i.e., changes in fuel type or technology).	No base year recalculation is needed.
9. Changes in measurement or quantification methodologies, improvements in the accuracy of activity data, or discovery of previous errors / number or cumulative errors.	Recalculate base year to be consistent with new approach or to correct errors.

4.3.2 Normalization values

Applicants have flexibility in defining the unit of measure appropriate for each credit to demonstrate change over time.

Additional Information

If indicators are built using a ratio $R = A/B$, then it has to be done as follows:

- Figure A has to indicate the input/impact in the given field
- Figure B has to indicate the output of the organization

For Figure B it is possible to use the following values, among others:

- annual gross value-added expressed in million Euro
- annual physical output expressed in tonnes

Auditors shall check whether A, B and R are appropriate to demonstrate the requirements in the respective credit.

4.4 Frequency of Conformity Assessment

Products shall be reevaluated if significant changes to materials, processes or the facility occur that affect the eligibility for any credit within the scope of conformance at the time of the change. Regardless, the frequency of conformity assessment shall not exceed three years, and the surveillance audit shall be performed one time in the three-year cycle.

4.5 Testing

All the tests mentioned in this Standard shall be carried out by test laboratories that are accredited according to ISO 17025 for the specific test.

Additional Information

- Only testing methods designated in the Standard will satisfy the requirements. References to other labels or unaccredited or not designated testing methods may be helpful but shall not be used to fulfil the requirements of the respective credit.
- The German Accreditation Body DAkkS maintains a database of accredited bodies with full text search on its website. This enables anybody to search easily for a laboratory which is accredited for a special test standard like "ISO 11885" (with regard to heavy metals) or "ISO 16000-9" (indoor air, emission test chamber method). The search results cover only laboratories accredited by DAkkS.
- We encourage all users of the Standard to ask their CB to identify accredited laboratories.
- The nomenclature of EC regulation 1272/2008 (CLP regulation) shall be applied for all documentation of substances and mixtures in the scope of the regulation.
- In test reports a value might be marked as "not tested". It could nevertheless happen that this value had been tested earlier. The CB shall check whether that earlier assessment is still valid.

4.6 Acceptance of other Certificates

Some of the credits in this Standard make reference to other certificates. Those certificates may be used by the certification body instead of their own evaluation when the certificates have been issued on a legal basis or are supported by legislation or are underlying an accreditation under EA or IAF recognition which covers the requirements contained in clauses 6.2.2 and 7.4.5 of ISO 17065.

When a Certification Body (CB) relies on certificates other than their own, the CB is responsible to guarantee impartiality with regard to the issuer of the other certificate as is laid down in clause 4.2 of ISO 17065.

Furtheron the CB shall only rely on other certificates when they are issued by a laboratory accredited against ISO 17025, when the applied testing method is one of those named in the relevant credit in the Standard, and when the accreditation of the laboratory covers this method.

The full responsibility for the results of the evaluation against the requirements of this Standard remains at the certification body.

Additional information

- CB has to guarantee impartiality from any institution which edits certificates that it uses. This question is not directly related to the interpretation of the FEMB Standard or the CAS but to the formal application of ISO 17065. Among other things, the risks listed in ISO 17065, chapter 4.2.3 need to be checked. The concept of “confidence” from 6.2.2.2 shall be applied.
- MBDC Cradle to Cradle certificates do not match the requirements of 4.6 and can therefore not be used directly instead of the own evaluation of the CB.

4.7 Decision rules for laboratories

Laboratories shall use a decision rule which gives at least “< 50% Probability of False Accept”, inferred from ILAC G8:09/2019, called simple acceptance or shared risk. The use of other decision rules is permitted as long as the specific risk is “< 50% Probability of False Accept”.

The applied decision rule shall be documented in the test report.

5 Materials

This section focuses on materials used for furniture products, their chemical compounds, management of materials and products and on packaging, water and waste management.

5.1 Wood and wood-based Materials

5.1.1 Prerequisite – Legally sourced timber

Wood specified in the product, other than recovered or reused wood, shall not contain endangered wood species, unless the trade of such wood conforms with the requirements of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix I or II, and is harvested according to the applicable laws and regulations of the country of origin. The scope of this credit is defined by the applicable chain of custody.

Verification:

Evidence that the wood used in the product, other than recovered or reused wood, has been legally harvested and traded or is FLEGT-licensed. Wood materials complying with the Regulation (EU) no. 995/2010 (“timber regulation”) are deemed to satisfy this requirement. When credit 5.1.3 is satisfied with a PEFC certificate, this prerequisite 5.1.1 is also fulfilled.

Additional Information

Check actual information on EU Regulation on Deforestation-free Products (EU) 2023-1115 (EUDR) entering into application foreseen at 30.12.2025.

Correction

When EUDR enters into application, evidence for verification shall be in accordance with the transition rules between EUTR, FLEGT and EUDR.

Resources

- Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market Text with EEA relevance (EU Timber Regulation):
eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32010R0995
- Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May 2023 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010 (
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1115>
- Additional information on EU Timber Regulation and FLEGT:
https://environment.ec.europa.eu/topics/forests/deforestation_en
- Additional information on EUDR
https://environment.ec.europa.eu/topics/forests/deforestation/regulation-deforestation-free-products_en
- Information on CITES: cites.org

5.1.2 Contaminants in recycled wood

The applicant can earn one point if the wood based materials which make up the product being assessed are produced using wood, chips or fibres which do not contain the substances listed in Annex 3 in quantities exceeding the limits in Annex 3.

Verification:

Test reports by accredited laboratories making use of the methods for determination laid down in Annex 3.

Points:

The applicant shall receive one product point if they meet this requirement.

Additional information

In Annex 3 an additional test method for Fluorine and Chlorine is introduced.

Helpful documentation

Checking the declaration of compliance to the EPF standard by the particleboard manufacturers as a first advice. Test reports for tests carried out according to the EPF Standard for delivery conditions of recycled wood give strong evidence that the requirement is met.

Resources

- Europanel EPF-Standard: europanel.org/publications-studies/

5.1.3 Sustainable forest management - Minimum share of certified matter

In order to qualify for this point the product to be assessed shall contain at least 5 percent wood or 3 percent paper by weight. The applicant shall be aware of the originating forest as well as the way in which the forest is managed for wood used in the manufacture of environmentally labelled furniture.

In order to earn a point in this credit, the part of the product this requirement applies to, shall be manufactured from supplies of wood materials whose percentage of certified matter is:

- 70% (volume or mass) for solid wood or paper; or
- 50% (volume or mass) for wood-based panels

This percentage shall be calculated using a moving average of supplies over a maximum period of 12 months.

The scope of this credit is defined by the applicable chain of custody.

Verification:

Certificates of chain of custody for the wood fibres issued by monitoring organisation according to Regulation (EU) No 995/2010 or a PEFC certificate will be accepted as proof of compliance.

Points:

The applicant shall receive one product point if they meet this requirement.

Helpful documentation

Checking the declarations of compliance to PEFC, FSC or other standards. The successful check of FSC certificates gives strong evidence that the requirement is met. PEFC satisfies this requirement as described in the credit. Documentation complying with ISO 38200 "Chain of custody of wood and wood-based panels" may satisfy the requirements as well upon discretion of the CB.

Resources

- PEFC Forest Certification System: www.pefc.org

- Forest Stewardship Council: ic.fsc.org
- ISO 38200: www.iso.org/standard/70179.html

5.1.4 Sustainable forest management - Accredited certification

The supplies of the applicant shall rely on an accredited forestry certification system for sustainable management of forests and traceability.

Verification:

The applicant shall provide relevant certificates.

Points:

The applicant shall receive one additional product point when this requirement is met.

5.2 Plastic Parts

5.2.1 Marking of plastic parts -Prerequisite

All plastic parts $\geq 100\text{g}$ shall be marked for recycling according to ISO 11469. Parts greater than 100g in weight that would be adversely affected by a marking, such as for consumer acceptance and aesthetic reasons, may place the necessary recycling information in the user manual or similar literature. The same applies to parts which the supplier can demonstrate are technically impossible to mark, i.e. due to lack of space for labelling or to production method (e.g. extruded components).

Verification:

Applicants shall provide a description of the plastic materials that are present and the quantities used, the way in which they are labelled and how they are attached to one another or to other materials. When the weight of the plastic component exceeds 100 g but is technically impossible to label, a declaration indicating the type of plastic will be required.

5.3 Surface Coating of Wood, Plastic or Metal parts

5.3.1 Restrictions on chemicals - Prerequisite

The requirements established in the following three indents apply to the products used for surface coating, as they are put on the market (e.g. in their cans, before their application on the finished product).

- The products shall not be classified according to Annex 4 except derogations detailed in the annex.
- The products shall not contain any additives based on cadmium, lead, chromium VI, mercury, arsenic or selenium in concentrations exceeding 0.010% w/w.
- When the furniture being assessed is treated with products containing volatile organic compounds (VOC), the amount of organic solvent applied shall not exceed 35 g per m² of surface.

Verification:

The applicant shall provide a list with all surface treatment and surface coating substances used for each material present in the furniture and their Material Safety Data Sheet demonstrating compliance with the above criteria.

Helpful documentation

Material Safety Data Sheet of the products used for the coating.

Note: EU GPP revision 2017 covers most of the above named H-phrases in its clause TS3.

EU Ecolabel for furniture 2016/1332 covers all of the above named H-phrases in its clause 2.2(a) in conjunction with Table 1.

Resources

EU GPP criteria:

- ec.europa.eu/environment/gpp/pdf/toolkit/furniture_gpp.pdf
- ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm

5.4 Adhesives and Glues

5.4.1 VOC content 10% - 30%

The applicant can earn a point when the VOC content of adhesives used in the assembly of furniture does not exceed 10% by weight in water-based products and 30% by weight in solvent based products, in case the use of water based products is technically not possible.

Verification:

The applicant shall present a list with all adhesives used in the assembly of furniture and their Safety Data Sheet where the amount of VOCs is displayed demonstrating compliance with the above criteria.

Points:

The applicant shall receive one product point if they meet this requirement.

5.4.2 VOC content maximum 10%

The applicant can earn an additional point if the VOC content of adhesives used in the assembly of furniture does not exceed 10% by weight whatever is the kind of adhesives used.

Verification:

As in 5.4.1.

Points:

The applicant shall receive one additional product point if they meet this requirement.

5.5 Textiles and Leather

5.5.1 Restrictions on chemicals - Prerequisite

Textiles and leather, when they are present in the finished product for more than 1% on weight, shall not contain the following substances in excess of the specified maximum content as specified in Annex 5:

- dyes classed as carcinogenic, mutagenic, toxic to reproduction or potentially sensitizing
- azo dyes that may cleave to aromatic amines that are known to be cancerogenic
- formaldehyde

Verification:

Test reports making use of the methods for determination laid down in Annex 5.

Additional information

See Annex 5 A5.3 "Requirement for formaldehyde" for a change in REACH legislation that affects the threshold for formaldehyde

5.5.2 Formaldehyde in textile or leather

In order to earn points, the textiles or leathers in the furniture shall not exceed the specified maximum content of the following substances:

- formaldehyde in textiles which have direct contact to skin: 16 ± 2.4 mg/kg
- formaldehyde in other textiles: 75 ± 1.9 mg/kg

Verification:

Test reports making use of the methods for determination laid down in Annex 5.

Points:

The applicant shall receive two product points if they meet either the requirements on textiles or the requirements on leather.

Correction

Bullet 2 shall read " formaldehyde in other textiles or in leather: 75 ± 1.9 mg/kg" because leather is restricted in EU Ecolabel as well, see Table 10 on page 23 of Commission Decision (EU) 2016/1332.

Additional information

See Annex 5 A5.4 "Requirement for formaldehyde in 5.5.2" for information on awarding points from 1.11.2023 onwards.

Resources

- EU GPP criteria: ec.europa.eu/environment/gpp/pdf/toolkit/furniture_gpp.pdf
- Oeko-Tex: www.oeko-tex.com
- Oeko-Tex Standard 100, details see right column: www.oeko-tex.com/en/business/certifications_and_services/ots_100/ots_100_start.xhtml
- RAL-UZ 154: www.blauer-engel.de/en/companies/basic-award-criteria. Search here for "154"
- EU Ecolabel: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016D1332&qid=1693403661512>
- Criteria for the EU Ecolabel on textiles: Refer to Commission Decision (EU) 2014/350: Search here for your language by year 2014, number 350 and Type: Decision: eur-lex.europa.eu/homepage.html?locale=en

5.6 Upholstery Materials

5.6.1 Halogenated organic compounds - Prerequisite

Halogenated organic compounds, CFC and HCFC shall not be used as blowing, or auxiliary blowing agents, in the production of polyurethane foam.

Verification:

The applicant shall provide a declaration of non-use from the manufacturer of the foam.

Resources

EU GPP criteria: ec.europa.eu/environment/gpp/pdf/toolkit/furniture_gpp.pdf

5.6.2 Restricted substances

In order to earn points the product shall meet the requirements relevant to padding materials laid down in Annex 6.

Verification:

Test reports making use of the methods for determination laid down in Annex 6.

Points:

The applicant shall receive two product points if they meet this requirement.

Resources

RAL UZ 117:

www.blauer-engel.de/en/companies/basic-award-criteria Search here for “117”

5.7 Flame Retardants

5.7.1 Not listed in REACH - Prerequisite

Fire retardants that are explicitly included in the following lists or that contain more than 0.1% w/w of chemicals which are named in the following lists

- annex XVII of REACH
- annex XIV of REACH
- REACH candidate list for annex XIV

shall not be used.

The applicant shall use lists not older than one year at the date of filling in the application to the certification body or, when the last update of a list is older than one year, its latest available version.

Verification:

The applicant shall provide:

- a declaration testifying that no additive flame retardant has been used; or
- in the event a flame retardant is used
 - documentation for all used flame retardants (e.g. safety data sheets); or
 - declarations of their compliance with this criterion

Resources

- Annex XIV and XVII of REACH:
echa.europa.eu/regulations/reach/legislation
Search here for your actual language version
- REACH candidate list for inclusion in Annex XIV:
echa.europa.eu/en/candidate-list-table
Search here for your language version

5.8 Phthalates

5.8.1 Not listed in REACH - Prerequisite

Phthalates that are explicitly included in the following lists or that contain more than 0.1% w/w of chemicals which are named in the following lists

- annex XVII of REACH
- annex XIV of REACH
- REACH candidate list for annex XIV

shall not be used.

