

Brussels, **XXX**
[....] (2015) **XXX** draft

COMMISSION DECISION

of **XXXX**

**establishing the ecological criteria for the award of the EU Ecolabel for Wood-based
Floor Covering**

(Text with EEA relevance)

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establishing the ecological criteria for the award of the EU Ecolabel for wood-based floor covering

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel¹, and in particular Article 8(2) thereof,

After consulting the European Union Eco-labelling Board,

Whereas:

- (1) Under Regulation (EC) No 66/2010, the EU Ecolabel may be awarded to products which have a reduced environmental impact during their entire life cycle.
- (2) Regulation (EC) No 66/2010 provides that specific EU Ecolabel criteria are to be established according to product groups.
- (3) Since **(to be completed)** it is appropriate to establish EU Ecolabel criteria for the product group of 'wood-based floor coverings'.
- (4) The measures provided for in this Decision are in accordance with the opinion of the Committee established by Article 16 of Regulation (EC) No 66/2010,

¹ OJ L 27, 30.1.2010, p. 1.

HAS ADOPTED THIS DECISION:

Article 1

1. The product group of ‘wood-based floor coverings’ shall comprise wood- and plant-based pre-manufacturing floor coverings: including wood and timber coverings, laminate floorings, cork coverings and bamboo floorings which are made, for more than 80 % in mass (in the final product), from wood, wood powder and/or wood/plant-based material.
2. It does not apply to wall coverings, where properly indicated, or coverings for external use or for coverings with a structural function

Article 2

For the purpose of this Decision, the following definitions shall apply:

- (1) ‘Wood and timber coverings’ are wood floors or wall coverings made of one solid piece of wood that have tongue and groove sides or constructed from several wood plies that are glued together in a multilayer panel. A wood covering shall be pre-finished in a factory. ~~A wood covering can be unfinished and once installed sanded, then finished on site or pre-finished in a factory.~~

Wood and timber coverings criteria can be applicable both for wall and floor coverings, if the production processes remain the same, using the same materials and the same manufacturing methods. The criteria are set for internal use only.

- (2) ‘Laminate floorings’ are rigid floor covering with a surface layer consisting of one or more thin sheets of a fibrous material (usually paper), impregnated with aminoplastic thermosetting resins (usually melamine), posed or bonded on a substrate, normally finished with a backer.

Laminate coverings criteria can be applicable only for floor coverings and for indoor use.

The industry producing laminate floor coverings determines its technical position in the European Committee for Standardization CEN/TC 134

- (3) ‘Cork floorings’ are floor or wall coverings the main component of which is cork. The granulated cork is mixed with a binder, and then cured or several layers of cork agglomeration/veneer) can be pressed together with glue.

The cork coverings can be divided into natural cork tiles (the main component of which is agglomerated composition cork, intended to be used with a finish) and in engineered cork panels (consisting of several layers including a fibreboard the main component of which is agglomerated cork or has cork as technical solution, intended to be used with a finishing wear layer).

Cork covering criteria can be applicable both for wall and floor coverings, if the production processes remain the same, using the same materials and the same manufacturing methods. The criteria are set for indoor use only.

The European cork floor covering industry determines its technical position in the European Committee for Standardization CEN/TC 134.

- (4) ‘Bamboo floor coverings’ are made of bamboo in solid pieces or in agglomerates as a main component.

Bamboo coverings criteria can be applicable only for floor coverings and for indoor use. ~~The functional unit, to which inputs and outputs should be related is 1m² of finished product.~~

- (5) 'Wood-based material' is material made by binding with adhesives and/or glues one or more of the following materials: wood fibres and /or stripped or sheared wood sheets, and/or wood residues from forest, plantations, sawn-wood, residues from pulp/paper industry, and/or recycled wood. Wood based materials comprise: hardboard, fibreboard, medium density fibreboard, particleboard, OSB (oriented strand board), plywood, and panels in solid wood. It also refers to composite materials made from wood-based panels coated by plastics, or laminated plastics or metals or other coating materials and finished/semi-finished wood based panels
- (6) 'Recycled Wood' is any kind of wooden materials, such as solid wood, fibres, chips, veneers, diverted from the waste stream during a manufacturing process or generated by households or by commercial, industrial and institutional facilities in their roles as end-users of the product, which can no longer be used for their intended purpose. Excluded is reutilisation of materials generated in a process and capable of being reclaimed within the same process that generated it and also by-products or co-products of logging and sawmilling operations
- (7) 'Volatile organic compounds (VOC)' means any organic compounds having an initial boiling point less than or equal to 250 °C measured at a standard pressure of 101,3 kPa as defined in Directive 2004/42/EC.
- (8) 'Semi volatile organic compounds (SVOCs)' are defined as all organic compounds which, in a capillary column² are eluting with a retention range between n-hexadecane (excluded) and n-docosane (included).

