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COMMISSION DECISION (EU) 2017/176

of 25 January 2017

on establishing EU Ecolabel criteria for wood-, cork- and bamboo-based floor coverings

(notified under document C(2017) 303)

(Text with EEA relevance)

(OJ L 28, 2.2.2017, p. 44)

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►M2	Commission Decision (EU) 2026/66 of 23 December 2025	L 66	1	6.1.2026

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COMMISSION DECISION (EU) 2017/176

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(Text with EEA relevance)

Article 1

The product group of 'wood-, cork- and bamboo-based floor coverings' shall comprise indoor floor coverings, including wood floorings, laminate floorings, cork floor coverings and bamboo floorings which are made, for more than 80 % by weight of the final product, from wood, wood-based, cork, cork-based, bamboo and bamboo-based materials or fibres, not containing synthetic fibres in any of the composing layers.

It shall not comprise wall coverings, coverings for external use, coverings with a structural function or levelling compounds.

Article 2

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

(1) 'wood flooring' means an assembly of wood elements, pre-assembled boards or parquet panels which constitute the wearing surface of the floor;

(2) 'cork floor coverings' means floor coverings made of granulated cork mixed with a binder, and then cured, or several layers of cork, agglomerated or veneer, that can be pressed together with glue and are intended to be used with a coating;

(3) 'coating' means a preparation within the meaning of Article 2(8) of Directive 2004/42/EC of the European Parliament and of the Council ([1]);

(4) 'bamboo floor coverings' means floor coverings made of bamboo in solid pieces or in agglomerates mixed with a binder;

(5) 'laminate flooring' means a 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), pressed or bonded on a substrate, normally finished with a backer;

([1]) Directive 2004/42/EC of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC (OJ L 143, 30.4.2004, p. 87).

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(6) ‘semi volatile organic compound’ (SVOC) means all organic compounds which, in a capillary column coated with 5 % phenyl-polysiloxane and 95 % methyl-polysiloxane are eluting with a retention range between n-hexadecane (excluded) and n-docosane (included);

(7) ‘R value’ means the sum of all R_i values where R_i value is the ratio C_i/LCI_i, where C_i is the chamber mass concentration of compound i, and LCI_i is the LCI (lowest concentration of interest) value of compound i defined under the European Collaborative Action on Urban Air, Indoor Environment and Human Exposure Reports ([1]);

(8) ‘substance’ means a substance within the meaning of Article 3(1) of Regulation (EC) No 1907/2006 of the European Parliament and of the Council ([2]);

(9) ‘mixture’ means a mixture within the meaning of Article 3(2) or Regulation (EC) No 1907/2006;

(10) ‘biocidal product’ means a biocidal product within the meaning of Article 3(1)(a) of Regulation (EU) No 528/2012 of the European Parliament and of the Council ([3]);

(11) ‘preservative’ means any product falling under product-type 8 (Wood preservatives) as specified in Annex V to Regulation (EU) No 528/2012 including products used for the preservation of cork or bamboo;

(12) ‘active substance’ means an active substance within the meaning of Article 3(1)(c) of Regulation (EU) No 528/2012;

(13) ‘recycled material’ means material that has been reprocessed from recovered or reclaimed material by means of a manufacturing process and made into a final product or into a component for incorporation into a product, excluding waste wood, chips and fibres from logging and saw-milling operations, as defined in ISO 14021;

(14) ‘wood-based material’ means material fabricated from wood fibres, wood chips or wood by one of several different processes that may involve the use of elevated temperatures, pressures and binding resins or adhesives. Wood-based materials comprise: hardboard, fibreboard, medium and high density fibreboard, particleboard, oriented strand board (OSB), plywood, and panels in solid wood. It can be coated by a finishing during the manufacturing production of the floor covering;

([1]) http://publications.jrc.ec.europa.eu/repository/bitstream/JRC83683/eca%20report%2029_final.pdf

([2]) 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, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006, p. 1).

([3]) Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products (OJ L 167, 27.6.2012, p. 1).

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(15) ‘cork-based material’ means material fabricated from cork fibres, cork chips or cork by one of several different processes that may involve the use of elevated temperatures, pressures and binding resins or adhesives;

(16) ‘bamboo-based material’ means material fabricated from bamboo fibres, bamboo chips or bamboo by one of several different processes that may involve the use of elevated temperatures, pressures and binding resins or adhesives;

(17) ‘synthetic fibres’ means all polymer fibres;

(18) ‘renewable energy’ means energy from renewable sources (RES) within the meaning of Article 2(a) of Directive 2009/28/EC of the European Parliament and of the Council ([1]);

(19) ‘guarantee of origin’ means a guarantee of origin within the meaning of Article 2(j) of Directive 2009/28/EC.

Article 3

In order to be awarded the EU Ecolabel under Regulation (EC) No 66/2010, a product shall fall within the product group ‘wood-, cork- and bamboo-based floor coverings’ as defined in Article 1 of this Decision and shall comply with the EU Ecolabel criteria as well as the related assessment and verification requirements set out in the Annex to this Decision.

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Article 4

The EU Ecolabel criteria for the product group “wood-, cork- and bamboo-based floor coverings” and the related assessment and verification requirements shall be valid until 31 December 2029

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Article 5

For administrative purposes, the code number assigned to the product group ‘wood-, cork- and bamboo- based floor coverings’ shall be ‘035’.

Article 6

Decision 2010/18/EC is repealed.

([1]) 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 (OJ L 140, 5.6.2009, p. 16).

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Article 7

By derogation from Article 6, applications for the EU Ecolabel for products falling within the product group ‘wooden floor coverings’ submitted within two months from the date of notification of this Decision may be submitted in accordance with the criteria set out in Decision 2010/18/EC or on the criteria set out in this Decision.