The applicant shall use lists not older than one year at the date of filling in the application to the certification body or, when the last update of a list is older than one year, its latest available version.

Verification:

The applicant shall provide a declaration testifying that the product does not contain phthalates included in the above lists.

Resources

- EU GPP criteria: ec.europa.eu/environment/gpp/pdf/toolkit/furniture_gpp.pdf
- Annex XIV and XVII of REACH:
echa.europa.eu/regulations/reach/legislation
Search here for your actual language version
- REACH candidate list for inclusion in Annex XIV:
echa.europa.eu/en/candidate-list-table
Search here for your language version

5.9 Packaging Materials

5.9.1 Minimum quality of material - Prerequisite

This requirement applies to packaging of the finished product and packaging of product components or parts which are used for the product (supplier packaging).

Packaging shall consist of readily recyclable material, or materials taken from renewable resources, or be a multi-use system with returnable packaging (e.g. blankets).

All packaging materials shall be easily separable by hand into recyclable parts consisting of one material (e.g. cardboard, corrugated paper, paper, plastic, textile).

Verification:

The applicant shall provide a description of the packaging with a declaration of conformity to the above requirements. If different packaging for national and international shipping or for different selling channels is used, a separate declaration for each case is necessary.

Helpful documentation

Documentation showing compliance of the packaging to the following EN standards:

- EN 13427 - Packaging - Requirements for the use of European Standards in the field of packaging and packaging waste
- EN 13428 - Packaging - Requirements specific to manufacturing and composition - Prevention by source reduction
- EN 13429 - Packaging – Reuse
- EN 13430 - Packaging - Requirements for packaging recoverable by material recycling
- EN 13431 - Packaging - Requirements for packaging recoverable in the form of energy recovery, including specification of minimum inferior calorific value
- EN 13432 - Packaging - Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging

Resources

EU GPP criteria: ec.europa.eu/environment/gpp/pdf/toolkit/furniture_gpp.pdf

5.9.2 Recycled content 60%/40% or multi-use

In order to earn a point the packaging shall:

- be made of at least 60% w/w recycled material if made of paper or cardboard
- be made of at least 40% w/w recycled material if made of plastics
- be returnable packaging (e.g. blankets) used in a documented multi-use system for at least 50% of all deliveries.

Verification:

The applicant shall provide evidence of

- the percentage of recycled materials used;
- the use of returnable packaging; or
- the use of packaging indicating the minimum recycled material content in conformity with
 - EN ISO 14021 (e.g. with the circle of Moebius symbol together with the corresponding percentage value of recycled material); or
 - EN 14024 "Type I environmental labels „when they indicate the appropriate weight values

Points:

The applicant shall receive one product point if they meet this requirement.

5.9.3 Recycled content 90%/60% or multi-use

In order to earn a point the packaging shall:

- be made of at least 90% w/w recycled material if made of paper or cardboard
- be made of at least 60% w/w recycled material if made of plastics
- be returnable packaging (e.g. blankets) used in a documented multi-use system for at least 70% of all deliveries.

Verification:

The applicant shall provide evidence of

- the percentage of recycled materials used; or
- the use and share of returnable packaging; or
- the use of packaging indicating the minimum recycled material content in conformity with
 - EN ISO 14021 (e.g. with the circle of Moebius symbol together with the corresponding percentage value of recycled material); or
 - EN 14024 "Type I environmental labels when they indicate the appropriate weight value

Points:

The applicant shall receive one additional product point if they meet this requirement.

Suggested methodology for 5.9.2 and 5.9.3

If different types of material are used in one shipping channel, each material type (paper, plastic, returnable) shall be regarded separately in its fraction.

The percentages of all types shall be calculated and assessed as follows:

If total packaging amount consists of 50% paper and 50% returnable:

- then the overall share of paper shall be at least 60% of 50% total packaging = 30% of total and
- returnable packaging shall be 50% of 50% total packaging = 25% of total.

If one condition is not met, the point is not awarded.

5.10 Life Cycle Assessment

The organisation shall encourage use of Life Cycle Assessments (LCA) to inform product design and development, and to optimize design and materials choices. The organisation may complete an LCA for the furniture product being assessed. By fulfilling one of the three criteria below, the applicant can earn a maximum of four points in this credit, as detailed below.

The scope of this credit is cradle-to-grave: The LCA boundary shall encompass extraction of raw materials through end of product life.

Additional information

Auditors shall check whether the figures published by the applicant for this credit conform with the data available internally in the organisation.

5.10.1 Life Cycle Assessment with two components from ISO

The applicant can earn two points if they provide evidence that the company has incorporated the life cycle assessment framework into product design by applying the first two of the four LCA components in ISO 14040 and ISO 14044 (Goal & Scope Definition and Life Cycle Inventory).

Verification:

The applicant shall provide evidence that the requirement is met. This can be done with an LCA or with an Environmental Product Declaration (EPD) which conforms to ISO 14025.

Points:

The applicant shall receive two product points if they meet this requirement.

5.10.2 Life Cycle Assessment with four components from ISO

The applicant can earn three points if they provide evidence that the company has completed an LCA utilizing all four components in ISO 14040 and ISO 14044. At a minimum, these impact categories shall include:

- Global Warming Potential
- Acidification potential
- Photochemical ozone creation potential
- Eutrophication potential

Verification:

The applicant shall provide evidence that the requirement is met. This can be done with an LCA or with an Environmental Product Declaration (EPD) which conforms to ISO 14025.

Points:

The applicant shall receive one additional product point if they meet this requirement.

5.10.3 Life Cycle Assessment with third party review

The applicant can earn four points if they demonstrate compliance to 5.10.2 and provides evidence that the company has completed an independent third-party review of its LCA.

Verification:

The applicant shall provide evidence of the third-party review.

Points:

The applicant shall receive one additional product point if they meet this requirement.

Resources

- [European Platform on LCA: eplca.jrc.ec.europa.eu](http://eplca.jrc.ec.europa.eu)
- [International Standards Organization, ISO 14040 and 14044: www.iso.org](http://www.iso.org)
- [United Nations Environment Programme Life Cycle Initiative: www.lifecycleinitiative.org](http://www.lifecycleinitiative.org)
- [Open LCA, a basic framework for life cycle assessment \(LCA\) calculation: www.openlca.org](http://www.openlca.org)
- [US Life Cycle Inventory Database: www.nrel.gov/lci](http://www.nrel.gov/lci)

5.11 Efficient Use of Materials

The organisation shall reduce the quantity (mass) of raw materials used in the manufacture of products. Material efficiency is calculated for the materials comprising 80 percent of the weight of the products to be assessed.

Process aids and incidental consumables (e.g. gloves, sandpaper) are not included in the calculation. Waste Mass includes materials sent to recycling.

The calculation shall be based on this formula: $\text{Material Efficiency} = \frac{(\text{Input Mass} - \text{Waste Mass})}{(\text{Input Mass})} \times 100\%$.

The scope of this credit is focused on the substantial conversion of raw material (e.g. sawing, routing, machining, forming, stamping, moulding, cutting, and sewing). It does not include the extraction and initial processing of raw materials but exceeds the gate-to-gate approach.

By fulfilling one of the two criteria below, the applicant can earn a maximum of two points in this credit, as detailed below.

5.11.1 Material efficiency 70%

The applicant can earn one point if they demonstrate a Material Efficiency of 70%.

Verification:

The applicant shall provide evidence of its calculation.

Points:

The applicant shall receive one product point if they meet this requirement.

5.11.2 Material efficiency 80%

The applicant can earn two points if they demonstrate a Material Efficiency of 80%.

Verification:

The applicant shall provide evidence of its calculation.

Points:

The applicant shall receive two product points if they meet this requirement.

Helpful documentation

Document Input Mass and Waste Mass for 80% of the material weight of the product. Input Mass is therefore 80% of the original mass of material used to create the office furniture product. Waste Mass is the material loss during conversion to the furniture product.

Information

In the Annex 11 Scorecard the values 70% and 80% were not displayed correctly.

5.12 Recycled Content

The organisation shall increase the amount of recycled content material incorporated into products.

5.12.1 Recycled content 30%

The applicant can earn one point if they incorporate recycled content materials into the product so that it constitutes at least 30% w/w of the total weight of the materials in the product.

Verification:

The applicant shall provide technical documentation demonstrating that the requirement is met.

Points:

The applicant shall receive one product point if they meet this requirement.

5.12.2 Recycled content 50%

The applicant can earn one point if they incorporate recycled content materials into the product so that it constitutes at least 50% w/w of the total weight of the materials in the product.

Verification:

The applicant shall provide technical documentation demonstrating that the requirement is met.

Points:

The applicant shall receive two product points if they meet this requirement.

5.13 Extended Producer Responsibility and Circular Economy

The applicant shall implement circular economy strategies in its production and in its services during the whole lifecycle of the product and its parts as far as economically, ecologically and socially feasible. None of these activities shall lead to rebound effects that reduce the positive impact of other already established activities.

5.13.1 Policy for maximising useful product life - Prerequisite

The applicant shall maximize the useful life of the product by making it easy to refurbish, remanufacture or upgrade the product for long-term use by the original or subsequent users. In order to accomplish this, the organisation shall adopt and publicize a policy stating that they design and manufacture products that have a long useful life; can withstand repeated service, repair, and

handling; and has standardized product parts and components available to facilitate maintenance, servicing, and reassembly. The organisation's policy may allow for the replacement of design components and reuse of functional components. The product to be assessed shall be covered by the policy.

This requires at least:

- a public commitment by the manufacturer to supply, for 5 years from the end of manufacture date of the range of products concerned, original replacement parts or elements which fulfil equivalent functions
- the product being assessed shall comply with the relevant durability requirements established by EN or ISO standards (see also prerequisite 5.14 and Annex 7)

Verification:

The applicant shall provide evidence that they meet this requirement.

5.13.2 Design for remanufacturing - Prerequisite

The applicant shall design products to ensure that they can be remanufactured. The products shall be designed to facilitate the replacement of components that are

- subject to wear or breakage
- likely to go out of style
- likely to be upgraded

Verification:

In order to meet this requirement, the applicant shall provide evidence that:

- product disassembly instructions are publicly available
- disassembly is possible with standard tools and does not require special training (exceptions: gas lifts and electrical mechanisms)
- replacement of components is possible without loss of product quality.

5.13.3 Design for recycling - Prerequisite

The applicant shall maximize the degree to which materials from the product, when it cannot be reused, refurbished or remanufactured, can be recycled into value-added products.

Verification:

In order to satisfy this requirement, the applicant shall provide evidence that:

- product disassembly instructions are publicly available
- disassembly is possible with standard tools and does not require special training (exceptions: gas lifts and electrical mechanisms)
- product parts are labelled, or otherwise identified, to facilitate separation by material content, and identification of any materials that may require special handling.

5.13.4 Product information for user - Prerequisite

Information for user shall be publicly disclosed providing at least the following basic information:

- about wearing parts and their repair or exchange, and
- that functionally compatible replacement parts are available for a period of at least 5 years

Verification:

The applicant shall provide evidence that the above information is disclosed to the user.

5.13.5 Extended product information for user and re-logistic

The applicant can earn one point if extended information for user and re-logistic is publicly available providing at least the following basic information if applicable:

- information about other materials than wearing parts when their weight is > 3% of the total weight of the finished product
- information about assembly of the products
- information about disassembly for moving or later recycling purposes

Verification:

The applicant shall provide evidence that the above information is available to the user.

Points:

The applicant shall receive one organisation point if they meet this requirement.

5.13.6 Product information on legacy products

The applicant can earn one point if they publish information on the bill of materials and on recovery opportunities for its legacy product lines that have been launched in the 10 years prior to the date of the Standard version being assessed against.

Verification:

The applicant shall provide evidence that the above information is available to the user.

Points:

The applicant shall receive one organisation point if they meet this requirement.

5.13.7 Take-back of used furniture

The applicant can earn up to two points if they offer and implement take-back of its furniture. Take-back programmes may include financial compensation from manufacturer or from user.

- The applicant can earn one point if they offer a take-back programme for all of its products.
- The applicant can earn a second point upon providing proof of implementation on a regular scale. The applicant may involve a third party in the take-back programme. The applicant shall ensure that also at the third party the programme is managed consistently with its own environmental programmes.

Verification:

The applicant shall provide evidence that

- information on the programme is publicly disclosed; or
- the programme is implemented on a regular scale.

Points:

The applicant shall receive:

- one organisation point if information on the programme is publicly disclosed.
- two organisation points if additionally the programme is implemented on a regular scale.

5.13.8 Activities for life cycle extension of products

Correction

Second bullet shall read:

- "they or a third party offer services for refurbishing, remanufacturing, upgrading or re-using its products or parts of it on a regular scale; or"

The applicant can earn up to three points if

- they provide a public commitment to supply original replacement parts or elements which fulfil equivalent functions after the end of manufacture of the range of products concerned for 7 or for 10 years; or
- they or a third party offers services implements activities for refurbishing, remanufacturing, upgrading or re-using its products or parts of it on a regular scale; or
- they offer services matching relevant best practice solutions; or
- they provide sales volume information related to the above activities.

Activities shall not increase environmental impact of the product or its use or treatment in other aspects (rebound effect).

Verification:

The applicant shall provide evidence of

- its publicly disclosed offer to supply parts for 7/10 years
- activities in response to client requests by themselves or by third-party service providers
- published offers in line with relevant best practice solutions
- their sales volume of products and services related to these activities

Points:

The applicant shall receive

- one organisation point if they provide evidence for one requirement
- two organisation points if they provide evidence for two requirements
- three organisation points if they provide evidence for three requirements including the supply of parts for 10 years.

5.13.9 Product as a service

The applicant can earn one point if they offer product-as-a-service (PaaS) contracts to customers. PaaS contracts offer services and outcomes the product can provide rather than ownership on the product itself, that is e.g. leasing, sharing or subscription contracts. Regular preemptive maintenance, repair and final take-back of products in PaaS contracts are managed by the producer itself and can contribute to the lifetime extension of the products. It thus offers environmental advantages compared to other types of product ownership.

Verification:

The applicant shall provide evidence that

- information on the contract offer is publicly disclosed; or
- the programme is implemented on a regular scale.

Points:

The applicant shall receive one organisation point if they meet this requirement

5.14 Product Compliance to EN/ISO Standards - Prerequisite

The product shall meet the relevant EN/ISO standards establishing requirements for safety, strength, durability and dimensions of furniture and components. A list of relevant standards is given in Annex 7.