Note: Other definitions to be added for substance groups

Article 3

The criteria for awarding the EU Ecolabel under Regulation (EC) No 66/2010, for a product falling within the product group "wood-based floor coverings" defined in Article 1 of this Decision as well as the related assessment and verification requirements are set out in the Annex to this Decision.

Article 4

The criteria and the related assessment requirements set out in the Annex, shall be valid for four years from [insert date - the date of adoption of this Decision].

Article 5

For administrative purposes, the code number assigned to the product group 'wooden floor coverings' shall be "x".

Article 6

Decisions 2010/18/EC and 2013/295/EU (prolongation of the validity of the criteria) are repealed.

² As specified in 8.2.2 of FprCEN/TS 16516.

Article 7

This Decision is addressed to the Member States.

Done at Brussels,

For the Commission

xxxxxx

Member of the Commission

ANNEX

EU ECOLABEL CRITERIA AND ASSESSMENT AND VERIFICATION REQUIREMENTS

The aim of the criteria

The criteria aim, in particular at promoting:

- products that have a lower environmental impact along their life cycle,
- products that have high quality, good performance and long durability,
- products which contain a limited amount of hazardous substances,
- products which are low-emitting

Criteria for awarding the EU Ecolabel to wood-based floor covering are set for each of the following aspects:

1. Wooden materials, cork and bamboo
 - (a) Sustainable certified wood, cork and bamboo
2. Restriction of hazardous substances and mixtures
 - (a) Hazardous substances (general)
 - (b) Hazardous substances (specific: raw materials and auxiliary materials in the manufacturing process)
3. Production process
 - (a) Energy consumption
 - (b) Waste treatment
4. Use phase
 - (a) Emissions of VOCs and formaldehyde
 - (b) Fitness for use
 - (c) Maintenance
5. Information
 - (a) Consumer information
 - (b) Information appearing on the EU Ecolabel

Appendix I VOC effective application

Appendix IIa and IIb Energy consumption calculation

Assessment and verification

- (a) Requirements

The specific assessment and verification requirements are indicated within each criterion.

Where the applicant is required to provide declarations, documentation, analyses, test reports, or other evidence to show compliance with the criteria, these may originate from the applicant and/or his supplier(s) and/or their supplier(s), as appropriate.

Where appropriate, test methods other than those indicated for each criterion may be used if these are described in the user manual of the Ecolabel criteria application and the competent body assessing the application accepts their equivalence.

Where possible, the testing shall be performed by laboratories that meet the general requirements of European Standard EN ISO 17025³ or equivalent.

Where appropriate, competent bodies may require supporting documentation and may carry out independent verifications.

(b) Measurement thresholds

Unless otherwise indicated compliance with the Eco-label criteria is required for substances and mixtures intentionally added, as well as for by-products and impurities from raw materials, the concentration of which equals or exceeds 0,010 % by weight of final formulation.

(c) The exact formulation of the chemical products used for manufacturing the wood based floor coverings, the function and the physical form of all ingredients intentionally used as well as the ingoing quantity shall be provided to the competent body. The trade name, chemical name, CAS number and CLP classification shall be provided for each chemical product. Any ingredient of the chemical products, including known impurities, present in concentrations greater than 0,010 % shall be reported unless a lower concentration is specified elsewhere in the criteria.

Where ingredients are referred to in the criteria, this includes substances and preparations or mixtures. The definitions of 'substances' and 'mixtures' are given in the REACH Regulation (Regulation (EC) No 1907/2006 of the European Parliament and of the Council (1).

Safety data sheets and/or CAS numbers and CLP classifications (harmonised or otherwise) for each ingredient shall be submitted to the competent body in accordance with Regulation (EC) No 1907/2006 of the European Parliament and of the Council.

³ ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories

Criterion 1. Certified sustainable wood, cork and bamboo

Note 1: These criteria apply to solid wood, wood chips and wood fibres as well as cork and lignified materials other than wood such as bamboo. Hereinafter, these distinct materials are simply referred to as "wood".

Wood may originate from virgin or recycled material.

Virgin wood shall be covered by valid sustainable forest management and chain of custody certificates issued by an independent third party certification scheme such as FSC, PEFC or equivalent.

However, where certification schemes allow mixing of uncertified material with certified and/or recycled materials in a product or product line, a minimum of 70% of the wood shall be sustainable certified virgin material and/or recycled material.

Uncertified material shall be covered by a verification system which ensures that it is legally sourced.

The certification bodies issuing forest and/or chain of custody certificates shall be accredited or recognized by that certification scheme.

Assessment and verification

The applicant shall provide valid, independently certified chain of custody certificates and demonstrate that the at least 70% of the wood originates from forests managed according to Sustainable Forestry Management principles and/or from recycled sources that meet the requirements set out by the relevant independent chain of custody scheme. FSC, PEFC or equivalent schemes shall be accepted as independent third party certification.

If the product or product line includes uncertified material, proof should be provided that the content of uncertified material does not exceed 30% and is covered by a verification system which ensures that it is legally sourced.