EU Ecolabel licences awarded in accordance with the criteria set out in Decision 2010/18/EC may be used for 12 months from the date of notification of this Decision.

Article 8

This Decision is addressed to the Member States.

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ANNEX

FRAMEWORK

EU ECOLABEL CRITERIA

Criteria for awarding the EU Ecolabel to wood-, cork- and bamboo- based floor covering products:

Criterion 1.	Product description
Criterion 2.	Wood-, cork- and bamboo-based materials
Criterion 3.	General requirements for hazardous substances and mixtures
Criterion 4.	Specific substance requirements
Criterion 5.	Energy consumption in the production process
Criterion 6.	Emissions of VOC from the floor coverings
Criterion 7.	Emissions of formaldehyde from the floor coverings and the core board
Criterion 8.	Fitness for use
Criterion 9.	Reparability and extended guarantee
Criterion 10.	Consumer information
Criterion 11.	Information appearing on the EU Ecolabel
Appendix I.	Guidance on the calculation of the quantity of VOC applied
Appendix II.	Guidance for calculating the energy consumption in the production process
Appendix III.	List of standards

ASSESSMENT AND VERIFICATION

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 or its supplier(s), etc., as appropriate.

Competent bodies shall preferentially recognise attestations which are issued by bodies accredited according to the relevant harmonised standard for testing and calibration laboratories and verifications by bodies that are accredited according to the relevant harmonised standard for bodies certifying products, processes and services. Accreditation shall be carried out according to the provisions of the Regulation (EC) No 765/2008 of the European Parliament and of the Council ([1]).

([1]) Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93 (OJ L 218, 13.8.2008, p. 30).

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Where appropriate, test methods other than those indicated for each criterion may be used if the competent body assessing the application accepts their equivalence.

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

As pre-requisite, the product shall meet all applicable legal requirements of the country or countries in which the product is intended to be placed on the market. The applicant shall declare the product's compliance with this requirement.

If a supplier prefers not to disclose the substances constituting a mixture to the applicant, that information can be sent directly to the competent body by the supplier.

Criterion 1. Product description

A technical description of the floor covering including drawings that illustrate the parts or materials that form the final floor covering product, its dimensions and a description of the manufacturing process shall be provided to the competent body. That description shall be accompanied by the bill of materials for the product that shall state the total weight of the product and how this is split between the different materials used.

Compliance with the scope of the product group as defined in Article 1 shall be demonstrated.

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance, supported by the following information about the floor covering:

— brand/trade name ([1]);

— a description of the product including technical drawings that illustrate the parts or materials used in the final product;

— the bill of materials: percentage composition of the raw materials, substances or mixtures in the final product in mass including any additive and surface treatment, when relevant;

— a list of all the component parts ([2]) of the product and the respective weight;

— a description of the manufacturing process. Suppliers of raw materials or substances shall be described with the legal name, production site, contact details and description of the production step(s) they carried out or are part of.

The product data sheet, environmental product declaration or equivalent document can be accepted as evidence of compliance with this criterion provided that it includes the listed information.

Criterion 2. Wood-, cork- and bamboo-based materials

This requirement is applied to wood, wood-based, cork, cork-based, bamboo, bamboo-based materials weighing more than 1 % of the finished product.

([1]) Trade name means all names under which the substance is marketed within the Union market.

([2]) Component part means each of the layers the floor coverings consist of whose material, shape and form provide a specific function. It includes, for example, the wear or scratch resistant layer, the pattern or veneer layer, the substrate or stability layer and the backing layer.

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All wood, wood-based, cork, cork-based, bamboo, bamboo-based materials shall not originate from genetically modified organisms (GMO) and be covered by chain of custody certificates issued by an independent third party certification scheme such as the Forest Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification (PEFC) or equivalent.

All virgin wood, cork and bamboo shall be covered by valid sustainable forest management certificates issued by an independent third party certification scheme such as FSC, PEFC or equivalent.

Where a certification scheme allows the mixing of uncertified material with certified and/or recycled materials in a product or production line, a minimum of 70 % of the wood, cork and/or bamboo shall be sustainable certified virgin materials and/or recycled material.

Uncertified material shall be covered by a verification system which ensures that it is legally sourced and meets any other requirement of the certification scheme with respect to uncertified material.

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

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance supported by a valid, independently certified chain of custody certificate of the manufacturer for all wood, wood-based, cork, cork-based, bamboo, bamboo-based material used in the product or production line and demonstrate that no virgin material is sourced from GMO. The applicant shall provide audited accounting documents that demonstrate that at least 70 % of the materials originate from forests or areas 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 production line includes uncertified material, proof shall be provided that the content of uncertified virgin material does not exceed 30 % and is covered by a verification system which ensures that it is legally sourced and meets any other requirement of the certification scheme with respect to uncertified material.

Criterion 3. General requirements for hazardous substances and mixtures

The presence in the product and any component parts thereof, of substances that have been identified according to Article 59(1) of Regulation (EC) No 1907/2006 as substances of very high concern (SVHCs) or substances or mixtures that meet the criteria for classification, labelling and packaging (CLP) according to Regulation (EC) No 1272/2008 of the European Parliament and of the Council ([1]) for the hazards listed in Table 3.1 of this Decision, shall be restricted in accordance with points 3.a and 3.b. For the purpose of this criterion, Candidate List SVHCs and CLP hazard classifications are grouped in Table 3.1 according to their hazardous properties.

([1]) 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).

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Table 3.1.