Verification:

The applicant shall provide appropriate test reports.

5.15 Waste Management

The applicant can earn a maximum of five points for documenting, managing and reducing non-hazardous and hazardous waste.

5.15.1 Non-hazardous waste inventory

The applicant can earn one point for compiling an inventory of non-hazardous waste from manufacturing processes producing the product, allocating waste to product.

The inventory shall:

- list materials comprising no less than 80% of product weight;
- provide a general description of the operations producing waste;
- specify whether the assessment is at one of the applicant's own facilities or at facilities operated by a supplier;
- specify the waste code for each non-hazardous waste according to European waste catalogue
- specify the final treatment or disposition of each waste generated according to the waste hierarchy laid down in European Waste Directive:
 - prevention
 - preparing for re-use
 - recycling
 - other recovery, e.g. energy recovery
 - disposal; and
- quantity of waste generated, expressed per fraction and in total.

Verification:

The applicant shall provide evidence of the inventory. On re-certification the applicant shall provide a renewed documentation.

Points:

The applicant shall receive one product point if they meet this requirement.

Additional information

If product specific values of waste generation are not available, it is possible to refer to the facility waste management by calculating the relevant share of the product. The CB shall take responsibility for the result if points are awarded.

5.15.2 Non-hazardous waste reduction

The applicant can earn one point for achieving the following limits based on the inventory above (5.15.1) for the product to be assessed for non-hazardous waste generated from manufacturing and assembly of the final product:

- amount of disposed waste is less than 5%; and
- amount of waste given to other recovery is less than 20%

OR

The applicant can earn two points for achieving the following limits based on the inventory above (5.15.1):

- total amount of non-hazardous waste is reduced by 10%; or
- amount of waste is shifted from one hierarchy level to a preceding level by 10%; or
- non-hazardous waste generated by the assessed processes is absent.

Not included is waste generated from packaging or process aids, for example sandpaper, gloves and spray booth filters.

Verification:

The applicant shall provide evidence of the reduction or absence. On re-certification the applicant shall document that

- the already achieved reduction has been maintained; or
- the amount of further reduction that has been newly achieved

Points:

The applicant shall receive one product point if

- on initial certification the amount of disposed waste is less than 5% and waste for other recovery is less than 20%
- on re-certification the already achieved level has been maintained

The applicant shall receive two product points if

- on initial certification the total amount of waste is reduced or shifted to a preceding level by 10%
- on re-certification the total amount is further reduced or shifted by 10%
- non-hazardous waste is absent

5.15.3 Hazardous waste reduction

Manufacturing of small components (e.g. fasteners, screws, washers, glides, labels), that combined comprise up to a total of 5% of the product by weight may be excluded. The applicant shall state whether the assessment is being completed for the applicant's facilities or for supplier facilities in the scope of this credit.

The applicant can earn a maximum of two points if it

- reduces the amount of hazardous waste generated in steps of 10% on an absolute basis over the baseline period;
- reduces the amount of hazardous waste generated in steps of 20% on a normalized basis over the baseline period;
- demonstrates that already achieved reductions of 30% (absolute) or 60% (normalized) of the initial values have been maintained; or
- has less than 2 tons of hazardous waste per year (all hazardous waste added together regardless of the kind of waste).

Verification:

The applicant shall provide evidence of the reduction or total amount of waste.

Points:

The applicant shall receive one product point for a reduction of 10% (absolute) or 20% (normalized).

The applicant shall receive two product points for

- a reduction of 20% (absolute) or 40% (normalized)
- maintaining already achieved reductions of 30% (absolute) or 60% (normalized)
- less than 2 tons of hazardous waste

5.16 Water Management

The intent of this section is to focus on process water only. Process water includes water used for pre-treatment (e.g., phosphating wash line), water-based adhesive processes, cooling water, water-jet cutting operations, and spray booth over-spray capture systems.

In order to qualify for water management credits, the applicant shall prove that process water was used in the manufacturing of the product to be assessed, at any point in time during the past six years. The scope of this credit is the applicant's facility.

5.16.1 Water inventory of facility

The applicant can earn one point if they establish a baseline process water inventory to document water sources and withdrawals, uses, and discharges for the facility where the final product is assembled or manufactured.

Verification:

The applicant shall provide evidence of the inventory. On re-certification the applicant shall provide an updated documentation.

Points:

The applicant shall receive one facility point if they meet this requirement.

5.16.2 Efficient water use

The applicant can earn one point if they implement a programme to maximize process water efficiency in the facility where the final product is assembled or manufactured. The goals shall have been established within the past 6 years.

Verification:

The applicant shall provide evidence of the programme and of the achieved efficiency gains.

Points:

The applicant shall receive one facility point if they meet this requirement.

5.16.3 Water from own supply

The applicant can earn one point if they use process water only from its own well or spring or from rainwater collection. If water from an own well or spring is used, the applicant shall demonstrate that water pumping does not adversely affect surrounding groundwater level.

Verification:

The applicant shall provide evidence of its water supply and in case of well or spring water the level of groundwater for the last 10 years at the extraction point.

Points:

The applicant shall receive one facility point if they meet this requirement.

5.16.4 Wastewater discharge

The applicant can earn two points for zero net process water usage or zero process wastewater discharge rates for the facility where the final product is assembled or manufactured.

Verification:

The applicant shall provide evidence of zero water usage for production or zero process wastewater discharge from facility. If zero water usage for production or zero process wastewater discharge from facility have been realized more than six years ago, the applicant shall provide evidence that the achieved status is maintained.

Points:

The applicant shall receive two facility points if they meet this requirement.

6 Energy and Atmosphere

This section focuses on energy use and management in production, buildings and transportation.

6.1 Energy Policy - Prerequisite

The leadership of the organisation shall develop and implement an energy policy that shall establish the organisation's overall direction in terms of its commitment to energy conservation and performance.

The policy shall:

- be appropriate to the nature and scale of the organisation's activities, products, and services
- include a commitment to continual improvement
- include a commitment to comply with relevant local, state, regional or national regulations, and with other requirements to which the organisation subscribes
- provide the framework for setting and reviewing objectives and targets
- be documented, implemented, and publicly communicated

The policy shall focus on the organisation's mission, vision, and core values. Specific local or regional conditions should be considered, as should the organisation's image and the views of other interested parties. Other interested parties may include employees, shareholders, customers, consumers, local communities, environmental groups, lenders, and regulators.

Verification:

An EMAS validation or an ISO 14001 or ISO 50001 certificate covering the relevant facilities will satisfy this prerequisite.

Additional information

Verification of this prerequisite is more strictly formulated than in version 2017. If no EMAS or ISO certificates are available, check if a Corporate Energy Policy Statement bearing approval of corporate officer with responsibility for energy is available and acceptable.

If this occurs more often, please report to FEMB for discussion of verification.

6.2 Building Energy Performance baseline

6.2.1 Conduct of a building energy performance baseline

The applicant can earn one point if they conduct a building energy baseline from historical energy use data. This shall include all energy sources not used for the production process itself.

The scope of this credit is each of the buildings directly associated with manufacturing or final assembly of the product being assessed.

Verification:

The applicant shall provide evidence of the annual energy usage and the baseline calculation for each building in the scope of this credit.

Points:

The applicant shall receive one facility point if they meet this requirement.

Additional information

Consider every energy source including electricity, natural gas, fuel oil, diesel fuel, LPF, gasoline, district steam, district chilled water, wood, etc.

6.2.2 Extended building energy performance baseline

The applicant can earn up to two additional points if they conform to 6.2.1 and conduct an extended building energy baseline from historical energy use data. This shall include all energy sources used.

The scope of this credit is other facilities such as warehouses, office building, showrooms, supply partner facilities (other than final assembly), that are associated with the product being assessed.

One point will be awarded for each facility, up to a maximum of two points for this credit.

Verification:

The applicant shall provide evidence of the annual energy usage and the baseline calculation for the buildings in the scope of this credit.

Points:

The applicant shall receive one facility point if they meet this requirement for one facility and two facility points if they meet this requirement for more than one facility.

Additional information

- Consider every energy source including electricity, natural gas, fuel oil, diesel fuel, LPF, gasoline, district steam, district chilled water, wood, etc.
- It is sufficient to evaluate two buildings to receive two points, even if more buildings fall within the scope of the credit.

6.3 Sustainable Building Rating Systems

The applicant can earn one point for a facility they own or lease and operate if they cover at minimum three of the following requirements for sustainable building construction and management:

- building life cycle assessment
- building energy management
- indoor environmental quality
- material and resources efficiency
- green cleaning
- water and wastewater management

Verification:

A certificate of an accredited or legally based sustainable building rating system will satisfy this requirement. Alternatively, the applicant shall provide evidence that they cover the above requirements.

Points:

The applicant shall receive one facility point if they meet this requirement.

Additional information

At the time of Standard release BREEAM and HQE meet this criterion.

Helpful documentation

Other certificates like LEED or DGNB are useful as preparation for accredited rating.

LEED and DGNB are valuable certifications programs for buildings. As this Standard relies exclusively on accredited or legally founded certificates, it is not possible to accept these standards for this credit because they are not accredited. Many of those criteria could nevertheless be used for obtaining a HQE or BREEAM certification if desired.

6.4 Energy Management System

Energy management systems document the efforts of the applicant to use energy efficiently.

6.4.1 Implementation of activities from energy audit

The applicant can earn one point for compliance to national legal transpositions of EU Directive 2012/27 on energy efficiency (EED) under this condition: At least one activity from the last energy audit was implemented in the last 24 months before the start of the audit for certification to this standard.

Verification:

The applicant shall provide evidence of the legal status of the energy management certificate in reference to EED. Applicants outside the EU shall provide evidence of fulfilment of the EU Directive criteria.

Points:

The applicant shall receive one facility point if they meet this requirement.

6.4.2 Conformance to ISO 50001 or EMAS

The applicant can earn two points if they document conformance to ISO 50001 or to EMAS.

Verification:

An EMAS validation or an ISO 50001 certificate covering the relevant facilities will satisfy this requirement.

Points:

The applicant shall receive two facility points if they meet this requirement.

6.5 Embodied Energy

6.5.1 Cradle-to-Gate analysis

The applicant can earn one point for assessing the amount of embodied energy consumed for the materials used within the product. The assessment is to be completed using publicly available Life-Cycle Inventory (LCI) data. The scope of this credit is cradle-to-gate.

Verification:

The applicant shall provide evidence of the LCI sources and data used and of the calculation.

Points:

The applicant shall receive one product point if they meet this requirement.

Helpful documentation

Provide a summary of the embodied energy consumed in extracting and transporting the raw materials used in the product line using available tools noted below. An example of such data can be found in the standard NF Environnement Ameublement NF 217 version 10 or later.

6.5.2 Gate-to-Gate analysis

The applicant can earn one point for conducting a Life-Cycle Inventory (LCI) of the amount of energy associated with the processes used during manufacturing of the product.

Verification:

The applicant shall provide evidence of the data sources and data used for the calculation.

Points:

The applicant shall receive one product point if they meet this requirement.

Helpful documentation

Provide a summary of the embodied energy consumed to manufacture the product line being assessed.

Suggested methodology

1. Identify manufacturing processes related to product manufacture throughout the gate-to-gate boundary including any intermediate transportation.
2. Track energy usage for each manufacturing process identified by any combination of the following strategies.
 - 2.1 Place sub-meters on each line and track monthly energy usage.
 - 2.2 Allocate overall facility energy usage to operations by relative floor area, production, or other metric.
 - 2.3 Obtain energy usage information from material/component supplier(s).
 - 2.4 Use LCI software tools for gathering and tracking energy usage data.

6.5.3 Embodied energy – 10% reduction

The applicant can earn one point for a 10% reduction of energy input from

- 6.5.1 associated with raw material production (cradle-to-gate); or
- 6.5.2 associated with the processes used during manufacturing of the product (gate-to-gate).

Verification:

The applicant shall provide evidence of the selected methodology for reduction and of the resulting reduction percentage share. On re-certification the applicant shall document that the already achieved reduction has been maintained.

Points:

The applicant shall receive one product point if they meet this requirement.

6.6 Standby Energy Consumption - Prerequisite

The standby electrical consumption of any electrically powered products like e.g. sit/stand tables shall be ≤ 0.5 W.

Verification:

The applicant shall provide evidence of the standby energy consumption by declaration of the component manufacturer.

6.7 Transportation

6.7.1 Inbound and internal transportation

The organisation can earn one point if they document and implement technologies and strategies that help carriers save fuel, reduce air pollution, and reduce emissions when receiving materials and components to the manufacturing facilities and distributing between facilities.

Verification:

The applicant shall provide evidence of technologies and strategies and of their implementation.

Points:

The applicant shall receive one organisation point if they meet this requirement.

6.7.2 Outbound transportation

The organisation can earn one point if they document and implement technologies and strategies that help carriers save fuel, reduce air pollution, and reduce emissions. The scope of this credit is the transport of products from the exit gate of the applicant towards further distribution or final user.

Verification:

The applicant shall provide evidence of technologies and strategies and of their implementation.

Points:

The applicant shall receive one organisation point if they meet this requirement.

6.8 On-site and Off-site Renewable Energy

The applicant can earn up to a maximum of four points for using at least the indicated percentages of on-site or off-site renewable energy or renewable energy certificates of its energy requirement for buildings directly associated with the manufacturing or final assembly of the product being assessed. This may be accomplished by a combination of individual actions by the applicant or its suppliers.

On-site	Off-site	Points
1%	5%	1
2%	10%	2
4%	25%	3
8%	50%	4

Verification:

The applicant shall provide documentation of the renewable energy quantities, types and sources used and of the certificates purchased.

Points:

The applicant shall receive one to four facility points in relation to the documented use of renewable energy.

6.9 Carbon Footprint and Greenhouse Gas

The carbon footprint is the sum of major greenhouse gas (GHG) emissions. It is calculated by converting the single GHG emissions into comparable values by referring to the greenhouse potential of carbon dioxide. The assessment shall be carried out using a tool which complies with the ISO 14064 standard. The applicant shall provide the results, the data and the theories considered.

Major GHG considered in this credit are

- Carbon Dioxide (CO₂)
- Methane (CH₄)
- Nitrous Oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur Hexafluoride (SF₆)
- Nitrogen trifluoride (NF₃)

By fulfilling the following criteria, the applicant can earn up to six points.