Criterion 2. General restriction of hazardous substances

The presence in the product of substances that have been identified according to Article 59 of the REACH Regulation^[1] or meet the criteria for classification according to the CLP Regulation^[2] for the hazards listed in Table 2.1 shall be restricted in accordance with sub-criterion 2.a and 2.b.

Table 2.1. Grouping of Candidate List SVHCs and CLP hazards

Group 1 hazards – Substances of Very High Concern

Hazards that identify a substance as being within Group 1:

- Substances that appear on the Candidate List for Substances of Very High Concern (SVHC).
- Category 1A or 1B CMR*: H340, H350, H350i, H360F, H360D, H360FD, H360Fd,

^[1] Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency (OJ L 136, 29.05.2007, p.3).

^[2] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p.1).

H360Df
<p>Group 2 hazards – CLP</p> <p><i>Hazards that identify a substance as being within Group 2:</i></p> <ul style="list-style-type: none"> ○ Category 2 CMR*: H341, H351, H361f, H361d, H361fd, H362 ○ Category 1 aquatic toxins: H400, H410 ○ Category 1 and 2 acute toxins: H300, H310, H330, H304 ○ Category 1 STOT*: H370, H372 ○ Category 1 Skin Sensitiser H317
<p>Group 3 hazards – CLP</p> <ul style="list-style-type: none"> ○ Category 2, 3 and 4 aquatic toxins: H411, H412, H413 ○ Category 3 acute toxins: H301, H311, H331, EUH070 ○ Category 2 STOT*: H371, H373

*CMR = Carcinogenic, Mutagenic or toxic to reproduction; STOT = Specific Target Organ Toxicity

2.a) Restriction of Substances of Very High Concern (SVHC's)

The wood-based floor covering product shall not contain substances that have been identified according to the procedure described in Article 59(1) of the Regulation (EC) No 1907/2006 (the 'REACH' Regulation) and **have been** included in the Candidate List for SVHCs at concentrations of greater than 0.10% wt.

No derogation from this requirement shall be given to Candidate List SVHCs present in the product if they are present in the final product in concentrations greater than 0.10% wt.

Assessment and verification

The applicant and/or chemical product supplier shall compile declarations of the non-presence of SVHCs at or above the specified concentration limit for the final product. Declarations shall be with reference to the latest version of the Candidate List published by ECHA^[3]

2.b) CLP restriction of the chemical products used in the wood-based floor covering product

Note 1: this requirement specifically refers to chemical products that are used in the manufacture of the wood-based floor covering product. The criterion is split into two parts.

2.b.(i) Referring specifically to chemical products used by the wood-based floor covering manufacturer during the production or assembly and any other treatment of the wood-based floor covering and

2.b.(ii) Referring only to listed chemical products used in the production of certain component materials that are bought from suppliers^[4].

2.b.(i) CLP restriction of chemical products used by wood-based chemical

Chemical products used by the wood-based floor covering manufacturer during manufacture, assembly or any other treatment of the wood-based floor covering product shall not be

^[3] ECHA, Candidate List of Substances of Very High concern for Authorization
<http://www.echa.europa.eu/candidate-list-table>

^[4] e.g. if the wooden core panel is directly bought and not manufactured by the applicant

classified with any of the CLP hazards listed in Table 2.1. Restricted chemical products shall include adhesives, paints, varnishes, wood stains, wood preservatives, resins and sealants.

However, the use of such restricted chemical products shall be permitted if one or more of the following conditions apply:

- that the quantity of the chemical product used does not reach a concentration greater than 0.10%wt of the final product
- that the chemical product changes its properties upon processing (e.g. becomes no longer bioavailable or undergoes chemical modification so that the restricted CLP hazards no longer apply) and that the residual content of the restricted chemical product in the final product is less than 0.10%wt
- that compliance with specific derogation conditions, as set out in Table 2.2 is demonstrated.

2.b.(ii) CLP restriction of chemical products used by suppliers in components of the wood-based chemical

Note 2: any individual component part from suppliers used in the wood-based floor covering product that does not come into direct contact with users during normal use shall be considered exempt from the requirements set out in criterion 2.b.2

Suppliers of solid wood and plant-based panels, paper layers or other supplied components shall demonstrate that the components have not been produced using chemical products that are classified with any of the CLP hazards listed in Table 2.1.

However, the use of such restricted chemical products shall be permitted if one or more of the following conditions apply:

- that the quantity of the chemical product used does not reach a concentration greater than 0.10%wt of the final product
- that the chemical product changes its properties upon processing (e.g. becomes no longer bioavailable or undergoes chemical modification so that the restricted CLP hazards no longer apply) and that the residual content of the restricted chemical product in the final product is less than 0.10%wt
- that compliance with specific derogation conditions, as set out in Table 2.2 is demonstrated.

Table 2.2. Derogations to the hazard restrictions in Table 2.1 and applicable conditions.