Grouping of restricted hazards

Group 1 Hazards — SVHC and CLP

Hazards that identify a substance as being within Group 1:

— substances that appear on the Candidate List for SVHCs

— carcinogenic, mutagenic and/or toxic to reproduction (CMR) category 1A or 1B: H340, H350, H350i, H360, H360F, H360D, H360FD, H360Fd, H360Df

Group 2 Hazards — CLP

Hazards that identify a substance as being within Group 2:

— category 2 CMR: H341, H351, H361f, H361d, H361df, H362

— category 1 aquatic toxicity: H400, H410

— category 1 and 2 acute toxicity: H300, H310, H330, H304

— category 1 aspiration toxicity: H304

— category 1 specific target organ toxicity (STOT): H370, H372

— category 1 skin sensitiser: H317

Group 3 Hazards — CLP

Hazards that identify a substance as being within Group 3:

— category 2, 3 and 4 aquatic toxicity: H411, H412, H413

— category 3 acute toxicity: H301, H311, H331, EUH070

— category 2 STOT: H371, H373

3.a. *Restriction of SVHCs*

The product and any component parts thereof shall not contain SVHCs at concentrations greater than 0,10 % (weight by weight).

No derogation from this requirement shall be given to Candidate List SVHCs present in the product or any component parts thereof at concentrations greater than 0,10 % (weight by weight).

Assessment and verification

The applicant shall compile declarations of absence of SVHCs above the specified concentration limit for the product and any component parts used in the product. Declarations shall be with reference to the latest version of the Candidate List published by ECHA ([1]).

3.b. *Restriction of CLP classified substances or mixtures used in the floor covering*

Substances or mixtures used by the floor covering manufacturer or his suppliers during the preparation of raw materials, manufacturing, assembly or any other treatment of the floor covering shall not be classified with any of the CLP hazards listed in Table 3.1. Restricted substances or mixtures shall include adhesives, paints, primers, varnishes, stains, resins, biocidal products, fillers, waxes, oils, joint fillers, dyes and sealants.

([1]) ECHA, Candidate List of substances of very high concern for Authorisation, http://www.echa.europa.eu/candidate-list-table

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However, the use of such restricted substances shall be permitted if at least one of the following conditions applies:

— the restricted substance or mixture was used in quantities that amount to less than 0,10 % of the total weight of the floor covering and any component part thereof;

— the restricted substance changes its properties upon processing (e.g. becomes no longer bioavailable or undergoes chemical reaction) so that the restricted CLP hazards no longer apply and any unreacted residual content of the restricted substance is less than 0,10 % of the total weight of the floor covering and any component part thereof.

Assessment and verification

The applicant and/or its suppliers shall provide to the competent body a declaration of compliance with criterion 3.b. supported, where appropriate, by a list of relevant substances or mixtures used together with declarations about their hazard classification or non-classification, their added quantities and if appropriate, statements whether the substances or mixtures change their properties upon processing so that the restricted CLP hazards no longer apply. If so, the quantities of any unreacted residual content of the restricted substance shall be provided.

The following information shall be provided in relation to the hazard classification or non-classification for each of the substances:

(i) the substance's Chemical Abstract Service (CAS) ([1]), European Community (EC) ([2]) or other list number (where available for mixtures);

(ii) the physical form and state in which the substance or mixture is used;

(iii) harmonized CLP hazard classifications;

(iv) self-classification entries in ECHA's REACH registered substance database ([3]) (if no harmonized classification available);

(v) mixture classifications according to the criteria laid down in Regulation (EC) No 1272/2008.

When considering self-classification entries in the REACH registered substance database, priority shall be given to entries from joint submissions.

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

(i) toxicological studies and hazard assessments by ECHA peer regulatory agencies ([4]), Member State regulatory bodies or intergovernmental bodies;

([1]) CAS registry: https://www.cas.org/content/chemical-substances
([2]) EC inventory: http://echa.europa.eu/information-on-chemicals/ec-inventory
([3]) ECHA, REACH registered substances database: http://www.echa.europa.eu/information-on-chemicals/registered-substances
([4]) ECHA, Cooperation with peer regulatory agencies, http://echa.europa.eu/about-us/partners-and-networks/international-cooperation/cooperation-with-peer-regulatory-agencies.

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(ii) a Safety Data Sheet (SDS) fully completed in accordance with Annex II to Regulation (EC) No 1907/2006;

(iii) a documented expert judgment provided by a professional toxicologist, which shall be 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;

(iv) an attestation, where appropriate based on expert judgment, issued by an accredited conformity assessment body that carries out hazard assessments according to the Globally Harmonized System (GHS) or CLP hazard classification systems.

Information on the hazardous properties of substances 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.

Criterion 4. Specific substance requirements

4.a. *Contaminants in recycled wood, cork and bamboo*

Any recycled fibres or chips used in the manufacture of the final floor covering product shall be tested in accordance with the European Panel Federation (EPF) standard for delivery conditions of recycled wood [1] or with another equivalent standard that has equal or stricter limits, and shall comply with the limits for contaminants as listed in Table 4.1.

Table 4.1.

Limits for contaminants in recycled wood, cork, bamboo and their fibres or chips (mg/kg dry recycled material)

Contaminants	Limit values	Contaminants	Limit values
Arsenic (As)	25	Mercury (Hg)	25
Cadmium (Cd)	50	Fluorine (F)	100
Chromium (Cr)	25	Chlorine (Cl)	1 000
Copper (Cu)	40	Pentachlorophenol (PCP)	5
Lead (Pb)	90	Tar oils (benzo(a) pyrene)	0,5

Assessment and verification

The applicant shall provide to the competent body:

— a declaration from the manufacturer or the panel supplier, as appropriate, that no recycled wood, cork, bamboo or their fibres or chips were used in the floor covering, or

[1] 'EPF Standard for delivery conditions of recycled wood', October 2002 at: http://europanels.org/site/upload/57d9467eac5f3.pdf

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— a declaration from the manufacturer or the panel supplier, as appropriate, that all recycled wood, cork, bamboo or their fibres or chips used have been representatively tested in accordance with the EPF standard for delivery conditions of recycled wood or with another equivalent standard that has equal or stricter limits, supported by test reports that demonstrate compliance of the recycled samples with the limits specified in Table 4.1.