6.9.1 Greenhouse gases inventory for scope 1 and 2 emissions

The applicant can receive one point if they establish an inventory of GHG scope 1 and 2 emissions for all of the applicant's facilities. The scope of this credit includes the facilities where manufacturing or final assembly of the product being assessed occurs.

Verification:

The applicant shall provide results of calculations conducted in accordance with ISO 14064, including raw data and emission factors.

Points:

The applicant shall receive one facility point if they meet this requirement.

6.9.2 Greenhouse gases inventory for scope 3 emissions

The applicant can receive one point if they establish an inventory for GHG scope 3 emissions for at least two of the following categories. The inventory shall contain at least one upstream category and at least one downstream category.

Upstream categories

- Purchased goods and services
- Capital goods
- Fuel- and energy-related activities (not included in scope 1 or scope 2)
- Upstream transportation and distribution
- Waste generated in operations
- Business travel
- Employee commuting
- Upstream leased assets

Downstream categories

- Downstream transportation and distribution
- Processing of sold products
- Use of sold products
- End-of-life treatment of sold products
- Downstream leased assets
- Franchises
- Investments

Verification:

The applicant shall provide results of calculations conducted in accordance with ISO 14064, including raw data and emission factors.

Points:

The applicant shall receive one facility point if they meet this requirement.

Resources

Greenhouse Gas Protocol: www.ghgprotocol.org/calculation-tools#cross_sector_tools_id

6.9.3 Greenhouse gas reduction

The applicant can earn up to a maximum of two points if they conform to 6.9.1 and reduce greenhouse emission inventory values for scope 1 and 2 by the indicated percentage on an absolute or on a normalized basis from the baseline for all emissions sources of the seven GHGs.

Absolute	Normalized	Points
3%	6%	1
6%	12%	2

Verification:

The applicant shall provide evidence of reduction.

If the applicant has already achieved the maximum reduction goals (6%/12%), they shall provide evidence on re-certification that the achieved reduction has been maintained.

Points:

The applicant shall receive one or two facility points in relation to the demonstrated reduction.

6.9.4 Greenhouse gas voluntary reporting programme

The applicant shall receive two points if they participate in a voluntary GHG Reporting programme, where companies annually inventory and report their scope 1 and scope 2 GHG emissions; and voluntary commit themselves to reducing their GHG emissions. A validated EMAS environmental statement is also acceptable.

Verification:

The applicant shall provide evidence of programme participation or an EMAS validation.

Points:

The applicant shall receive two organisation points if they meet this requirement.

Resources

- Global Reporting Initiative (GRI): www.globalreporting.org
- Carbon Disclosure Project: www.cdp.net
- Eco-Invent: www.ecoinvent.org
- Emission & Generation Resource Integrated Database (eGRID): www.epa.gov/cleanenergy/energy-resources/egrid
- The Climate Registry: www.theclimateregistry.org
- CSA, CleanProject Registry: www.ghgregistries.ca/cleanprojects/index_e.cfm

6.10 Air Emissions

This credit assesses air emissions that are not included in the GHG credit.

6.10.1 Inventory of air emissions

The applicant can earn one point for compiling an inventory of air emissions.

The material and operations documentation shall:

- list product materials comprising no less than 80% of product weight
- provide a general description of operations producing air emissions
- specify whether the assessment is of the applicant's own facilities, or facilities operated by a supplier
- specify which data comes from primary or secondary sources

The emissions inventory shall include all categories listed in Annex 8.

On re-certification, the applicant can earn one point when a new inventory is submitted.

Verification:

The applicant shall provide documentation of the material and operations inventory and of the emissions inventory.

Points:

The applicant shall receive one facility point if they meet this requirement.

6.10.2 Reduction of air emissions

The scope of this credit is the facility of final assembly or manufacture.

On initial certification, the applicant can earn

- one facility point if they demonstrate a 2% reduction of air emissions on an absolute basis over the baseline period from the inventory created in the credit above.
- two points for the absence of air emissions.

On re-certification, the applicant can earn

- one point by demonstrating that already achieved reductions have been maintained.
- two points by demonstrating a further reduction of 2% of air emissions on an absolute basis compared to the foregoing baseline calculation or the absence of air emissions.

Verification:

The applicant shall provide evidence of the reduction values or the absence of emissions.

Points:

The applicant shall receive one facility point for

- a reduction of 2% (absolute) on initial certification; or
- for maintaining the achieved reduction on re-certification

The applicant shall receive two facility points for

- a further reduction of 2% (absolute) on re-certification; or
- the absence of air emissions.

7 Management of Chemicals

This section focuses on management of chemicals used in products, processes and maintenance and their impact on environment.

7.1 Demonstration of Compliance - Prerequisite

The organisation shall screen all its facilities for compliance with environmental and health and safety requirements of their products and processes. The organisation shall evaluate compliance with all applicable environmental and health and safety regulations that govern toxic and hazardous substance use and risk management associated with human health or environment. The organisation or any representative of the organisation shall not have any related criminal violations within the previous three years. Any related criminal violation at an acquired company which preceded the date of acquisition shall not preclude an organisation from participating in this Standard. The scope of this credit is limited to the applicant's facilities.

Verification:

An EMAS validation or an ISO 14001 certificate will satisfy the health and environmental aspects of this prerequisite.

Additional information

If the applicant's organisation has a previous case of criminal violation, but the problem that caused the violation is under control and being resolved (in accordance with ISO 14001), while the organisation is still certified, the prerequisite is satisfied.

7.2 Key Chemical and Risk Policies - Prerequisite

The organisation shall adopt a policy statement addressing chemicals and associated risk. The policy statement shall be publicly available and communicated to all persons working for or on behalf of the organisation. The scope of this credit is limited to the applicant's facilities.

In addition to the aforesaid topics, the organisation shall document the following:

- an environmental policy that includes commitments to prevention of pollution, continuous improvement and compliance with applicable regulations and other obligations
- a chemical management policy that includes a statement of how the company assesses and reduces human health and ecosystem impacts
- incorporation of life-cycle thinking into company policies

Verification:

An EMAS validation or an ISO 14001 certificate will satisfy the health and environmental aspects of this prerequisite.

7.3 EMAS, ISO 14001 or Equivalent

The applicant can earn two points if they document conformance with:

- EMAS;
- ISO 14001; or
- an environmental management system that contains the following elements for at least three manufacturing processes associated with the manufacture of the product:
 1. Environmental policy
 2. Environmental aspects
 3. Legal or other requirements
 4. Objectives and targets
 5. Implementation
 6. Management review

Verification:

The applicant shall provide the EMAS validation or the ISO 14001 certificate or documentation of the environmental management system.

Points:

The applicant shall receive two facility points if they meet this requirement.

7.4 Chemical Management Plan (CMP)

The applicant shall establish a CMP to manage chemicals in products and processes. The scope of this credit is limited to the applicant's facilities. By fulfilling one of the following three criteria, the applicant can earn one point as detailed below.

7.4.1 Inventory system

The applicant can earn one point if they implement a system for inventory tracking and control of process, product, and facility management chemicals that includes acquisition, use, storage, transportation, and final disposition.

Verification:

The applicant shall provide evidence of the system and its implementation.

OR

7.4.2 Handling of chemicals

The applicant can earn one point if they demonstrate responsible and effective handling of chemicals in all way. This includes the knowledge of all chemicals, having all MSDS, having done a risk assessment for each chemical, having all containers properly labelled, having trained the employees regularly, having stored all chemicals according to the regulations, having minimized the amount of chemicals at the workplace, and actively trying to substitute chemicals on a yearly basis.

Verification:

The applicant shall provide an EMAS validation, an ISO 14001 or ISO 45001 certificate.

OR

7.4.3 Emergency action plan

The applicant can earn one point if they have documented and implemented an action plan for emergency planning and response. The action plan has to consider situations like releasing chemicals, fire and explosion, natural disaster. It also has to contain the responsibilities within these situations (e.g. for evacuation, for first and second firefighting) and documented escape routes and the availability of such plans everywhere in the facility.

Verification:

The applicant shall provide evidence of the implementation of measures according to Directive 2012/18/EU or its transposition in a Member State or an ISO 14001 certificate or an EMAS validation.

Points for 7.4.1. to 7.4.3

The applicants shall receive one facility point if they meet at minimum one requirement.

Resources

- European Agency for Safety and Health at Work (OSHA): osha.europa.eu/en/themes/dangerous-substances
- European Commission, Seveso Directive: ec.europa.eu/environment/seveso/
- European Commission, Minerva Portal: minerva.jrc.ec.europa.eu/en/minerva

7.5 Assessment and Reduction of Chemical Impact

The organisation shall design safer products and processes by using design for the environment (DfE) protocol to identify and assess the human health and environmental impacts of chemicals of concern by using reference lists in Annex 1. Evaluation may take place at the:

- Product level
- Process level
- Maintenance and operations level

The intent of the identification and assessment process is for the applicant to collect data from the supply chain. The chemical constituents are to be reported and referenced by Chemical Abstracts Service Registry Number (CASRN). Chemical constituents of metal alloys can be based on generic composition defined by appropriate standards organisations. No further review of wood and other natural fibres is required; however, for products where these materials are used the added chemical constituents shall be reported as defined below.

7.5.1 Product level - MSDS reportable chemicals

The applicant can earn one point if they identify and assess all MSDS reportable chemicals as defined by Regulation (EC) No 1907/2006 for materials in the final product that add up to 95% by weight of the final product.

OR

7.5.2 Product level - Chemicals of concern

The applicant can earn two points if they identify and assess all chemicals of concern down to 100 parts per million, using the list in Annex 1, for materials in the final product that add up to 99% by weight of the final product.

OR

7.5.3 Product level - Deep analysis

The applicant can earn up to three points if they identify and assess all chemical constituents down to 100 parts per million for materials in the final product that add up to at least the indicated percentage by weight of the final product:

Weight	Points
75%	1
90%	2
99%	3

Verification for 7.5.1 to 7.5.3:

The applicant shall provide evidence of the evaluation.

Points:

The applicant shall receive one to three product points in relation to the assessed criterion.

7.5.4 Process level - process chemicals

The applicant can earn one point if they identify and assess process chemicals of concern, based on MSDS information and using the list in Annex 1, for at least three manufacturing processes associated with the manufacture of the product. If there are less than three manufacturing processes, then all process chemicals shall be identified and assessed.

The scope of assessment for human health and environmental impact and for exposure during application is gate-to-gate by the applicant or its suppliers. Manufacturing processes do not cover the extraction and initial processing of raw materials.

Verification:

The applicant shall provide evidence of the identification and assessment.

Points:

The applicant shall receive one facility point if they meet this requirement.

7.5.5 Maintenance and operations level - 50% of used chemicals

The applicant can earn one point if they identify and assess chemicals of concern, based among other sources on MSDS information and using the list in Annex 1. Assessment shall include at least 50% (by spend) of all maintenance and operating chemicals and assesses human health and environmental impact. The scope of this credit is the facility of final assembly or manufacture.

Verification:

The applicant shall provide evidence of the identification and assessment process and of the selection based on purchasing costs.

Points:

The applicant shall receive one facility point if they meet this requirement.

7.5.6 Chemical impact reduction strategy

The applicant can earn one point if they develop a strategy to reduce the use of chemicals, materials and processes with significant life cycle impacts. The strategy shall be based on the findings of 7.5.1 to 7.5.5.

Verification:

The documentation of significance shall be based on quantity of chemical used, relative impact, impact categories, likelihood of impact, and feasibility.

Points:

The applicant shall receive one facility point if they meet this requirement.

7.6 Reduction or Absence of Chemicals of Concern

The organisation shall minimize the impact on human health and environment of chemicals used in or associated with production of furniture.

Additional information

In December 2022 the Delegated EU-Regulation 2023/707 amended the CLP Regulation (EC) 1272/2008 with introducing four new hazard classes thereof two classes for endocrine disruptors coming into force between 1. May 2025 and 1. May 2028.

The amended or new hazard classes can be used in parallel with the existing classifications throughout chapter 7.6 for evaluation and point collection from May 2025 onwards. The maximum number of points shall remain at six points.

The new hazard classes will be introduced into the full text in the next standard revision.

Resource

ec.europa.eu/environment/chemicals/labelling/clp_revision_en.htm

7.6.1 Elimination from products

The applicant shall document that the product does not contain chemicals of concern, using the list in Annex 1, in the following classifications above 100 mg/kg. The applicant can earn two points for each classification that is shown not to be present above 100 mg/kg up to a maximum of six points:

- persistent, bioaccumulative, and toxic (PBT)
- reproductive toxicant
- carcinogen

Verification:

The applicant shall provide evidence for the absence of:

- PBT substances defined in EU regulation 253/2011. Under the REACH regulation they are recognized as SVHC substances. A proof of evidence is possible in two ways:
 1. identifying substances according to EU regulation 253/2011
 2. identifying substances according to the list of SVHC substances
- Reproductive toxicant: H360, H361
- Carcinogen: H350, H351

Points:

The applicant shall receive two product points for each absent classification up to a maximum of six points.

7.6.2 Reduction or absence from processes

If credit 7.5.4 "Process level - process chemicals" is satisfied, the applicant can earn a maximum of four points by reducing chemicals of concern or by demonstrating their absence, based on MSDS information using the list in Annex 1. Reduction of an identified chemical is not eligible for this credit if the amount of that chemical is below 1% w/w of all chemicals used in the process.

Additionally identified chemicals that contribute to one or more of the impact categories listed below can also earn points for reduction.

From Annex 1:

- Persistent, bioaccumulative, or toxic (PBT)
- Reproductive toxicant

- Carcinogen

Additional categories:

- Acidification
- Aquatic Toxicity
- Eutrophication
- Global Warming
- Photochemical Smog Formation
- Stratospheric Ozone Depletion
- Terrestrial Toxicity

Percentage reduction of chemicals

On initial certification, the applicant can earn points if they reduce chemicals in one or more of the above categories by the indicated percentage on an absolute or on a normalized basis.

Absolute	Normalized	Points
≥ 5%	≥10%	1
≥ 10%	≥ 20%	2
≥ 15%	≥ 30%	3
≥ 20%	≥ 40%	4

On re-certification, the applicant can earn points by

- demonstrating further reductions in already evaluated categories in increments of 5% on an absolute basis, or 10% on a normalized basis;
- showing the levels of reduction detailed above in a different category without an increase in the former category; or
- demonstrating that the already achieved reductions have been maintained.