Chemical product type	Applicability	Derogated classification	Derogation conditions
(a) biocides/ preservatives	Treatment of wooden materials and components to be used in the final product	All group 3 hazard listed in Table 2.1	Only permitted when the formulation and any active substance(s) present are approved under Product Type 6 as per the requirements of the Biocidal Products Regulation (EU) No 528/2012

(b) flame retardants		H351	The product must 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
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Assessment and verification

The applicant shall provide a declaration of compliance with criterion 2.b.(i), supported by a list of all the chemical products used by the wood-based floor covering manufacturer during the production, assembly and any treatment of the wood-based floor covering product together with their hazard classification (if any).

The applicant shall compile declarations of compliance with criterion 2.b.(ii) from suppliers of any of the components. These declarations shall be supported by lists of any relevant chemical products used and their hazard classifications (if any).

The following information shall be provided to support declarations of the hazard classifications or non-classification for each substance or mixture identified as being present in the product/component part:

- i. substance's CAS^[5], EC^[6] or list number
- ii. the physical form and state in which the substance is used
- iii. harmonised CLP hazard classifications
- iv. self-classification entries in ECHA's REACH registered substance database^[7]

Self-classification entries from joint submissions shall be given priority when comparing entries in the REACH registered substance database.

Where a classification is recorded as 'data lacking' or 'inconclusive' according to REACH register database, or where a substance has not yet been registered under the REACH system, toxicological data meeting the requirements in Annex VII to the Regulation (EC) No 1907/2006 shall be provided that is sufficient to support conclusive self-classifications in accordance with Annex I of the Regulation (EC) No 1272/2008 and ECHA's supporting guidance. In the above cases of 'data lacking' or 'inconclusive' database entries, self-classifications shall be verified, the following information sources being accepted:

- Toxicological studies and hazard assessment by ECHA peer regulatory agencies^[8], Member State regulatory bodies or intergovernmental bodies
- A Safety Data Sheet (SDS) completed in accordance with sections 2, 3, 9, 10, 11 and 12 of the Annex II of the Regulation (EC) No 1907/2006
- A documented expert judgement based on a review of scientific literature and existing testing data, where necessary supported by results from new testing carried out by independent laboratories using methods approved by ECHA

^[5] CAS, <https://www.cas.org/content/chemical-substances/faqs>

^[6] EC, http://en.wikipedia.org/wiki/European_Community_number

^[7] ECHA, REACH registered substances database:

<http://www.Echa.europa.eu/information-on-chemicals/registered-substances>

^[8] ECHA, Co-operation with peer regulatory agencies, <http://echa.europa.eu/en/about0us/partners-and-networks/international-cooperation/cooperation-with-peer-regulatory-agencies>

- An attestation, where appropriate based on expert judgment, issued by an accredited conformity assessment body that carries out hazard assessments according to the GHS or CLP hazard classification systems.

Information on the hazardous properties of chemical products may, in accordance with Annex XI to Regulation (EC) No 1907/2006, be generated by means other than tests, for instance through the use of alternative methods such as in vitro methods, by quantitative structure activity models or by the use of grouping or read-across.

For criterion 2.b.(i) or 2.b.(ii), as appropriate, where chemical products with the restricted hazards listed in Table 2.1 are added in a concentration no greater than 0.10%wt of the final product or are considered to no longer exhibit any restricted hazardous properties in the final product or relevant component part due to physical and/or chemical changes during processing, and residual levels in the final product, or relevant component, can be considered to be present at concentrations less than 0.1% w/w, the applicant shall specifically mention this in their declaration and provide supporting arguments.

For criterion 2.b.(i) or 2.b.(ii), as appropriate, where the use of restricted chemical products may be subject to derogation as per Table 2.2, the applicant shall provide proof that all the derogation conditions are met, as described in Table 2.2. Where test reports are required, they shall be valid at the time of application for a production model

Criterion 3. Specific restrictions of hazardous substances

3. a) Contaminants in recycled wood

Any recycled wood fibres used in the manufacture of wood-based panels included in the final wood-based floor covering product shall be tested for delivery conditions in accordance with the 2002 "EPF standard conditions for the delivery of recycled wood" (Table 3.1) or any other national regulation in place with equivalent or stricter limit values.

Table 3.1. Limit values for delivery conditions if no other national regulation is in place

Elements and compounds	Limit values (mg/kg dry panel)	Elements and compounds	Limit values (mg/kg dry panel)
Arsenic	25	Mercury	25
Cadmium	50	Fluorine	100
Chromium	25	Chlorine	1000
Copper	40	Pentachlorophenol (PCP)	5
Lead	90	Tar oils (benzo(a)pyrene)	0.5

Assessment and verification:

The applicant and/or his/her supplier(s) shall provide a declaration of compliance with the criterion supported by the following documentation:

- A declaration that no recycled wood fibres are used in the panel, or
- A declaration that all recycled wood fibres used have been tested in accordance with the 2002 "EPF standard conditions for the delivery of recycled wood" or any other national regulation with equivalent or restricted limits, supported by appropriate test reports that demonstrate compliance of the recycled wood samples with the limits specified in the table 3.1 or those of the national regulation.