4.b. *Biocidal products*

The treatment of wood, cork and/or bamboo of the floor coverings with biocidal products shall not be permitted.

The following active substances shall not be permitted for in-can preservation of water-based mixtures such as adhesives or lacquers:

— blend (3:1) of chloromethylisothiazolinone and methylisothiazolinone (CMIT/MIT CAS No 55965-84-9) at a concentration above 15 ppm;

— methylisothiazolinone at a concentration above 200 ppm;

— other isothiazolinones at a concentration above 500 ppm.

Assessment and verification

The applicant shall provide to the competent body a declaration of non-use of biocidal products or, if applicable, a declaration supported by an SDS from the water-based mixtures' suppliers stating what active substances have been used as in-can preservatives for the water-based mixtures.

4.c. *Heavy metals in paints, primers and varnishes*

Any paints, primers or varnishes used on wood, wood-based, cork, cork-based, bamboo or bamboo-based materials shall not contain substances based on the following metals: cadmium, lead, chromium VI, mercury, arsenic or selenium at concentrations exceeding 0,010 % (weight by weight) for each individual metal in the in-can paint, primer or varnish formulation.

Assessment and verification

The applicant or his supplier, as appropriate, shall provide to the competent body a declaration of compliance with this criterion and provide the respective SDS from the suppliers of the paints, primers and varnished used.

4.d. *VOC content in surface treatment*

Surface treatment products used on wood, wood-based, cork, cork-based, bamboo or bamboo-based materials shall have either of the following:

— a total VOC content of less than or equal to 5 % weight by weight (in-can substance concentration);

— a total VOC content greater than 5 % weight by weight provided that they are shown to be applied in quantities that amount to less than 10 g/m^2 of treated surface area.

The criterion relates to the total VOC in the surface treatment products with the chemical composition they have in wet form. If the products require dilution before use, the calculation is to be based on the content in the diluted product.

For the purpose of this criterion, VOC means volatile organic compound as defined in Article 2(5) of Directive 2004/42/EC.

This criterion does not apply to mixtures used for repairing (e.g. knots, checks, dents, etc.) during the manufacturing process.

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Assessment and verification

The applicant shall provide to the competent body a declaration of compliance with this criterion supported by the SDS of any surface treatment substances or mixtures used on wood, wood-based, cork, cork-based, bamboo or/and bamboo-based materials. If the SDS states that the VOC content of the surface treatment substances or mixtures used is less than or equal to 5 % weight by weight, no further verification shall be necessary.

Should the VOC content information not be included in the SDS, the VOC content shall be calculated from the list of substances in the surface treatment mixture. The concentration of each VOC ingredient shall be stated as a percentage by weight.

Alternatively, if the VOC content is higher than 5 % weight by weight, the applicant shall provide a calculation demonstrating that the effective quantity of VOC applied per m^2 of the treated surface area of the floor covering is less than 10 g/m^2, in accordance with the guidance provided in Appendix I.

4.e. *VOCs content in other used substances and mixtures*

VOC content shall be less than:

— 3 % weight by weight in both in-can adhesives and resins used in manufacturing of the floor coverings;

— 1 % weight by weight in other substances apart from in-can adhesives, resins and surface treatment (criterion 4.d) used in manufacturing of the floor coverings.

Free-formaldehyde of liquid aminoplast resins used in the manufacturing of the floor coverings shall be less than 0,2 % weight by weight.

The criterion relates to the total VOC in the substances with the chemical composition they have in wet form. If the mixtures require dilution prior to use, the calculation is to be based on the content in the diluted product.

For the purpose of this criterion, VOC means volatile organic compound as defined in Article 2(5) of Directive 2004/42/EC.

This criterion does not apply to mixtures used for repairing (e.g. knots, checks, dents, etc.) during the manufacturing process.

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance with the criterion supported by the SDS of any in-can adhesive, resin or other substances used or equivalent documentation that supports the declaration of compliance, together with a complete recipe with designation of quantities and CAS numbers.

If the SDS states that the VOC content is less than 3 % weight by weight of the in-can adhesive and resin used or less than 1 % weight by weight of other substances used, no further verification shall be necessary.

Should the VOC content information not be included in the SDS, the VOC content shall be calculated from the list of substances. The concentration of each VOC ingredient shall be stated as a percentage by weight.

The applicant shall provide test reports demonstrating that the free-formaldehyde content in the liquid aminoplast resins is less than 0,2 % weight by weight in accordance with standard EN1243.

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4.f. *Plasticisers*

Any adhesive, resin or surface treatment substance or mixture shall not contain any phthalate plasticisers that are referred to in Article 57 of Regulation (EC) No 1907/2006. The non-presence of these phthalates shall be considered as the total sum of the listed phthalates amounting to less than 0,10 % of the adhesive, resin or surface treatment substance or mixture weight (1 000 mg/kg).

Assessment and verification

The applicant shall provide to the competent body either:

— a declaration of compliance with the criterion from the supplier or the floor covering manufacturer stating that phthalate plasticisers were not used, or

— a declaration of compliance with the criterion from the supplier or the floor covering manufacturer stating that phthalate plasticisers were used and that none of the phthalates meeting the criteria of Article 57 of Regulation (EC) No 1907/2006 have been used in the adhesive, resin or surface treatment substance or mixture. In the absence of a suitable declaration, adhesive, resin or surface treatment substance or mixture materials shall be tested for the presence of these phthalates according to the ISO 8214-6 standard.