Absence of impact categories from processes

The applicant can also earn points if they document that the processes used to manufacture the product do not contain any chemical of concern at a concentration greater than 0.1% in one or more of the categories listed in Annex 1. The applicant can earn one point for each of the classifications that is shown to be absent above this concentration.

A chemical is relevant to this credit if it is present or released at any stage of the processing of the final product. Presence or release during processing may be intentional or unintentional; direct or indirect (e. g., intentionally added chemicals, or background levels). For the purposes of this credit, a chemical of concern shall be considered successfully phased out if the presence or release of the chemical in the process is below 0.1%. Where reduction is achieved by substitution, there shall be no net increase of chemicals from any of the above categories.

Verification:

The applicant shall provide evidence of reduction or absence of chemicals of concern according to the categories.

Points:

The applicant shall receive up to four facility points

- according to the documented reductions; or
- according to the documented absences; or
- if the sum of all identified and used chemicals is below 10 kg per year.

7.6.3 Reductions from maintenance and operations level

If credit 7.5.5 "Maintenance and operations level - 50% of used chemicals" is satisfied, the applicant can earn additional points by reducing or eliminating chemicals of concern, based on MSDS information using the list in Annex 1. The scope of this credit is the facility of final assembly or manufacture.

Additionally identified chemicals that contribute to one or more of the impact categories listed below can also earn points for reduction or elimination.

From Annex 1:

- Persistent, bioaccumulative, or toxic (PBT)
- Reproductive toxicant
- Carcinogen

Additional categories:

- Acidification
- Aquatic Toxicity
- Eutrophication
- Global Warming
- Photochemical Smog Formation
- Stratospheric Ozone Depletion
- Terrestrial Toxicity

On initial certification, the applicant can earn one point for demonstrating reduction in chemicals in the above categories by

- 20% or more on an absolute basis; or
- 40% or more on a normalized basis.

On re-certification, the applicant can earn one point by

- demonstrating further reductions in already evaluated categories in increments of 10% on an absolute basis, or 20% on a normalized basis; or
- demonstrating the levels of reduction detailed above in a different set of chemicals without an increase in the former set of chemicals.
- demonstrating that already achieved reductions of 60% (absolute) or 80% (normalized) of the initial values have been maintained.

Verification:

The applicant shall provide evidence of the reduction values.

Points:

The applicant shall receive one facility point if they meet this requirement.

7.7 Low Emitting Furniture

7.7.1 Wood-based material with E1 quality - Prerequisite

Wood based panels shall meet the requirements for class E1 established by EN 13986 Annex B.

Verification:

The applicant shall provide evidence that all panels used for the product are of class E1 or better. Testing shall be carried out according to the test methods laid down in Annex 9.

7.7.2 Wood-based material - formaldehyde reduced

Wood based panels shall not exceed 50% of formaldehyde emissions according to class E1 as laid down in Annex 7.

Correction

It shall read "Annex 9" instead of Annex 7.

Additional information

Please note that in Blue Angel DE-UZ-038 version 2022 page 11 the required formaldehyde value is now 0.030 ppm or 37 $\mu\text{m}/\text{m}^3$ with test method EN 16516.

Verification:

The applicant shall provide evidence that the formaldehyde emissions of all panels used for the product do not exceed 50% of E1. Testing shall be carried out according to the test methods laid down in Annex 9.

Points:

The applicant shall receive two product points if they meet this requirement.

7.7.3 VOC emissions from the finished product

VOC emissions from finished furniture product shall not exceed the limit values laid down in Annex 10. Furniture components can be tested as representative samples of the finished product under these conditions:

- Furniture components excluded from testing shall be qualified as inherently non-emitting, see Annex 10.
- For furniture products consisting of homogenous materials it is possible to test a representative sample of the product in test chambers not smaller than 100 liters.
- For furniture products consisting of non-homogenous materials it is possible to test a sample of the product when a representative sample can be obtained in test chambers not smaller than 100 liters.

Verification:

Test reports by accredited laboratories making use of the methods for determination laid down in Annex 10.

Points:

The applicant shall receive

- two product points for matching one limit value
- three product points for matching two limit values
- four product points for matching all limit values

8 Social Responsibility

The scope of these credits is the applicant's facilities and organisation if not stated otherwise.

8.1 Employee Health and Safety Management - Prerequisite

The organisation shall ensure employee health and safety by establishing management processes that will detect, avoid, or respond to actual and potential threats to the health and safety of personnel.

The processes shall include the following components:

- identification of the legal or relevant health and safety regulations applicable to the facility
- appointment of a management representative with defined responsibilities;
- an employee health and safety policy;
- documented procedures for the management of the system including a corrective action process that addresses regulatory compliance and actual and potential threats to employee health and safety;
- establishment and maintenance of employee health and safety metrics;
- health and safety training available for employees; and
- regular evaluation of compliance to applicable health and safety laws, as well as internal procedures and requirements.

Alternatively, an organisation that is ISO 45001 certified meets this prerequisite.

Verification:

An ISO 45001 certificate or a documentation of the above processes will satisfy this prerequisite.

Resources

EU OSHA, Guidelines: osha.europa.eu/en/safety-and-health-legislation/european-guidelines

8.2 Labour and Human Rights - Prerequisite

The organisation shall protect and respect the rights of human resources at the local, national, and global levels by ensuring that forced or involuntary labour is not used or supported in any form, that employment is voluntary, and that child labour is not used or supported in any form.

Verification:

The applicant shall provide official commitments, codes or policies that cover these issues. Verification also occurs during the in-person audit by the certifying body.

Verification:

An ISO 45001 certificate or evidence of the above processes will satisfy this prerequisite.

Resources

- United Nations Universal Declaration of Human Rights: www.un.org/en/about-us/universal-declaration-of-human-rights
- International Labour Organization (Browse into "Subjects covered by International Labour Standards): www.ilo.org/global/standards/lang--en/index.htm
- UN Global Compact Principles: www.unglobalcompact.org

8.3 Policy on Social Responsibility

The applicant can earn one point if the organisation adopts publicly available documented policies on social responsibility that, at least, address:

- fair hiring practices;
- education for employees in this subject area;
- corporate ethics;
- receipt of gifts; and
- insider trading

Verification:

The applicant shall provide evidence of the policies and their publication.

Points:

The applicant shall receive one organisation point if they meet this requirement.

Resources

- ISO 26000: www.iso.org/iso/home/standards/iso26000.htm
- SA 8000: www.sa-intl.org

8.4 External Health and Safety Management Standard

The applicant can earn one point if the organisation enhances productivity and employee welfare by implementing policies and procedures that go beyond the requirements of 8.1 by conforming to the requirements of a publicly available external health and safety management system standard.

Verification:

The applicant shall provide documentation of policies and procedures or an ISO 45001 certificate.

Points:

The applicant shall receive one organisation point if they meet this requirement.

Resources

ISO 45001 Occupational Health and Safety Management Systems:
www.iso.org/publication/PUB100427.html

8.5 Inclusiveness

The applicant can earn one point if the organisation promotes inclusiveness in the workforce, in management, and corporate governance bodies while recognizing local norms at the location of the assessed facilities. The organisation shall develop and implement an inclusiveness policy that includes the following components:

- identification of and compliance to the local and national inclusiveness rules and regulations applicable to the facility
- documented procedures for the management of the system
- establishment of appropriate feedback mechanisms
- a corrective action process
- establishment and maintenance of employee inclusiveness metrics and internal performance tracking and reporting
- inclusiveness education available for employees

- regular evaluation of compliance to applicable inclusiveness rules and regulations, internal procedures and requirements

Items above could for instance include employee opinion surveys, employee suggestion systems, works councils, and employee meetings.

Verification:

The applicant shall provide documentation of policies, procedures and records developed to promote inclusiveness.

Points:

The applicant shall receive one organisation point if they meet this requirement.

8.6 Engage in Community Outreach and Involvement

The applicant can earn one point if they demonstrate good corporate citizenship to benefit the communities in which they operate. They shall demonstrate at least two volunteer efforts or financial contributions supporting community projects within each 12-month period.

Verification:

The applicant shall provide evidence of volunteer time, financial contributions or other community outreach and engagement efforts.

Points:

The applicant shall receive one organisation point if they meet this requirement.

8.7 Social Responsibility Reporting

The applicant can earn up to three points if they promote transparency through public reporting of social responsibility activities and results.

8.7.1 Minimum report content

The applicant can earn one point if they publicly disclose a social responsibility report that addresses at least:

- employee health and safety management;
- labour and human rights management;
- inclusiveness; and
- community outreach and involvement

Verification:

The applicant shall provide the report with appropriate content.

Points:

The applicant shall receive one organisation point if they meet this requirement.

8.7.2 Extended report content

The applicant can earn additionally two points if they publicly disclose a social responsibility report that covers at least the following topics from ISO 26000:

- the core subject “Organisation”;
- three of the remaining core subjects;
- and within each of the taken core subjects 40% of the issues

The social responsibility report may also be part of a more comprehensive report that includes environmental or economic elements.

Different publicly disclosed reports can be accepted if they together cover the requirements above.

Verification:

The applicant shall provide the reports with all appropriate content.

Points:

The applicant shall receive two organisation points if they meet this requirement.

8.8 Social Responsibility in the Supply Chain

The organisation shall encourage continuous improvement in the supply chain particularly to social responsibility. By fulfilling the following criteria, the applicant can earn up to four points as detailed below.

8.8.1 Establishment of a supplier assessment tool

The applicant can earn one point if they establish a documented supplier assessment tool (which may be a self-assessment tool) containing social responsibility criteria for its suppliers. The assessment tool shall contain criteria at least in the following categories:

- child labour
- forced labour
- health and safety
- freedom of association
- discrimination
- discipline/harassment
- working hours
- compensation
- corruption
- bribery

Verification:

The applicant shall provide evidence of or access to the tool which contains the appropriate criteria.

Points:

The applicant shall receive one organisation point if they meet this requirement.

8.8.2 Implementation of a supplier self-assessment tool

The applicant can earn two additional points if it

- conforms to 8.8.1; and
- provides completed responses to the assessment tool from suppliers comprising at least 80% of its total direct material spend for all products

The spend is measured using actual annual spend data for a consecutive 12-month time period within the previous 2 years.

Suppliers that act as brokers, distributors, inventory management providers, etc. and do not manufacture or assemble, shall obtain the responses from their suppliers who do manufacture or assemble the parts or products.

Verification:

The applicant shall provide completed responses including their origin and documentation of calculation of the 80% share of spend.

Points:

The applicant shall receive two additional organisation points if they meet this requirement and demonstrate. They have then already earned one point in the foregoing credit.

8.8.3 Supplier Code of Conduct

The applicant can earn one additional point if they conform to 8.8.1 and 8.8.2 and develop a Supplier Code of Conduct. The Code of Conduct shall address at least the following criteria:

- child labour
- forced labour
- health and safety
- freedom of association
- discrimination
- discipline/harassment
- working hours
- compensation
- corruption
- bribery

The Code of Conduct shall be signed by suppliers comprising at least 80% of the applicant's total material spend which shall include its high risk suppliers.

The spend is measured using actual annual spend data for a consecutive 12-month time period within the previous 2 years.

Verification:

The applicant shall provide the code of conduct, documentation of calculation of the 80% share of spend and process documentation to identify high risk suppliers.

Points:

The applicant shall receive one additional organisation point if they meet this requirement.

Resources

- UN Global Compact: www.unglobalcompact.org
- UN Supplier Code of Conduct: www.un.org/Depts/ptd/about-us/un-supplier-code-conduct
- National purchasing federation such as BME in Germany: www.bme.de
- Assessment schemes, e.g. Ecovadis: ecovadis.com

8.9 Excellence in Social Responsibility

The applicant can earn one point for being recognized by a variety of sources for excellence in social responsibility. The intent of this section is to award outstanding performance that has been recognized by an entity external to the applicant's organisation.

The recognition of excellence shall have occurred within the previous 12 month period and relate directly to the topics described in Section 8, Social Responsibility.

Verification:

The applicant shall provide documentation of at least three examples showing recognition for excellence in social responsibility performance.

Points:

The applicant shall receive one organisation point if they meet this requirement.

Resources

- UN Global Compact: www.unglobalcompact.org
- ISO 26000: www.iso.org/iso/home/standards/iso26000.htm
- SA 8000: www.sa-intl.org
- Global Reporting Initiative: www.globalreporting.org
- Safety and Health Achievement Recognition Program: www.osha.gov/dcsp/smallbusiness/sharp.html

9 Annexes

Annex 1 - Chemicals of Concern List

Chemicals of Concern are all substances which fall under one or more of the following classifications

- carcinogenic category 1A and 1B (H350)
- carcinogenic category 2 (H351)
- reproductive toxicity category 1A and 1B (H360)
- reproductive toxicity category 2 (H361)
- may cause harm to breast-fed children (H362)
- hazardous to the aquatic environment – acute hazard category 1 (H400)
- hazardous to the aquatic environment – chronic hazard category 1 (H410)
- substances which are listed in annex XVII of REACH

The hazard statements (H-phrases) refer to the Global Harmonized System of Classification and Labelling of Chemicals (GHS) and its transposition into the European CLP regulation (EC) No 1272/2008.

Additional information

In December 2022 the Delegated EU-Regulation 2023/707 amended the CLP Regulation (EC) 1272/2008 with introducing four new hazard classes thereof two classes for endocrine disruptors coming into force between 1. May 2025 and 1. May 2028.

The amended or new hazard classes can be used in parallel with the existing classifications throughout chapter 7.6 for evaluation and point collection from May 2025 onwards. The maximum number of points shall remain at six points.

The new hazard classes will be introduced into the full text in the next standard revision.

Resource

ec.europa.eu/environment/chemicals/labelling/clp_revision_en.htm

Annex 2 - Candidate List of Substances of Very High Concern for Authorization (published in accordance with Article 59 (10) of the REACH regulation)

The actual candidate list of SVHC can be found here: echa.europa.eu/candidate-list-table

Annex 3 - Contaminants in recycled wood (to 5.1.2)

The following table shows the limit values and the values for measurement uncertainty for contaminants in recycled wood.