3.b) Wood preservatives

Treatment of wooden components with preservatives shall not be permitted.

Assessment and verification:

The applicant shall provide a declaration of non-use of wood preservatives

3.c) Biocides

Biocides shall not be permitted. Biocides exclusively used for in-can preservation in aqueous coating materials and glues or flame retardants according to criterion 3.d) shall be exempt from this requirement.

Assessment and verification

The applicant shall either:

- Provide a declaration of non-use of biocides
- Provide a declaration stating what biocides or formulation(s) have been used with wood and wood-based materials, supported by SDS from the in-can preservation suppliers.

3.d) Flame retardants

Flame retardants should not be permitted in wood and wood-based materials unless specifically required for the wood-based floor covering to meet fire safety requirements in the country or countries where it is to be sold. Flame retardant substances shall comply with the general hazardous substance requirements set out in Criterion 2.

Assessment and verification

The applicant shall either

- Provide a declaration of non-use of flame retardants or,
- Provide a declaration stating what flame retardant substance(s) or formulation(s) have been used with wood and wood-based materials, supported by SDS from the flame retardant suppliers. The flame retarding substances shall meet the requirements on criterion 2 and being demonstrated in accordance with the “Assessment and verification” requirements of criterion 2,
- Provide evidence that the wood-based floor covering, when treated with flame retardant substance(s) or formulation(s), meets the fire safety requirements in the country or countries where it is to be sold.

3. e) VOCS and formaldehyde in adhesives and resins

Adhesives and/or resins used in manufacturing of the wooden boards should have

- VOC content less than 3% w/w,
- Free-formaldehyde less than 0.2% w/w.

Assessment and verification

The applicant and/or its supplier shall provide the material SDSs or an equivalent declaration of the compliance of this requirement, together with a complete recipe with designation of quantities and CAS numbers for constituent substances.

The content of free-formaldehyde in the resin and/or adhesive formulation shall be in accordance with ISO 11402

3.f) Heavy metals in paints and varnishes

Paints and varnishes used on wood and wood-based materials shall not contain additives based on cadmium, lead, chromium VI, mercury, arsenic, barium, selenium, antimony or cobalt at concentrations exceeding 0.010% w/w for each individual metal in the in-can paint or varnish formulation.

Assessment and verification

The applicant shall declare that the paint or varnish formulations do not contain the aforementioned heavy metals in concentrations > 0.010% w/w and provide the respective SDS from the suppliers of the coating substances used.

3. g) VOC content in surface treatment

Note 1: It shall not be necessary to meet the requirements of this sub-criterion if compliance with criterion 6.1 can be demonstrated

Surface treatment chemical products used to coat wood and wood-based materials, cork or bamboo panels used in the wood-based floor covering product shall either:

- a) Have a total VOC content of less than 5% w/w (in-can substance concentration),
or
- b) Be greater than 5% w/w VOC content but be shown to be applied in quantities that amount to less than 2g/m² of the coated surface area

Assessment and verification

The applicant shall provide the SDS of any coating substances used on wooden materials, cork or bamboo. If the SDS states that the VOC content of the surface treatment used is less than 5% w/w, then no further verification shall be necessary. If the VOC content is higher, then the applicant shall provide calculations that demonstrate the effective quantity of VOC applied per m² of the coated surface area of the final wood-based floor covering product is < 2g/m². Guidance on these calculations is provided in Appendix I,

3.h) Halogens

No halogenated organic compounds may be used (e.g. as binders, flame retardants) in the manufacture of the products, including the materials used in the manufacture (wood-based materials, adhesives, coatings, etc). Paints and varnishes with long chain perfluoroalkyl sulfonates (>C6) and/or perfluorocarboxylic acids (>C8) shall not be used on wood and wood-based materials

Assessment and verification

The applicant shall provide a declaration of non-use of halogenated organic compounds, supported by SDS in the case of the paints and varnishes.

Criterion 4. Production process

4.a) Energy consumption

The energy consumption shall be calculated as the process energy used for the production of the coverings. The process energy, calculated as indicated in the Appendix IIa, shall exceed the following limits (E = scoring point):

- E > 11.0 for solid wood and laminate floor,
- E > 8.0 for parquet, bamboo and cork floor coverings.

Assessment and verification

The applicant shall demonstrate that the E score has been calculated according to the Appendix IIa instructions and exceeds the limits of this criterion.