4.g. *Halogenated organic compounds*

Halogenated organic compounds shall not be permitted in the substances used in the manufacture of floor coverings (e.g. as binders, adhesives, coatings, etc.).

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance supported by a declaration of non-use of halogenated organic compounds from the manufacturer of the substances. In addition, the respective SDS of the substances shall be provided.

4.h. *Flame retardants*

Flame retardants shall not be permitted in the substances used in the manufacture of floor coverings.

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance supported by a declaration of non-use of flame retardants from the manufacturer of the substances. In addition, the respective SDS of the substances shall be provided.

4.i. *Aziridine and polyaziridine*

Aziridine and polyaziridine shall not be permitted in the substances used in the manufacture of floor coverings (e.g. as surface treatment, coatings, etc.).

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance supported by a declaration of non-use of aziridine and polyaziridine from the manufacturer of the substances. In addition, the respective SDS of the substances shall be provided.

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Criterion 5. Energy consumption in the production process

The average annual energy consumed during the production of the floor coverings shall be calculated as indicated in Table 5.1 and Appendix II and shall exceed the following limits (E score):

Product	E score
Solid wood floorings	> 11,0
Multi-layer wood floorings Wood veneer floor covering Cork floor coverings and cork tile floorings Bamboo floor coverings Laminate floorings	> 8,0

Table 5.1.

Calculation of the E score

Formula		Environmental parameter		Maximum requirements
$E = \frac{A}{20} + \left(5 - \frac{B}{3}\right) + \left(5 - \frac{C}{7}\right)$	A	Proportion of renewable energy in the total annual energy consumption	%	—
	B	Annual electricity purchased	kWh/m^2	15 kWh/m^2
	C	Annual fuel consumption	kWh/m^2	35 kWh/m^2

Where A = Ratio between the energy coming from renewable energy sources and the total energy.

In the numerator of the A ratio shall read the purchased RES fuels as (amount of fuel × standard value), plus the heat generated on-site from non-fuel RES, plus 2,5 × electricity on-site generated from non-fuel RES and plus 2,5 × purchased electricity from RES.

In the denominator of the A ratio shall read the purchased RES fuels as (amount of fuel × standard value), plus the purchased non-RES fuels as (amount of fuel × standard value), plus the heat generated on-site from non-fuel RES, plus 2,5 × electricity on-site generated from non-fuel RES, plus 2,5 × purchased electricity from RES and plus 2,5 × purchased electricity from non-RES.

B = Annual electricity purchased means the sum of the electricity purchased from an external supplier. If the electricity purchased is electricity from RES, a factor of 0,8 shall be applied.

C = Annual fuel consumption means the sum of all fuels purchased or sourced as by-products in the manufacturing of the floorings and used to generate energy on-site.

E scoring shall be calculated per m^2 of produced flooring and shall account the direct energy consumed in the production of the flooring. Indirect energy consumption is not considered.

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The following is an indicative list of activities that shall be included and not included in the calculations of the energy consumption. Activities shall start at the reception of the fells (tree trunks), cork and bamboo in the manufacturer's or his suppliers facilities until the end of the manufacturing process.

Product	Conditions for the electricity and fuel consumption (indicative list)	
	Included	Not included
Solid wood floorings	— drying, grinding and sawing — sizing and trimming — sanding — coating — packaging — and any other activity needed for manufacturing	— manufacture of lacquers or any other in-can preparation — energy consumed in the quality control activities — indirect energy consumption (e.g. heating, lighting, internal transportation, etc.).
Multi-layer wood floorings	— drying, grinding and sawing — sizing and trimming — sanding — pressing — coating — packaging — and any other activity needed for manufacturing	
Cork and cork tile floor coverings Bamboo floor coverings	— drying, grinding and sawing — sizing and trimming — sanding — pressing — manufacturing of the core board if used in its structure — coating — packaging — and any other activity needed for manufacturing	
Laminate floorings	— manufacturing of the core board — impregnation process of the décor, overlay and backing paper — pressing — sizing — packaging — and any other activity needed for manufacturing	

Assessment and verification

The applicant shall state and demonstrate:

— the type and quantity of electricity that has been, on average, purchased from an external supplier per year. Should electricity from RES be purchased, guarantees of origin in accordance with Directive 2009/28/EC shall be provided. Where Directive 2009/28/EC is not applicable in the country where the floor covering is manufactured, an equivalent means of proof shall be provided;

— the type(s) of fuels and quantities that have been used in the manufacturing of the floor coverings by means of the contracts, bills or equivalent documentation that includes dates, quantity delivered/purchased and specifications of the fuel (e.g. physic-chemical properties, Low Heating Value (LHV), etc.). Declaration of which of those used fuels are coming from RES in accordance with Directive 2009/28/EC shall be included;

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— the quantity of energy that has been used in the manufacturing steps included in the calculation of the E score together with supporting documents (e.g. energy measurements at different manufacturing stages, energy consumption of the equipment as reported in the product sheets, etc.);

— the type and quantity of energy that has been sold. The calculations shall include the type and quantity of fuels, if any, used for generating the energy sold, the dates or periods of time in which it was generated and the selling dates;

— a declaration of the quantity of flooring that applies for the EU Ecolabel (in m^2) that has been, on average, annually produced.

The documents used to communicate the energy consumption, fuel purchase and energy generation as well as the documents to communicate flooring production to the national authorities may be used to demonstrate compliance with this criterion.