Additional information

For testing on Fluorine and Chloride this method is also acceptable:

EN 14582 Characterization of waste - Halogen and sulfur content - Oxygen combustion in closed systems and determination methods

Group of substances: Heavy Metals		
Substance	Limit $\pm$ measurement uncertainty value (mg/kg)	Testing Methods
As (Arsenic)	25 $\pm$ 3.3	EN ISO 11885, ICP-AES ISO 22036, ICP-OES EN ISO 17294-2, ICP-MS ISO 20280, ET-AAS und Hydrid AAS EN ISO 16968
Cd (Cadmium)	50 $\pm$ 8.4	ISO 11047, AAS EN ISO 11885, ICP-AES ISO 22036, ICP-OES EN ISO 17294-2, ICP-MS EN ISO 16968
Cr (Chromium)	25 $\pm$ 4.0	ISO 11047, AAS EN ISO 11885, ICP-AES ISO 22036, ICP-OES EN ISO 17294-2, ICP-MS EN ISO 16968
Cu (Copper)	40 $\pm$ 5.4	ISO 11047, AAS EN ISO 11885, ICP-AES ISO 22036, ICP-OES EN ISO 17294-2, ICP-MS EN ISO 16968
Hg (Mercury)	25 $\pm$ 2.1	DIN ISO 16772, CV-AAS or CV-AFS EN ISO 16968
Pb (Lead)	90 $\pm$ 14.4	DIN ISO 11047, AAS DIN EN ISO 11885, ICP-AES DIN ISO 22036, ICP-OES DIN EN ISO 17294-2, ICP-MS EN ISO 16968
Fluorine	100 $\pm$ 12.3	EN ISO 10304-1 EN 15408

Group of substances: Heavy Metals		
Substance	Limit $\pm$ measurement uncertainty value (mg/kg)	Testing Methods
Chlorine	1000 $\pm$ 86	EN ISO 10304-1 EN 15408
Pentachlorophenol (PCP)	5 $\pm$ 0.5	DIN ISO 10382 or DIN ISO 14154, GC-ECD, GC-MS
Tar oils (Benzo(a)pyrene)	0.5 $\pm$ 0.01	EN 1014-3

Annex 4 - Product classifications for surface coating (to 5.3.1)

The following table shows the classifications of products that shall not be used in surface coating. Classification refers to Regulation (EC) No 1272/2008. For possible derogations see below.

GHS Hazard Class	Categories	Hazard Statements	Group 1	Group 2	Group 3
Acute Toxicity	1	H300		x	
	1	H310		x	
	1	H330		x	
	2	H300		x	
	2	H310		x	
	2	H330		x	
	3	H301			x
	3	H311			x
	3	H331			x
Skin sensitization	1, 1A, 1B	H317		x	
Germ Cell Mutagenity	1A, 1B	H340	x		
	2	H341		x	
Carcinogenity	1A, 1B	H350	x		
	2	H351		x	
Reproductive Toxicity	1A, 1B	H360, H360F, H360D, H360FD, H360Fd, H360Df	x		
	2	H361, H361f, H361d, H361 fd		x	
	effects on or via lactation	H362		x	

GHS Hazard Class	Categories	Hazard Statements	Group 1	Group 2	Group 3
Specific target organ toxicity single exposure	1	H370		x	
	2	H371			x
	3	H372		x	
Specific target organ toxicity repeated exposure	1	H372		x	
	2	H373			x
Aspiration Hazard	1	H304		x	
Hazardous to the aquatic environment – short term (Acute)	Acute 1	H400		x	
Hazardous to the aquatic environment – long term (Chronic)	Chronic 1	H410		x	
	Chronic 2	H411			x
	Chronic 3	H412			x
	Chronic 3	H413			x
Toxic by eye contact		EUH070			x

Derogations

- For the substances in group 1 no derogation is possible.
- For the substances in groups 2 and 3 of the table in the annex derogations are possible under certain conditions. These conditions are laid down in EU Ecolabel for furniture (Commission Decision (EU) 2016/1332 of 28 July 2016 establishing the ecological criteria for the award of the EU Ecolabel for furniture), criterion 2, in 2.2(a) and 2.2(b).
- If an applicant wants to make use of a derogation, then they shall demonstrate compliance to each used entry in table 2 of EU Ecolabel for furniture.

Annex 5 - Textiles and Leather (to 5.5.1 and 5.5.2)

This annex regulates substances of content in textiles and leather. If the product consists of textile parts, leather parts, or both of them, then this annex is mandatory for each of any textile and each of any leather part in the product. The limit values always refer to the weight of the textile and leather part as they are in the product.

A5.1 Requirements for dyes which are classed as carcinogenic, mutagenic, toxic to reproduction or potentially be sensitizing

The table on the following page shows the list of dyes which shall not be present at levels higher than the value of 50 mg/kg $\pm$ 2.5 mg/kg measurement uncertainty for each individual substance.

Group of substances: Dyes that are carcinogenic, mutagenic, toxic to reproduction or potentially sensitizing		
Substance	CAS-No.	Testing Methods
C.I. Acid Red 26	3761-53-3	Textiles: EN 14362-1, EN 14362-3, EN ISO 16373-2, EN ISO 16373-3, DIN 54231 Leather: EN 17234
C.I. Basic Red 9	569-61-9	
C.I. Basic Violet 14	632-99-5	
C.I. Direct Black 38	1937-37-7	
C.I. Direct Blue 6	2602-46-2	
C.I. Direct Red 28	573-58-0	
C.I. Disperse Blue 1	2475-45-8	
C.I. Disperse Blue 3	2475-46-9	
C.I. Disperse Blue 7	3179-90-6	
C.I. Disperse Blue 26	3860-63-7	
C.I. Disperse Blue 35	12222-75-2	
C.I. Disperse Blue 102	12222-97-8	
C.I. Disperse Blue 106	12223-01-7	
C.I. Disperse Blue 124	61951-51-7	
C.I. Disperse Brown 1	12236-00-9	
C.I. Disperse Orange 1	2581-69-3	
C.I. Disperse Orange 3	730-40-5	
C.I. Disperse Orange 11	82-28-0	
C.I. Disperse Orange 37/76	13301-61-6	
C.I. Disperse Red 1	2872-52-8	
C.I. Disperse Red 11	2872-48-2	
C.I. Disperse Red 17	3179-89-3	
C.I. Disperse Yellow 1	119-15-3	
C.I. Disperse Yellow 3	2832-40-8	
C.I. Disperse Yellow 9	6373-73-5	
C.I. Disperse Yellow 39	12236-29-2	
C.I. Disperse Yellow 49	54824-37-2	

A5.2 Requirements for carcinogenic arylamines

The following table shows the list of carcinogenic arylamines, which shall not be present at levels higher than 30 mg/kg $\pm$ 4.5 mg/kg measurement uncertainty for each individual substance.

Group of substances: carcinogenic arylamines		
Substance	CAS-No	Testing Methods
4-aminodiphenyl	92-67-1	Textiles: EN 14362-1, EN 14362-3 Leather: EN 17234
Benzidine	92-87-5	
4-chloro-o-toluidine	95-69-2	
2-naphtylamine	91-59-8	
o-amino-azotoluene	97-56-3	
2-amino-4-nitrotoluene	99-55-8	
4-chloroaniline	106-47-8	
2,4-diaminoanisol	615-05-4	
4,4'-diaminodiphenylmethane	101-77-9	
3,3'-dichlorobenzidine	91-94-1	
3,3'-dimethoxybenzidine	119-90-4	
3,3'-dimethyl-4,4'-diaminodiphenylmethane	838-88-0	
4,4'-oxydianiline	101-80-4	
4,4'-thiodianiline	139-65-1	
o-toluidine	95-53-4	
2,4-diaminotoluene	95-80-7	
2,4,5-trimethylaniline	137-17-7	
4-aminoazobenzene	60-09-3	
o-anisidine	90-04-0	
2,4-Xylidine	95-68-1	
2,6-Xylidine	87-62-7	
p-cresidine	120-71-8	
3,3'-dimethylbenzidine	119-93-7	
4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	

A5.3 Requirement for formaldehyde in 5.5.1

The limit for formaldehyde is 300 mg/kg.

Change in legislation

EU Regulation 2018/1513 for an amendment of REACH legislation (EC) 1907/2006, Annex 17, new entry 72, para 2 affects the current threshold of 300 mg/kg. Therefore the limit in the prerequisite 5.5.1 shall be lowered to 75 mg/kg from 1.11.2023 onwards.

See A5.4 for information on points.

Resources

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32018R1513>

Substance: Formaldehyde		
Substance	Limit $\pm$ measurement uncertainty value (mg/kg)	Testing Methods
Formaldehyde	300 $\pm$ 7.5	EN ISO 14184-1

A5.4 Requirement for formaldehyde in 5.5.2

The limit for formaldehyde depends on whether there is direct contact to skin or not.

Additional Information

See the comment for A5.3.

The applicant shall continue to receive two product points in 5.5.2 when the requirement is met although it is since 1.11.2023 the threshold for a prerequisite. The next revision of the standard will adapt this change.

Substance: Formaldehyde		
Substance	Limit $\pm$ measurement uncertainty value (mg/kg)	Testing Methods
Formaldehyde in textiles or leather with direct contact to skin	16 $\pm$ 2.4	EN ISO 14184-1
Formaldehyde in textiles or leather with no direct contact to skin	75 $\pm$ 1.9	EN ISO 14184-1

Correction

The EN ISO 14184-1 is not applicable to leather, this is a mistake in the current standard version.

Leather shall be tested according to ISO 17226-1 "Leather - Chemical determination of formaldehyde content - Part 1: Method using high-performance liquid chromatography"

Annex 6 - Upholstery Materials (to 5.6.1 and 5.6.2)

A6.1 Requirements for latex foam

The following tables show the limit values for restricted substances in latex foam.

Group of substances: Chlorophenols		
Substance	Limit $\pm$ measurement uncertainty value (ppm)	Testing Methods
mono- and di-chlorinated phenols (salts and esters)	1 ± 0.1	For chlorophenols the applicant shall provide a report presenting the results of the following test procedure. 5 g of sample shall be milled and chlorophenols shall be extracted in the form of phenol (PCP), sodium salt (SPP) or esters. The extracts shall be analysed by means of gas chromatography (GC). Detection shall be made with mass spectrometer or electron capture detector (ECD).
other chlorophenols	0.1 ± 0.01	

Group of substances: Heavy Metals		
Substance	Limit $\pm$ measurement uncertainty value (ppm)	Testing Methods
As (Arsenic)	0.5 ± 0.07	EN ISO 11885, ICP-AES ISO 22036, ICP-OES EN ISO 17294-2, ICP-MS ISO 20280, ET-AAS und Hydrid AAS EN ISO 16968
Cd (Cadmium)	0.1 ± 0.02	ISO 11047, AAS EN ISO 11885, ICP-AES ISO 22036, ICP-OES EN ISO 17294-2, ICP-MS EN ISO 16968
Co (Cobalt)	0.5 ± 0.06	DIN ISO 11047, AAS DIN ISO 22036, ICP-OES DIN EN ISO 17294-2, ICP-MS
Cr (Chromium), total	1 ± 0.11	ISO 11047, AAS EN ISO 11885, ICP-AES ISO 22036, ICP-OES EN ISO 17294-2, ICP-MS EN ISO 16968
Cu (Copper)	2 ± 0.24	ISO 11047, AAS EN ISO 11885, ICP-AES ISO 22036, ICP-OES EN ISO 17294-2, ICP-MS EN ISO 16968
Pb (Lead)	0.5 ± 0.04	DIN ISO 11047, AAS DIN EN ISO 11885, ICP-AES DIN ISO 22036, ICP-OES DIN EN ISO 17294-2, ICP-MS EN ISO 16968
Hg (Mercury)	0.02 ± 0.002	DIN ISO 16772, CV-AAS or CV-AFS EN ISO 16968
Ni (Nickel)	1 ± 0.1	DIN ISO 11047, AAS DIN ISO 22036, ICP-OES DIN EN ISO 17294-2, ICP-MS

The testing on pesticides is requested for foams composed of natural latex by at least 20% by weight.

Group of substances: Pesticides		
Substance	Limit $\pm$ measurement uncertainty value (ppm)	Testing Methods
Aldrin	0.04 $\pm$ 0.005	For pesticides the applicant shall provide a report presenting the results of the following test procedure. 2 g of sample is extracted in an ultrasonic bath with a hexane/ dichloromethane mixture (85/15). The extract is cleaned up by acetonitrile agitation or by adsorption chromatography over florisil. Measurement and quantification are determined by gas chromatography with detection on an electron capture detector or by coupled gas chromatography/mass spectrometry.
o,p-DDE	0.04 $\pm$ 0.005	
p,p-DDE	0.04 $\pm$ 0.005	
o,p-DDD	0.04 $\pm$ 0.005	
p,p-DDD	0.04 $\pm$ 0.005	
o,p-DDT	0.04 $\pm$ 0.005	
p,p-DDT	0.04 $\pm$ 0.005	
Diazinone	0.04 $\pm$ 0.005	
Dichlorfenthion	0.04 $\pm$ 0.005	
Dichlorvos	0.04 $\pm$ 0.005	
Dieldrin	0.04 $\pm$ 0.005	
Endrin	0.04 $\pm$ 0.005	
Heptachlor	0.04 $\pm$ 0.005	
Heptachlorepoxyde	0.04 $\pm$ 0.005	
Hexachlorobenzene	0.04 $\pm$ 0.005	
Hexachlorocyclohexane	0.04 $\pm$ 0.005	
α -Hexachlorocyclohexane	0.04 $\pm$ 0.005	
β -Hexachlorocyclohexane	0.04 $\pm$ 0.005	
γ -Hexachlorocyclohexane (Lindane)	0.04 $\pm$ 0.005	
δ -Hexachlorocyclohexane	0.04 $\pm$ 0.005	
Malathion	0.04 $\pm$ 0.005	
Methoxichlor	0.04 $\pm$ 0.005	
Mirex	0.04 $\pm$ 0.005	
Parathion-ethyl	0.04 $\pm$ 0.005	
Parathion-methyl	0.04 $\pm$ 0.005	

Group of substances: Other specific substances that are restricted		
Substance	Limit $\pm$ measurement uncertainty value (ppm)	Testing Methods
Butadiene	1 ± 0.14	For butadiene the applicant shall provide a report presenting the results of the following test procedure. Following milling and weighing of the latex foam, headspace sampling shall be performed. Butadiene content shall be determined by gas chromatography with detection by flame ionisation.