Table 4.1. Calculation of the scoring point

Formula	Maximum requirements	
$E = \frac{A}{20} + \left(5 - \frac{B}{3}\right) + \left(5 - \frac{C}{7}\right)$	A	--
	B	15 kWh/m ²
	C	35 kWh/m ²

Where A is the proportion of renewable fuel (%), B is the electricity consumption (kWh/m²) and C is the fuel consumption (kWh/m²)

The applicant should state and demonstrate:

- Which type(s) of fuel have been used in the manufacture of the wood based floor covering over the year prior to the application, and
- Which fuels are coming from renewable sources in accordance with Renewable Energy Directive 2009/80/EC⁴.

In addition, it should be stated and declared how much electricity has been used (purchased) and how much flooring (m²) has been produced over the year prior to the application in accordance with the instructions given in Appendix IIb.

4.b) Waste minimization management plan

The producer shall:

- a) Sort waste at source into the fractions that arise during the production, and
- b) Draw up an appropriate waste minimization management programme stating waste fractions and describing implemented processes to deal with and to minimise waste originated from the production process through recovery and reuse or reprocessing.

⁴ Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, L 140/16, OJEU 5.6.2009

- c) Implement the waste minimization management programme for at least the last year prior to the EU Ecolabel application and demonstrate its good performance

Waste from production with energy content greater than 10 MJ/kg (2.78 kWh/kg dry test) must be recovered, reused or reprocessed.

The waste management programme prepared under the responsibility of the applicant shall content and annually monitor and report the following information:

- Kind and quantity of waste produced,
- Breakdown of the total waste recovered to type of processes (information about the reuse of waste and secondary materials in the production of new products),
- Initiatives taken to reduce waste production and improve production efficiency,
- Initiatives taken to calculate and reduce the environmental impacts associated with the waste minimization or recovery,
- Initiatives or requirements for suppliers or contract manufactures.

Assessment and verification

The applicant shall provide appropriate documentation showing compliance with these requirements in writing and demonstrating its implementation during the last year (prior to the EU Ecolabel application). The documentation should include:

- Description of the facilities to sort waste at source into fractions stating the type of fractions to be sorted out and their capacity,
- Description of the waste minimization processes and procedures implemented,
- Information in form of mass balance sheets or/and environmental reporting system showing the rates and detail breakdown of recovery achieved in the previous year and the initiatives taken.

Criterion 5. Emissions of formaldehyde from the wood boards

Formaldehyde emissions from all supplied wood-based panels manufactured using formaldehyde-based resins or finishing agents shall either:

- Have formaldehyde emissions that are lower than 50% of the threshold value allowing them to be classified as E1⁵.
- Specifically, in the case of MDF (Medium Density Fibreboard) panels, have formaldehyde emissions that are lower than 65% of the E1 threshold limit.
- Have formaldehyde emissions that are lower than the limits set out in the CARB Phase II or the Japanese F-3 star or F-4 star standards.

Assessment and verification:

The applicant shall provide a declaration of compliance with this criterion. The assessment and verification of low formaldehyde emission panels shall vary depending on the

⁵ E1 is a threshold emission limit originally introduced in 1985 in the EU due to concerns over adverse health effects due to formaldehyde exposure. The emission limits are defined in Chapter B of EN 13986 and correspond to steady state background levels of 0.1ppm formaldehyde after 28d in a chamber test according to EN 717-1.

certification scheme it falls under. The verification documentation required for each scheme is described in Table 5.1.

Table 5.1. Assessment and verification of low formaldehyde emission panels

Certification scheme	Assessment and verification
E1- as defined in Annex B of the EN 13986 (developed in the EU)	A declaration from the wood-based panel supplier, stating that the panel is compliant with 50% of E1 emission limits or, in the case of MDF panels, with 65% of E1 emission limits, supported by test reports carried out according to either EN 717-1, EN 717-2 or EN 120
CARB- California Air Resources Board: Phase II limits (developed in the USA)	a declaration from the wood-based panel supplier, supported by third party verified test results according to ASTM E1333 or ASTM D6007, demonstrating panel compliance with the formaldehyde Phase II emission limits defined in the California Composite Wood Products Regulation 93120 ⁶ . Optionally, the wood-based panel may be labelled in accordance with Section 93120.3(e), containing details in respect of the manufacturer's name, the product lot number or batch produced, and the CARB assigned number for the third party certifier (this part is not required if the products were made using no-added formaldehyde or certain ultra-low emitting formaldehyde-based resins).
F-3 or 4 star (developed in Japan)	the applicant shall provide a declaration from the panel supplier of compliance with the formaldehyde emission limits as per JIS A 5905 (for fibreboard) or JIS A 5908:2003 (for particleboard and plywood), supported by third party verified test data according to the JIS A 1460 desicator method.

In all cases, the applicant shall also declare that no further formaldehyde-based surface treatment was applied to supplied panels and that the panels were not modified in any another way that would comprise compliance with the formaldehyde emission limits set out in the European, American and Japanese schemes, as appropriate.

Criterion 6. Finished product

6.a) Indoor emissions

The wood-based floor coverings shall not exceed the emission values listed in Table 6.1 measured in a test chamber in accordance with TS/CEN 16516 or equivalent method and ISO EN 16000-3 for the formaldehyde emission value.