Criterion 6. Emissions of VOC from the floor coverings

The floor coverings shall not exceed the emission values listed in Table 6.1 measured in a test chamber in accordance with testing standard CEN/TS16516. Packaging and delivery of samples sent for testing, their handling and conditioning shall follow the procedures described in CEN/TS 16516.

Table 6.1.

Emission requirements

Products	Emission requirements	
	Compound	Limit value after 28 days storage in a ventilated test chamber (see CEN/TS16516) in mg/m^3 air ([d])
Solid wood floorings Multi-layer wood floorings Wood veneer floor covering	Total VOC minus acetic acid (CAS 64-19-7)	< 0,3
Cork floor coverings Bamboo floor coverings	Total VOC	
Laminate floorings	Total VOC	< 0,16
All floor coverings	Total SVOC	< 0,1
Solid wood floorings Multi-layer wood floorings Wood veneer floor covering	R-value for Lowest Concentrations of Interest (LCI) substances minus acetic acid (CAS 64-19-7)	≤ 1
Cork floor coverings Bamboo floor coverings Laminate floorings	R-value for LCI substances	≤ 1
All floor coverings	Carcinogenic substances	< 0,001

([d]) The chamber test has to be carried out 28 days after the conclusion of the surface treatment. Up to this point in time the product to be tested is stored in a sealed package at the production site and thus delivered to the test laboratory.

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For the purpose of this criterion, VOC means all volatile organic compounds eluting between and including n-hexane and n-hexadecane on a gas chromatographic column and having a boiling point in the range of approximately 68 °C and 287 °C, where the measurement has been carried out using a capillary column coated with 5 % phenyl-polysiloxane and 95 % methyl-polysiloxane.

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance supported by the test reports from chamber tests carried out in accordance with CEN/TS16516 or an equivalent method showing that the limits in the Table 6.1 have been met. Test reports shall include:

— The test method used;

— The test results and needed calculations showing the limits in Table 6.1.

If the chamber concentration limits specified at 28 days can be met 3 days after placing the sample in the chamber, or any other time period between 3 and 27 days after placing the sample in the chamber, then the compliance with the requirements may be declared and the test may be stopped prematurely.

Test data from up to 12 months prior to the EU Ecolabel application shall be valid for products as long as no changes to the manufacturing process or chemical formulations used have been made that would be considered to increase VOC emissions from the final product.

A valid certificate from relevant indoor climate labels may also be used as proof of compliance if the indoor climate label fulfils the requirements of this criterion, and if it is judged by the competent body to be equivalent.

Criterion 7. Emissions of formaldehyde from the floor coverings and the core board

The floor covering manufactured by using formaldehyde-based core boards, adhesives, resins or finishing agents and if used, the untreated core boards manufactured by using formaldehyde-based adhesives or resins shall have either of the following:

— formaldehyde emissions that are lower than 50 % of the threshold value allowing them to be classified as E1 as defined in Annex B to EN 13986 +A1 (applying to all floor coverings and non-MDF/non-HDF core boards);

— formaldehyde emissions that are lower than 65 % of the E1 as defined in Annex B to EN 13986+A1 threshold limit applying to untreated MDF/HDF core boards;

— formaldehyde emissions that are lower than the limits set out in the California Air Resources Board (CARB) Phase II or the Japanese F-3 star or F-4 star standards.

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance with this criterion. The assessment and verification of low formaldehyde emission floor coverings and core boards shall vary depending on the certification scheme it falls under. The verification documentation required for each scheme is described in Table 7.1.

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Table 7.1.

Verification documentation of low formaldehyde emission floor coverings

Certification scheme	Assessment and verification
E1 (as defined in Annex B to EN 13986+A1)	A declaration from the manufacturer and the core board supplier if applicable, stating that the floor covering and untreated non-MDF/non-HDF core boards are compliant with 50 % of E1 as defined in Annex B to EN 13986 +A1 emission limits (1) or, in the case of untreated MDF/HDF core boards, with 65 % of E1 as defined in Annex B to EN 13986+A1 emission limits, supported by test reports carried out according to either EN 120, EN 717-2 or EN 717-1 or an equivalent method.
CARB: Phase II limits	A declaration from the manufacturer and the core board supplier if applicable, supported by test results according to ASTM E1333 or ASTM D6007, demonstrating floor covering compliance with the formaldehyde Phase II emission limits defined in the California Composite Wood Products Regulation 93120 (2). The floor covering and the core board if applicable 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 mandatory if the products are sold outside of California or if the products were made using no-added formaldehyde or certain ultra-low emitting formaldehyde-based resins).
F-3 or 4 star limits	A declaration from the manufacturer and the core board supplier if applicable, 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 test reports according to the JIS A 1460 desiccator method.

(1) The requirements apply to floor coverings with a moisture content of H = 6,5 %.
(2) Regulation 93120 'Airborne toxic control measure to reduce formaldehyde emissions from composite wood products' California Code of Regulations.

Criterion 8. Fitness for use

Only the requirements associated with the specific type of flooring have to be fulfilled.

The floor coverings shall be tested and classified in accordance with the latest versions of the standards and indications included in Table 8.1.

Table 8.1.