VOC emissions limits for latex foams after 24 hours in test chamber		
Substance	Limit $\pm$ measurement uncertainty value (mg/m ³)	Testing Methods
1,1,1-trichlorethane	0.2 $\pm$ 0.032	ISO 16000 series EN 16516 Testing method laid down in Commission Decision 2016/1332 [EU Ecolabel for furniture], chapter 7.1(b)
4-Phenylcyclohexene	0.02 $\pm$ 0.0032	
Carbon Disulphide	0.02 $\pm$ 0.0032	
Formaldehyde	0.005 $\pm$ 0.0008	
Nitrosamines (NDMA, NDEA, NMEA, NDIPA, NDPA, NDBA, NPYR, NPIP, NMOR)	0.0005 $\pm$ 0.00008	
Styrene	0.01 $\pm$ 0.0016	
Tetrachloroethylene	0.15 $\pm$ 0.024	
Toluene	0.1 $\pm$ 0.016	
Trichloroethylene	0.05 $\pm$ 0.008	
Vinyl chloride	0.0001 $\pm$ 0.000016	
Vinyl cyclohexene	0.002 $\pm$ 0.00032	
Aromatic hydrocarbons (total)	0.3 $\pm$ 0.048	
VOCs (total)	0.5 $\pm$ 0.08	

A6.2 Requirements for polyurethane (PUR) foam

The following table shows the limit values for restricted substances in polyurethane foam.

Group of substances: Biocidal products		
Substance	Restriction	Testing Methods
Biocidal products	not added intentionally	For biocidal products, phthalates and other specific substances that are restricted the applicant shall provide a declaration supported by declarations from suppliers of the foam confirming that they have not been added intentionally to the foam formulation.

Group of substances: Flame retardants		
Substance	Restriction	Testing Methods
Flame retardants	not added intentionally, unless the exemptions below are applicable	For biocidal products, phthalates and other specific substances that are restricted the applicant shall provide a declaration supported by declarations from suppliers of the foam confirming that they have not been added intentionally to the foam formulation.

Exemptions to the rule “not added intentionally”:

The product shall be intended to be used in applications in which it is required to meet fire protection requirements for ISO, EN, EU-Member State or public sector procurement standards and regulations.

Antimon trioxide is only permitted when all of the following conditions are met:

1. The product shall be intended to be used in applications in which it is required to meet fire protection requirements in ISO, EN, Member State or public sector procurement standards and regulations.
2. It is used as a synergist with textiles or coated fabrics.
3. Emissions to air in the workplace where the flame retardant is applied to the textile or fabrics product shall meet an eight hour occupational exposure limit value of 0.50 mg/m³.

Group of substances: Heavy Metals		
Substance	Limit $\pm$ measurement uncertainty value (ppm)	Testing Methods
As (Arsenic)	0.2 ± 0.03	DIN EN ISO 11885, ICP-AES DIN ISO 22036, ICP-OES DIN EN ISO 17294-2, ICP-MS DIN ISO 20280, ET-AAS und Hydrid AAS
Cd (Cadmium)	0.1 ± 0.01	DIN ISO 11047, AAS DIN EN ISO 11885, ICP-AES DIN ISO 22036, ICP-OES DIN EN ISO 17294-2, ICP-MS
Co (Cobalt)	0.5 ± 0.06	
Cr (Chromium), total	1 ± 0.11	DIN ISO 11047, AAS DIN EN ISO 11885, ICP-AES DIN ISO 22036, ICP-OES DIN EN ISO 17294-2, ICP-MS
Cr VI (Chromium VI)	0.01 ± 0.0013	
Cu (Copper)	2 ± 0.24	DIN ISO 11047, AAS DIN EN ISO 11885, ICP-AES DIN ISO 22036, ICP-OES DIN EN ISO 17294-2, ICP-MS
Hg (Mercury)	0.02 ± 0.002	DIN EN 1483, AAS, AFS DIN ISO 16772, CV-AAS or CV-AFS
Ni (Nickel)	1 ± 0.1	
Pb (Lead)	0.2 ± 0.03	DIN ISO 11047, AAS DIN EN ISO 11885, ICP-AES DIN ISO 22036, ICP-OES DIN EN ISO 17294-2, ICP-MS
Sb (Antimony)	0.5 ± 0.04	
Se (Selenium)	0.5 ± 0.06	

Group of substances: Plasticizers		
Substance	Limit $\pm$ measurement uncertainty value (ppm)	Testing Methods
(1) Dibutylphthalate (DBP)	0.1% $\pm$ 0.007 w/w (sum of all phthalates in furniture for children less than 3 years old) 0.1% $\pm$ 0.007 w/w sum of phthalates (1) – (4) for all other furniture	For the total amount of plasticizers the applicant shall provide a report presenting the results of the following test procedure. Extraction shall be performed using a validated method such as the subsonic extraction of 0.3 g of sample in a vial with 9 ml of t-Butylmethylether during 1 hour followed by the determination of phthalates by GC using a single ion monitoring mass selective detector (SIM Modus).
(2) Di-n-octylphthalate (DNOP)		
(3) Di (2-ethylhexyl)-phthalate (DEHP, 117-81-7)		
(4) Butylbenzylphthalate (BBP, 85-68-7)		
(5) Di-iso-decylphthalate (DIDP, 26761-40-0)		
(6) Di-iso-nonylphthalate (DINP, 28553-12-0)		
ECHA Candidate List (see Annex 2) phthalates	not added intentionally	For biocidal products, phthalates and other specific substances that are restricted the applicant shall provide a declaration supported by declarations from suppliers of the foam confirming that they have not been added intentionally to the foam formulation.

Group of substances: TDA and MDA		
Substance	Limit $\pm$ measurement uncertainty value (ppm)	Testing Methods
2,4 Toluenediamine (2,4-TDA, 95-80-7)	5.0 $\pm$ 0.3	For TDA and MDA the applicant shall provide a report presenting the results of the following test procedure. Extraction of a 0.5 g composite sample in a 5 ml syringe shall be performed with 2.5 ml of 1% aqueous acetic acid solution. The syringe is squeezed and the liquid returned to the syringe. After repeating this operation 20 times, the final extract is kept for analysis. A new 2.5 ml of 1% aqueous acetic acid is then added to the syringe and another 20 cycles repeated. After this, the extract is combined with the first extract and diluted to 10 ml in a volumetric flask with acetic acid. The extracts shall be analysed by high-performance liquid chromatography (HPLC-UV) or HPLC-MS. If HPLC-UV is performed and interference is suspected, reanalysis with high performance liquid chromatography–mass spectrometry (HPLC-MS) shall be performed.
4,4'-Diaminodiphenylmethane (4,4'-MDA, 101-77-9)	5.0 $\pm$ 0.4	

Group of substances: Tinorganic substances		
Substance	Limit $\pm$ measurement uncertainty value (ppb)	Testing Methods
Tributyltin (TBT)	50 $\pm$ 3	For tinorganic substances the applicant shall provide a report presenting the results of the following test procedure. A composite sample of 1-2 g weight shall be mixed with at least 30 ml of extracting agent during 1 hour in an ultrasonic bath at room temperature. The extracting agent shall be a mixture composed as follows: 1 750 ml methanol + 300 ml acetic acid + 250 ml buffer (pH 4.5). The buffer shall be a solution of 164 g of sodium acetate in 1 200 ml of water and 165 ml acetic acid, to be diluted with water to a volume of 2 000 ml. After extraction the alkyl tin species shall be derivatised by adding 100 μ l of sodium tetraethylborate in tetrahydrofuran (THF) (200 mg/ml THF). The derivative shall be extracted with n-hexane and the sample shall be submitted to a second extraction procedure. Both hexane extracts shall be combined and further used to determine the organotin compounds by gas chromatography with mass selective detection in SIM modus.
Dibutyltin (DBT)	100 $\pm$ 24	
Monobutyltin (MBT)	100 $\pm$ 18	
Tetrabutyltin (TeBT)	---	Value $\pm$ 6% if applicable
Monooctyltin (MOT)	---	Value $\pm$ 6% if applicable
Dioctyltin (DOT)	---	Value $\pm$ 6% if applicable
Tricyclohexyltin (TcyT)	---	Value $\pm$ 6% if applicable
Triphenyltin (TPhT)	---	Value $\pm$ 6% if applicable
Sum	500 $\pm$ 30	

Group of substances: Other specific substances that are restricted		
Substance	Restriction	Testing Methods
Chlorinated or brominated dioxins or furans	not added intentionally	For biocidal products, phthalates and other specific substances that are restricted the applicant shall provide a declaration supported by declarations from suppliers of the foam confirming that they have not been added intentionally to the foam formulation.
Chlorinated hydrocarbons: (1,1,2,2-Tetrachloroethane, Pentachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethylene)		
Chlorinated phenols (PCP, TeCP, 87-86-5)		
Hexachlorocyclohexane (58-89-9)		
Monomethyldibromo–Diphenylmethane (99688-47-8)		
Nitrites		
Polybrominated Biphenyls (PBB, 59536-65-1)		
Pentabromodiphenyl Ether (PeBDE, 32534-81-9)		
Octabromodiphenyl Ether (OBDE, 32536-52-0)		
Polychlorinated Biphenyls (PCB, 1336-36-3)		
Polychlorinated Terphenyls (PCT, 61788-33-8)		
Tris(2,3-dibromopropyl) phosphate (TRIS, 126-72-7)		
Trimethylphosphate (512-56-1)		
Tris-(aziridiny)-phosphin oxide (TEPA, 545-55-1)		
Tris(2-chloroethyl)-phosphate (TCEP, 115-96-8)		
Dimethyl methylphosphonate (DMMP, 756-79-6)		

VOC emissions limits for PUR foams after 72 hours in test chamber		
Substance	Limit $\pm$ measurement uncertainty value (mg/m ³)	Testing Methods
Formaldehyde (50-00-0)	0.005 $\pm$ 0.0008	ISO 16000 series, EN 16516 The test sample/chamber combination shall be either: 1 sample of 25 × 20 × 15 cm dimensions is placed in a 0,5 m³ test chamber or 2 samples of 25 × 20 × 15 cm dimensions are placed in a 1,0 m³ test chamber. The foam sample shall be placed on the bottom of an emission test chamber and conditioned for 3 days at 23 °C and 50 % relative humidity, applying an air exchange rate n of 0,5 per hour and a chamber loading L of 0,4 m²/ m³ (= total exposed surface of sample in relation to chamber dimensions without sealing edges and back) in accordance with ISO 16000-9 and ISO 16000-11. Sampling shall be done 72 $\pm$ 2 h after loading of the chamber during 1 hour via Tenax TA and DNPH cartridges for VOC and formaldehyde analysis respectively. The emissions of VOC are being trapped on Tenax TA sorbent tubes and subsequently analysed by means of thermo-desorption-GC-MS in accordance with ISO 16000-6. Results are semi-quantitatively expressed as toluene equivalents. All specified individual analytes are reported from a concentration limit $\geq$ 1 μg/m³. Total VOC value is the sum of all analytes with a concentration $\geq$ 1 μg/m³ and eluting within the retention time window from n-hexane (C6) to n-hexadecane (C16), both included. The sum of all detectable compounds classified as categories C1A or C1B according to Regulation (EC) No 1272/2008 is the sum of all these substances with a concentration $\geq$ 1 μg/m³. In case the test results exceed the standard limits, substance specific quantification needs to be performed. Formaldehyde can be determined by collection of the sampled air onto DNPH cartridge and subsequent analysis by HPLC/UV in accordance with ISO 16000-3. Testing following
Toluene (108-88-3)	0.1 $\pm$ 0.016	
Styrene (100-42-5)	0.005 $\pm$ 0.0008	
Each detectable compound classified as categories C1A or C1B according to Regulation (EC) No 1272/2008	0.005 $\pm$ 0.0008	
Sum of all detectable compound classified as categories C1A or C1B according to Regulation (EC) No 1272/2008	0.04 $\pm$ 0.0064	
Aromatic hydrocarbons	0.5 $\pm$ 0.08	
VOCs (total)	0.5 $\pm$ 0.08	

VOC emissions limits for PUR foams after 72 hours in test chamber		
Substance	Limit $\pm$ measurement uncertainty value (mg/m ³)	Testing Methods
		the standard CEN/TS 16516 shall be considered as equivalent to those of the ISO 16000 series of standards.

A6.3 Requirements for other padding materials

Other materials may be permitted to be used as padding in furniture upholstery if the following conditions are met:

- Halogenated organic compounds are not used as blowing agents or as auxiliary blowing agents.
- Feathers or down are not used as padding/filling material either alone or in blends.

Assessment and verification: The applicant shall provide a declaration of compliance stating all following points:

- The nature of the padding/filling material used and any other blended materials,
- That halogenated organic compounds have not been used as blowing agents or as auxiliary blowing agents.
- That down or animal feathers have not been used in the filling/padding material, either alone or in blends.
- If coconut fibres have been rubberised with latex, then compliance with requirements in table A5.1 for restricted substances and VOC emissions shall be demonstrated.

Annex 7 - List of EN and ISO technical standards on requirements for dimensions, safety, strength and durability of office and non-domestic furniture (to 5.13.1.2)

Correction

The reference shall read "to 15.14.1.2".

The storage unit standards 14073-2 and 14074 had been withdrawn in 2024.

Tables and desks

EN 527-1	Office furniture – Work tables and desks – Part 1: Dimensions
EN 527-2	Office furniture – Work tables and desks – Part 2: Safety, strength and durability requirements
EN 15372	Furniture – Strength, durability and safety – Requirements for non-domestic tables

Chairs

EN 1335-1	Office furniture – Office work chair – Part 1: Dimensions – Determination of dimensions
EN 1335-2	Office furniture – Office work chair – Part 2: Safety requirements
EN 16139	Furniture – Strength, durability and safety – Requirements for non-domestic seating
EN 1729-1	Furniture - Chairs and tables for educational institutions Part 1: Functional dimensions
EN 1729-2	Furniture - Chairs and tables for educational institutions Part 2: Safety requirements and test methods
EN 12727	Furniture - Ranked seating - Test methods and requirements for strength and durability

Office Screens

EN 1023-1	Office furniture – Screens – Part 1: Dimensions
EN 1023-2	Office furniture – Screens – Part 2: Mechanical safety requirements

Storage Units

EN 14073-2	Office furniture – Storage furniture – Part 2: Safety requirements
EN 14074	Office furniture – Tables and desks and storage furniture – Test methods for the determination of strength and durability of moving parts
EN 16121	Non-domestic storage furniture – Requirements for safety, strength, durability and stability

Others

EN 13150	Workbenches for laboratories in educational institutions. Dimensions, safety requirements and test methods
EN 14727	Laboratory furniture – Storage units for laboratories – Requirements and test methods

Annex 8 - Inventory of air emissions (to 6.10.1)

The inventory of air emissions shall include the following categories.