Table 6.1. Emission requirements

Compound or substance	Limit Value after 28 day in mg/m³ air
TVOC*	0.16
TSVOC**	0.016
R-value***	1
Cancerogenic substances	0.004
Formaldehyde	0.04

* TVOC – total volatile organic compounds, defined as those compounds within the retention range of C₆ to C₁₆ (inclusive)

** TSVOC – total volatile organic compounds, defined as those compounds within the retention range of C₁₇ to C₂₂ (inclusive)

***R value: total of all quotients (C_i/LCI_i)<1 (where C_i=substance concentration in the chamber air, LCI_i = LCI value of the substance as defined by the latest data defined under the European Collaborative Action "urban air", indoor environment and human exposure

⁶ Regulation 93120 "Airborne toxic control measure to reduce formaldehyde emissions from composite wood products" California Code of Regulations.

Assessment and verification

The applicant shall provide third party verified test results in accordance with TS/CEN 16516 or equivalent method showing that the limits above have been met.

The total VOC emissions per product unit basis shall be calculated and separately comply within each limit.

6.b) Fitness for use

Wooden floor coverings shall achieve at least:

- Class 32 for floor coverings for private use,
- Class 33 for floor coverings for commercial use,

in accordance with standard EN 685 or EN ISO 10874.

Assessment and verification:

The applicant shall provide third party verified test results in accordance with the appropriated standard that demonstrates that the requirement is fulfilled. The test method should be performed in accordance with:

- EN 13329 and EN 12104 (cork tiles) or equivalent for laminate flooring,
- EN 14354 (veneer wood flooring) or EN 438-2 or equivalent for wood flooring including solid wood flooring, factory lacquer wood flooring and parquet flooring,
- EN 687 or equivalent for bamboo flooring.

6.c) Maintenance

Maintenance of the products shall be possible without organic based solvents.

Assessment and verification:

The applicant shall provide the maintenance instructions of the product fulfilling the requirement

Criterion 7. Information

7.a) User information

The product shall be sold with the relevant user information on the packaging and/or on documentation accompanying the product, which provides advice on the product's proper installation, use and maintenance and indications to minimize waste at the end of its lifespan. These instructions should be legible or include graphical representation or icons and include information on:

- a) Recommendations for the installation. This information should include all relevant instructions referring to the best environmental installation practices. As appropriate, reference should be made to the necessary preparation of the underlying surface and the auxiliary materials needed, for example, the plastic underlayers or the adhesives and glues that can be used for its installation. In the case where adhesives is to be applied to the complete surface, it must be possible to use an adhesive certified with a

Type I Ecolabel or at least a low emission adhesive complying with EMICODE EC1 or equivalent,

- b) Recommendations for the use and maintenance of the product. This information should highlight all relevant instructions particularly referring to the maintenance and use of products. As appropriate, reference should be made to the features of the product's use under difficult conditions, for example, water absorption, stain resistance, resistance to chemicals, necessary preparation of the underlying surface, cleaning instructions and recommended types of cleaning agents and cleaning intervals. The information should also include any possible indication on the product's potential life expectancy in technical terms, either as an average or as a range value,
- d) An indication of the route of recycling or disposal (explanation in order to give the consumer information about the high possible performance of such a product)

Assessment and verification:

The applicant shall provide a sample of the packaging and/or texts enclosed.

7.b) Information appearing on the EU Ecolabel

The logo should be visible and legible. The use of the EU Ecolabel is protected in primary EU law. The EU Ecolabel registration/licence number must appear on the product, it must be legible and clearly visible.

The optional label with text box shall contain the following text:

- Certified sustainable wood and wood-based materials,
- Limited hazardous substances used,
- Low-emitting product

Assessment and verification:

The applicant shall provide a sample of the packaging

Appendix I. Guidance on the calculation of the quantity of VOC applied

The requirement relates to the total VOC in the chemical products with the chemical composition they have in the wet form. If the products required dilutions, the calculation is to be based on the content in the dilutive product.

This method is based on the application method that calculates the quantities applied per m² surface area but it determines before the content of organic solvents and/or environmentally harmful substances as percentage of the surface treatment quantity applied.

The applied quantity of VOC according to option b) is calculated using the following formula

$$\frac{\text{Applied quantity} \left(\frac{\text{g}}{\text{m}^2} \right) \times \text{proportion VOC in surface treatment (\%)}}{\text{surface treatment efficacy}}$$

The formula consists in three parameters:

- The applied quantity of surface treatment reported in g/m². It depends on the number of coats and the quantity applied per coat,
- The proportion of VOC in the surface treatment: the concentration is to be stated as a percentage by weight,
- The surface treatment efficiency that depends on the application method is tabled in accordance with the state-of-the-art of the coating industry as shown in Table 3.2.