Standards for testing and classifying the floor coverings

Flooring	Test method	Classification
Wood veneer floor covering (1)	EN 1534 for Resistance to indentation EN 13329 for Thickness swelling Appropriate testing method for impact resistance (2) Appropriate testing method for wear resistance (2) ISO 24334 for Locking strength	EN ISO 10874 (a)

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Flooring	Test method	Classification
Factory lacquer solid and multilayer wood floorings	Thickness of the top layer Wood hardness of the surface layer ([b])	EN 685 ([b]) CTBA
Factory oiled, uncoated solid wood and uncoated multilayer wood flooring		
Cork tile floor coverings	EN 12104	EN ISO 10874
Cork floor coverings	EN 660-1 for wearing group EN 425 for castor chair EN 425 for simulated movement of a furniture leg ISO 24343-1 for residual indentation	
Bamboo floor coverings	EN 1534 for resistance to indentation EN 13696 for top layer or wear layer thickness	—
Laminate flooring	EN 13329 EN 14978 EN 15468	EN ISO 10874

([1]) Wood veneer floor covering means rigid floor covering consisting of a substrate made from a wood-based panel, with a top layer of wood veneer and possibly a backing.
([2]) For the purposes of compliance, measurements and calculations shall be made using reliable, accurate and reproducible methods that take into account the generally recognised state of the art measurement and calculation methods, including harmonised standards that have their reference published in the *Official Journal of the European Union*. They shall meet the technical definitions, conditions and parameters as described in the Criteria User Manual.
([a]) The test method used to measure the abrasion resistance shall be declared as well as the thickness of the top layer, if appropriate.
([b]) Classification of wood species regarding the wood hardness and correlations between the use classes in the EN 685 and the thickness of the wear top layer and the species of wood can be found in CTBA Revetments interiors Parquet 71.01.

Floor coverings shall achieve at least:

Flooring	Limits
Veneer wood flooring	— the level of use of class 23 for floorings intended for private use — the level of use of class 32 for floorings intended for commercial use.
Factory lacquer solid and multilayer wood floorings	— the level of use of class 23 for floorings intended for private use and for commercial use
Factory oiled, uncoated solid wood and uncoated multilayer wood flooring	

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Flooring	Limits
Cork tile floor coverings Cork floor coverings	— the level of use of class 23 for floorings intended for private use — the level of use of class 32 for floorings intended for commercial use.
Bamboo floor coverings	— Equilibrium Moisture Content: 8 % at 20 °C and 50 % relative humidity — Resistance to Indentation: ≥ 4 kg/mm^2 for plain and side pressed floor coverings ≥ 9,5 kg/mm^2 for high density floor coverings
Laminate flooring	— the level of use of class 23 for floorings intended for private use — the level of use of class 32 for floorings intended for commercial use.

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance with the criterion. The declaration shall be supported by test reports that shall include:

— the type of flooring;

— the test method/s selected;

— the test results and the classification of the flooring according to the results and the appropriate standard, if applicable.

If the floor covering has been tested according to a test method other than what is specified above, this may be acceptable if the test methods are comparable in the opinion of the competent body.

Criterion 9. Reparability and extended guarantee

Only the requirements associated with the specific type of flooring have to be fulfilled.

For the purpose of undertaking repair and replacement of worn out parts, the floor covering shall meet the following requirements:

— Reparability: Information shall be included in the consumer instructions or the manufacturer's website to be accessible to the users and installers.

(a) Design for repair and repair document: For floor coverings that are not glued down, the flooring shall be designed for disassembly with a view to facilitating repair, reuse and recycling. Simple and illustrated instructions regarding the disassembly and replacement of damaged elements shall be provided. Disassembly and replacement operations shall be capable of being carried out using common and basic manual tools. Information/recommendation of keeping spare floor covering elements in stock for possible event of repair shall be provided.

— Extended product guarantee:

(b) The applicant shall provide at no additional cost a minimum of a five year guarantee effective from the date of delivery of the product. This guarantee shall be provided without prejudice to the legal obligations of the manufacturer and seller under national law.

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Assessment and verification

The applicant shall provide to the competent body a declaration of compliance supported by:

— a copy of the repair document or any other material where the information on design for repair is provided;

— a copy of the guarantee that indicates the terms and conditions of the extended product guarantee that are provided in consumer information documentation and that meets the minimum requirements set out in this criterion.

Criterion 10. Consumer information

The product shall be sold with the relevant consumer information on the packaging or any other documentation accompanying the product. Only the requirements associated with the specific type of flooring have to be fulfilled.

Instructions related to the following aspects shall be legible and be provided in the language of the country where the product is placed on the market and/or include graphical representation or icons:

— Information on the subgroup to which the product belongs (solid or multi-layer wood flooring, cork flooring, cork tile flooring, bamboo flooring, laminate flooring, etc.), the amount of wood, cork or bamboo material in the final product in weight percentage and if a surface treatment is still needed at user's place.

— Recommendations for the installation: All relevant instructions referring to the best environmental installation practices shall be included:

  — floating installation is recommended whenever possible. Reference shall be made to the necessary preparation of the underlaying surface and the auxiliary materials needed;

  — if a glued down installation is recommended due to the possible longer duration, recommendation of using an adhesive/glue certified with a Type I Ecolabel or a low emission adhesive complying with EMICODE EC1 or equivalent shall be included;

  — illustrated assembly and disassembly instructions as per the requirements of criterion 9.a (if applicable).

— Recommendation for the surface treatment for uncoated floor coverings and floorings needing an oiled surface:

  — relevant information about the type and quantity of the coating products needed (e.g. oil or lacquer) to achieve the intended durability;

  — relevant information about the coating of the floorings with low emitting coating products in accordance with the Directive 2004/42/EC;

  — information about how the service life of the flooring can be extended through renovation e.g. sanding and surface treatment.

— Recommendations for the use, cleaning and maintenance of the product:

  — relevant information for routine cleaning shall be included if applicable to the floor covering type, with a mention to cleaning products with a Type I ecolabel;

  — maintenance instructions, including maintenance products, and products for renovation or intensive cleaning. If possible, maintenance products with a Type I ecolabel should be recommended;

  — a clear statement of the flooring's areas of use and a statement of compliance with the relevant EN standards for the product as referred to in criterion 8.