Main components	
SO _x	Sulphur oxides reported as SO ₂
NO _x	Nitrogen oxides reported as NO ₂
NH ₃	Ammonia
NM VOC	Non-methane volatile organic compounds
CO	Carbon monoxide
Particulate matter (PM)	
PM ₁₀	Particulate matter with diameter equal to or less than 10 µm
PM _{2.5}	Particulate matter with diameter equal to or less than 2.5µm
TSP	Total Suspended Particulates
BC	Black Carbon which means carbonaceous particulate matter that absorbs light
Heavy metals (HMs)	
Cd	Cadmium and its compounds
Hg	Mercury and its compounds
Pb	Lead and its compounds
As	Arsenic and its compounds
Cr	Chromium and its compounds
Cu	Copper and its compounds
Hg	Mercury and its compounds
Ni	Nickel and its compounds
Se	Selenium and its compounds
Zn	Zinc and its compounds
Persistent organic pollutants (POPs)	
PCDD /PCDF	Dioxins and Furans
PAHs	Polycyclic aromatic hydrocarbons {benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, total 1-4}
HCBs	Hexachlorobenzene (CAS: 118-74-1)
PCBs	Polychlorinated biphenyls

Annex 9 - Formaldehyde (to 7.7.1 and 7.7.2)

9.1 Requirements for formaldehyde in wood-based panels (to 7.7.1)

The following tables show the limit values for formaldehyde in wood-based panels.

Group of substances: Formaldehyde		
Substance	Limit $\pm$ measurement uncertainty value	Testing Methods
Formaldehyde	0.1 ± 0.05 ppm or 124 ± 12.4 $\mu\text{g}/\text{m}^3$	EN 16516 with air flow rate 0,5/h and load 1,8 m^2/m^3
	0.1 ± 0.05 ppm or 124 ± 12.4 $\mu\text{g}/\text{m}^3$	chamber test carried out according to EN 717-1, steady-state concentration has to be multiplied by factor 2,0

9.2 Requirements for reduced formaldehyde in wood-based panels (to 7.7.2)

The following tables show the limit values for reduced formaldehyde in wood-based panels.

Group of substances: Formaldehyde		
Substance	Limit $\pm$ measurement uncertainty value	Testing Methods
Formaldehyde	0.05 ± 0.005 ppm or 62 ± 6.2 $\mu\text{g}/\text{m}^3$	EN 16516 with air flow rate 0,5/h and load 1,8 m^2/m^3
	0.05 ± 0.005 ppm or 62 ± 6.2 $\mu\text{g}/\text{m}^3$	chamber test carried out according to EN 717-1, steady-state concentration has to be multiplied by factor 2,0

Additional information

Please note that in Blue Angel DE-UZ-038 version 2022 page 11 the required formaldehyde value is now 0.030 ppm or 37 $\mu\text{g}/\text{m}^3$ with test method EN 16516.

Annex 10 - VOC in the finished product (to 7.7.3)

A10.1 Requirements for VOC from chairs and upholstered office chairs

The following table shows the limit values for restricted substances in the finished product.

Group of substances: VOC		
Substance	Limit $\pm$ measurement uncertainty value	Testing Methods
Formaldehyde	$40 \pm 4 \mu\text{g}/\text{m}^3$	ISO 16000-9, EN 16516, values determined after 28 days The test may be stopped from the 7th day after loading if the required final values of day 28 are reached prematurely and if, compared with the measurement of day 3, no rise in the concentration of any of the detected substances has been observed.
Other aldehydes (total)	$40 \pm 4 \mu\text{g}/\text{m}^3$	
TVOC (C6 – C16)	$300 \pm 30 \mu\text{g}/\text{m}^3$	
TSVOC (C16 – C22)	$50 \pm 5 \mu\text{g}/\text{m}^3$	
Sum of all VOC without LCI	$100 \pm 10 \mu\text{g}/\text{m}^3$	
Cancerogenic substances (C-substances)	$1 \mu\text{g}/\text{m}^3$ per individual substance	
Reprotoxic substances without LCI (R-substances)	$20 \pm 2 \mu\text{g}/\text{m}^3$	
R-value for LCI-substances	1 (dimension less)	

A10.2 Requirements for VOC from other furniture

The following table shows the limit values for restricted substances in the finished product.

Group of substances: VOC		
Substance	Limit $\pm$ measurement uncertainty value	Testing Methods
Formaldehyde	$60 \pm 6 \mu\text{g}/\text{m}^3$	ISO 16000-9, EN 16516, values determined after 28 days The test may be stopped from the 7th day after loading if the required final values of day 28 are reached prematurely and if, compared with the measurement of day 3, no rise in the concentration of any of the detected substances has been observed.
Other aldehydes (total)	$60 \pm 6 \mu\text{g}/\text{m}^3$	
TVOC (C6 – C16)	$450 \pm 45 \mu\text{g}/\text{m}^3$	
TSVOC (C16 – C22)	$80 \pm 8 \mu\text{g}/\text{m}^3$	
Sum of all VOC without LCI	$100 \pm 10 \mu\text{g}/\text{m}^3$	
Cancerogenic substances (C-substances)	$1 \mu\text{g}/\text{m}^3$ per individual substance	
Reprotoxic substances without LCI (R-substances)	$20 \pm 2 \mu\text{g}/\text{m}^3$	
R-value for LCI-substances	1 (dimension less)	

* TVOC: the sum of the concentrations of all identified target compounds (quantified using authentic standards) plus all identified non- target compounds and non-identified compounds (quantified using the TIC response factor for toluene) eluting between and including n-hexane and n-hexadecane, excluding any compounds determined to be below $5 \mu\text{g}/\text{m}^3$ after correcting for blank values of the respective compounds quantified in the same way. The quantification limit of any VOC shall be $1 \mu\text{g}/\text{m}^3$ as far as feasible. All compounds above $1 \mu\text{g}/\text{m}^3$ shall be reported with their concentrations. Compulsory target list for LCI values is the EU LCI value list:

ec.europa.eu/docsroom/documents/39985

** TSVO: sum of the concentrations of all identified target compounds (quantified using authentic standards) plus all identified non- target compounds and non-identified compounds (quantified using the TIC response factor for toluene) eluting after n-hexadecane and up to and including n-docosane excluding any compounds determined to be below $5 \mu\text{g}/\text{m}^3$. The quantification limit of any SVOC shall be $1 \mu\text{g}/\text{m}^3$ as far as feasible. All identified target compounds above $1 \mu\text{g}/\text{m}^3$ shall be reported with their concentrations.

*** LCI: lowest concentration of interest. Agreed EU-LCI values:

ec.europa.eu/docsroom/documents/39985

A10.3 Requirements for test chamber loading parameters for different type of product

The following table shows requirements for test chamber loading parameters depending on the type of product to be tested.

Test parameter	Sofas 3 Seat-Sofas	Sofas 2 Seat-Sofas	Armchairs and Sofas 1 Seat-Sofas	Office chairs	Other furniture items (cabinets, desks)	Leather or coated fabric upholstery covering materials
Air flow rate	12m ³ /h	8m ³ /h	4m ³ /h	2m ³ /h	1.0m ³ /m ² h	1.5m ³ /m ² h
Loading rate	Product shall occupy approximately 25 % of chamber volume				0.5 – 1.5m ² /m ³	Rear to rear
Air change rate					0.5 – 1.5/h	0.5/h

A10.4 Requirements for determining non-emitting furniture components

Determination of non-emitting furniture components for exclusion from testing shall consider the influence of manufacturing and processing in regard to the finished product. For this purpose non-emitting furniture components shall consist only of:

- metals;
- glass;
- ceramics;
- powder coated metals;
- galvanized metals; or
- melamine coating

Annex 11 - Scorecard

Section	Title	Prerequisite	Product points	Facility points	Organisation points
5	Materials	-	-	-	-
5.1	Wood and wood-based materials	-	-	-	-
5.1.1	Prerequisite – Legally sourced timber	x			
5.1.2	Contaminants in recycled wood		1		
5.1.3	Sustainable forest management - Minimum share of certified matter		1		
5.1.4	Sustainable forest management - Accredited certification		1		
5.2	Plastic parts	-	-	-	-
5.2.1	Prerequisite – Marking of plastic parts	x			
5.3	Surface coating of wood, plastic or metal parts	-	-	-	-
5.3.1	Prerequisite – Restrictions on chemicals	x			
5.4	Adhesives and glues	-	-	-	-
5.4.1	VOC content 10% - 30%		1		
5.4.2	VOC content maximum 10%		1		
5.5	Textiles and Leather	-	-	-	-
5.5.1	Prerequisite – Restrictions on chemicals	x			
5.5.2	Formaldehyde in textile or leather		2		
5.6	Upholstery materials	-	-	-	-
5.6.1	Prerequisite - Halogenated organic compounds	x			
5.6.2	Restricted substances		2		
5.7	Flame retardants	-	-	-	-
5.7.1	Prerequisite - Not listed in REACH	x			
5.8	Phthalates	-	-	-	-
5.8.1	Prerequisite - Not listed in REACH	x			
5.9	Packaging materials	-	-	-	-
5.9.1	Prerequisite - Minimum quality of material	x			
5.9.2	Recycled content 60%/40% or multi-use		1		
5.9.3	Recycled content 90%/60% or multi-use		1		
5.10	Life Cycle Assessment	-	-	-	-
5.10.1	Life Cycle Assessment with two components from ISO		2		
5.10.2	Life Cycle Assessment with four components from ISO		1		
5.10.3	Life Cycle Assessment with third party review		1		

Section	Title	Prerequisite	Product points	Facility points	Organisation points
5.11	Efficient Use of Materials	-	-	-	-
5.11.1+2	Material efficiency 60%/70%		2		

Correction

It shall read "Material efficiency 70/80% in line with the credit 5.11

5.12	Recycled Content	-	-	-	-
5.12.1+2	Recycled content 30%/50%		2		
5.13	Extended Producer Responsibility and Circular Economy	-	-	-	-
5.13.1	Prerequisite - Policy for maximising useful product life	x			
5.13.2	Prerequisite - Design for remanufacturing	x			
5.13.3	Prerequisite - Design for recycling	x			
5.13.4	Prerequisite - Product information for user	x			
5.13.5	Extended product information for user and re-logistic				1
5.13.6	Product information on legacy products				1
5.13.7	Take-back of used furniture				2
5.13.8	Activities for life cycle extension of products				3
5.13.9	Product as a service				1
5.14	Prerequisite - Product Compliance to EN/ISO Standards	x			
5.15	Waste Management	-	-	-	-
5.15.1	Non-hazardous waste inventory		1		
5.15.2	Non-hazardous waste reduction		2		
5.15.3	Hazardous waste reduction		2		
5.16	Water Management	-	-	-	-
5.16.1	Water inventory of facility			1	
5.16.2	Efficient water use			1	
5.16.3	Water from own supply			1	
5.16.4	Wastewater discharge			2	
6	Energy and Atmosphere	-	-	-	-
6.1	Prerequisite - Energy Policy	x			
6.2	Building Energy Performance baseline	-	-	-	-
6.2.1	Conduct of a building energy performance baseline			1	
6.2.2	Extended building energy performance baseline			2	
6.3	Building rating system certification			1	
6.4	Energy management System	-	-	-	-
6.4.1	Implementation of activities from energy audit			1	
6.4.2	Conformance to ISO 50001 or EMAS			2	
Section	Title	Prerequisite	Product points	Facility points	Organisation points
6.5	Embodied Energy	-	-	-	-
6.5.1	Cradle-to-Gate analysis		1		
6.5.2	Gate-to-Gate analysis		1		

6.5.3	Embodied energy – 10% reduction		1		
6.6	Prerequisite - Standby Energy Consumption	x			
6.7	Transportation	-	-	-	-
6.7.1	Inbound and internal transportation				1
6.7.2	Outbound transportation				1
6.8	On-site and Off-site Renewable Energy			4	
6.9	Carbon Footprint and Greenhouse Gas	-	-	-	-
6.9.1	Greenhouse gases inventory scope 1, 2			1	
6.9.2	Greenhouse gas inventory scope 3			1	
6.9.3	Greenhouse gas reduction			2	
6.9.4	Greenhouse gas voluntary reporting programme				2
6.10	Air emissions	-	-	-	
6.10.1	Inventory of air emissions			1	
6.10.2	Reduction of air emissions			2	
7	Management of Chemicals	-	-	-	-
7.1	Prerequisite - Demonstration of Compliance	x			
7.2	Prerequisite - Key Chemical and Risk Policies	x			
7.3	EMAS, ISO 14001 or Equivalent			2	
7.4	Chemical Management Plan (CMP)	-	-	-	-
7.4.1+2+3	Inventory system/Handling of chemicals/Emergency Action Plan			1	
7.5	Assessment and Reduction of Chemical Impact	-	-	-	-
7.5.1-7.5.3	Product level		3		
7.5.4	Process level - process chemicals			1	
7.5.5	Maintenance and operations level (50% of used chemicals)			1	
7.5.6	Chemical impact reduction strategy			1	
7.6	Reduction or Elimination of Chemicals of Concern	-	-	-	-
7.6.1	Elimination from products		6		
7.6.2	Reduction or elimination from processes	-	-	4	-
7.6.3	Reductions from maintenance and operations level			1	

Section	Title	Prerequisite	Product points	Facility points	Organisation points
7.7	Low Emitting Furniture	-	-	-	-
7.7.1	Prerequisite - Wood-based material - E1 quality	x	-	-	-
7.7.2	Wood-based material - formaldehyde reduced		2		
7.7.3	VOC emissions from the finished product		4		
8	Social Responsibility	-	-	-	-
8.1	Prerequisite - Employee Health and Safety Management	x			
8.2	Prerequisite - Labour and Human Rights	x			
8.3	Policy on Social Responsibility				1
8.4	External Health and Safety Management Standard				1
8.5	Inclusiveness				1
8.6	Engage in Community Outreach and Involvement				1
8.7	Social Responsibility Reporting	-	-	-	-
8.7.1	Minimum report content				1
8.7.2	Extended report content				2
8.8	Social responsibility in the supply chain	-	-	-	-
8.8.1	Establishment of a Supplier Assessment Tool				1
8.8.2	Implementation of a Supplier Self-Assessment Tool				2
8.8.3	Supplier Code of Conduct				1
8.9	Excellence in social responsibility				1