Table 3.2. Efficiency of the surface treatments

Surface treatment	Efficiency	Surface treatment	Efficiency
Automatic spray application, no recycling	50%	Roller coating	95%
Automatic spray application with recycling	70%	Curtain coating	95%
Spray application, electrostatic	65%	Vacuum coating	95%
Spray application, bell/disc	80%		

Appendix IIa. Guidance for calculating the process energy used

Energy consumption is calculated as an annual average. The following delimitations apply for what is included in the energy calculation:

Electricity and fuel consumed in drying and sawing is included in the calculation for parquet flooring, bamboo flooring and solid wood floor,

For laminate flooring that includes wood-based board in its structure, the energy consumed in the manufacture of the board is to be included.

At least 95%w/w of raw materials in the flooring must be included in the calculation of energy consumption during the manufacture process. Energy consumption in the manufacture of adhesives and lacquers used in the manufacture of the flooring is not included in the calculation.

Electricity consumption refers to electricity purchased from an external supplier. If the producer has an energy surplus that is sold as electricity, steam or heat, the sold quantity can be deducted from the fuel consumption. If electrical energy is produced on-site, one of the following methods can be used for calculating fuel consumption;

Actual annual consumption of fuel,

Consumption of electricity produced on-site multiple by 1.25.

Only the fuel that is actually used in floor covering production shall be included in the calculations. Energy consumption is reported in kWh/m², although calculations may also be made in MJ/m² (1 kWh=3.6 MJ). The energy contents of various fuels are given in Table 4.2.

Table 4.2. Standard fuel values⁷

Fuel	MJ/kg	Fuel	MJ/kg
Petrol	44.0	Pellets (7% W)	16.8
Diesel		Peat	7.8-3.8
LPG	45.2	Straw (15% W)	
Eo1 oil	42.3	Biogas	
Eo5 oil	44.0	Wood chips (45% W)	13.8
Natural gas	47.2	Waste Wood	(25% W)
Power station coal	28.5	<i>GJ/ton is equivalent to MJ/kg</i>	

(% W) is the percentage by weight of water in the fuel and given the letter *f* in the formulas below. If nothing else is stated, *f* = 0% W and the ash content is average.

The formula for calculating the energy content of woodchips depends on the water content. Energy is required to evaporate the water in the wood. This energy reduces the heat value of the woodchips. The energy content can be calculated as:

$$\text{Woodchip} = 19.0 \left(\frac{\text{MJ}}{\text{kg}} \right) - 21.442 \times \frac{f}{100}$$

Where *f* is the water content in %W of the wood. The factor 21.442 is the sum of water's heat of evaporation (2.442MJ/kg) and the energy content of dry wood 19.0 MJ/kg. If the applicant has laboratory analyses of the heat value of a fuel, the competent bodies may consider using this heat value for calculating the energy content.

Appendix IIb. Guidance for reporting the type of fuels and amount of electricity consumed during the manufacturing process and the amount of flooring produced.

1) Specification of the fuels, quantities and flooring production per year

Year of calculations:

Total production in this year (m²/year):

Total electricity purchase (kWh/year)

Total fuel purchase:

Column	A	B	C	D	E
Fuel	Energy Source (non-RE /RE)	Quantity (kg/year)	Standard fuel value	MJ	kWh/m ²

⁷ These values are reported by the Energy Efficiency Directive 2012/27/EC, Chapter IV, "Energy content of selected fuels for end users". Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, L 315/1, OJEU 14.11.2012

Where:

Column A: classification of the fuels depending on the source. Fuels classified as RE should comply with the definition of "energy from renewable sources" in accordance with Renewable Energy Directive 2009/28/EC

"energy from renewable sources" means energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases"

Fuels not complying with the above definition should be classified as non-RE.

Column B: quantity of fuel purchased during the year considered

Column C: Standard fuel value is the factor attributed to each fuel as included in Table 6 of the Appendix IIa

Column D: Total MJ contented in the annual purchase of this fuel. Column D is calculated for each fuel as follows:

$$MJ = \text{Quantity} \left(\frac{\text{kg}}{\text{year}} \right) \times \text{Factor} \left(\frac{\text{MJ}}{\text{kg}} \right)$$

Column E: Total power per square meter of wood base floor covering attributed with each fuel. The column E should be calculated as

$$\frac{kWh}{m^2} = \frac{MJ \text{ (column D)}}{3.6 \times \text{total production this year (m}^2\text{)}}$$

2) Calculation of the values A, B and C to be used in the formula (Table 5) for calculating the energy consumed:

The values A, B and C are calculated as follows:

$$A = \frac{\sum MJ_{\text{Fuels classified as RE (Column A)}}}{\sum MJ}$$

$$B = \frac{\text{Total electricity purchase} \left(\frac{kWh}{\text{year}} \right)}{\text{Total production} \left(\frac{m^2}{\text{year}} \right)}$$

$$C = \sum \frac{kWh}{m^2} \text{ (Column E)}$$