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— Information related to the reparability:

— a clear statement recommending the provision of spare parts as per the requirements of criterion 9.a;

— relevant information regarding the terms and conditions of the product guarantee as per the requirements of criterion 9.b.

— Information related to the end-of-life of the product:

A detailed description of the best ways to dispose of the product (i.e. reuse, recycling, energy recovery, etc.) shall be given to the consumer, ranking them according to the impact on the environment.

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance with the criterion supported by a copy of the consumer information document that is to be provided with the product. The copy shall show compliance with each of the points listed in the criterion, as appropriate.

Criterion 11. Information appearing on the EU Ecolabel

The logo shall be visible and legible. The EU Ecolabel registration/licence number shall appear on the product and shall be legible and clearly visible.

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

— Wood, cork or bamboo material from sustainably managed forests

— Lower energy consumption for manufacturing

— Low-emitting product.

Assessment and verification

The applicant shall provide to the competent body a declaration of compliance with the criterion supported by a copy of the information appearing on the EU Ecolabel.

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APPENDIX I

Guidance on the calculation of the quantity of VOC applied

The requirement relates to the total VOC in the surface treatment 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 diluted product.

This method is based on the application method that calculates the quantities applied per m^2 surface area. It determines the content of the organic solvents as a percentage of quantity of the surface treatment applied.

The applied quantity of VOC is calculated using the following formula

$$\sum_{n=1}^{i} Quantity\ of\ surface\ treatment\ product \times \%VOC \times surface\ treatment\ efficiency$$

The formula consists in:

— Quantity of surface treatment product: per each coating applied, the amount of surface treatment fed in the system shall be reported in g/m^2;

— The proportion of VOC in the surface treatment products: the concentration is to be stated as a percentage by weight;

— The surface treatment efficiency that depends on the application method. The efficiency is tabled in accordance with the state of the art of the surface treatment industry as shown in Table 4.2;

— The sum of all the coatings applied.

Table 4.2.

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		

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APPENDIX II

Guidance for calculating the energy consumption in the production process

Energy consumption per flooring m^2 is calculated as an annual arithmetic average of the last three years. Should the company not have these data, the competent bodies will assess the acceptance of equivalent data.

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. Only fuel that is actually consumed in the manufacture of the floor covering is to be included in the calculation.

Energy consumption is reported in kWh/m^2, although calculations may also be made in MJ/m^2 (1 kWh = 3,6 MJ).

The energy content of the fuels is calculated based on Table 5.2. 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 multiplied by 2,5, if the origin is a non-combustible renewable source.

Values of the energy consumption shall be calculated by means of the standard fuel values. The energy contents of various fuels are given in Table 5.2.

Table 5.2.

Standard fuel values [1]

Fuel	MJ/kg	Fuel	MJ/kg
Petrol	44,0	Pellets (7 % W)	16,8
Diesel		Peat	7,8-13,8
LPG	45,2	Straw (15 % W)	
Eo1 oil	42,3	Biogas	
Eo5 oil	44,0	Wood chips (25 %W)	13,8
Natural gas	47,2	Waste Wood	
Power station coal	28,5	*GJ/ton is equivalent to MJ/kg*	

[1] The values are laid down in Annex IV to 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 (OJ L 315, 14.11.2012, p. 1).

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

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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:

$$\text{Woodchip} = 19{,}0\left(\frac{\text{MJ}}{\text{kg}}\right) - 21{,}442 \times \frac{\text{f}}{100}$$

The factor 21,442 is the sum of water's heat of evaporation (2,442 MJ/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.

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APPENDIX III

List of standards and other technical specifications

Table III.1.

List of standards and other technical specifications

Standard	Title
Floor covering definitions	
EN 12466	Resilient floor coverings — Vocabulary
EN 13329	Laminate flooring. Specifications, requirements and test methods
ISO 14021	Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)
Volatile organic compound emissions	
CEN/TS 16516	Construction products — Assessment and release of dangerous substances — Determination of emissions into indoor air
EN 717-1	Wood-based Panels — Determination of Formaldehyde Release — Formaldehyde emission by the chamber method
EN 717-2	Wood-based Panels — Determination of Formaldehyde Release — Formaldehyde release by the gas analysis method
EN 120	Wood-based panels — Determination of formaldehyde content — Extraction method called the perforator method
EMICODE	http://www.emicode.com/en/emicode-r/
Raw materials	
EPF	EPF Standard for delivery conditions of recycled wood', October 2002. http://www.europanels.org/upload/EPF-Standard-for-recycled-wood-use.pdf
EN 1243	Adhesives. Determination of free formaldehyde in amino and amidoformaldehyde condensates
ISO 8214-6	Safety of toys — Part 6: Certain phthalate esters in toys and children's products

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Standard	Title
Fitness for use	
EN 425	Resilient and laminate floor coverings. Castor chair test
EN 660-1	Resilient floor coverings. Determination of wear resistance. Stuttgart test
EN 685	Resilient, textile and laminate floor coverings. Classification
EN 1534	Wood and parquet flooring — determination of resistance to indentation (Brinell) — test methods.
EN ISO 10874	Resilient, textile and laminate floor coverings — Classification
EN 12104	Resilient floor coverings. Cork floor tiles. Specification
EN 13329	Laminate floor coverings. Specifications, requirements and test methods
EN 13696	Wood flooring — Test methods to determine elasticity and resistance to wear and impact resistance
EN 14978	Laminate floor coverings — Elements with acrylic based surface layer, electron beam cured — Specifications, requirements and test methods
EN 15468	Laminate floor coverings — Elements with directly applied printing and resin surface layer. Specifications, requirements and test methods
ISO 24343-1	Resilient and laminate floor coverings — Determination of indentation and residual indentation — Part 1: Residual indentation