

# DECISIONS

## COMMISSION DECISION (EU) 2021/476

of 16 March 2021

### establishing the EU Ecolabel criteria for hard covering products

(notified under document C (2021) 1579)

(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 Ecolabel <sup>(1)</sup>, and in particular Article 8(2) thereof,

After consulting the European Union Ecolabelling Board,

Whereas:

- (1) Under Regulation (EC) No 66/2010, the EU Ecolabel may be awarded to those products with 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) Commission Decision 2009/607/EC <sup>(2)</sup> established criteria and related assessment and verification requirements for the product group 'hard coverings'. The period of validity of those criteria and requirements has been extended to 30 June 2021 by Commission Decision (EU) 2017/2076 <sup>(3)</sup>.
- (4) In order to better reflect best practice in the market for this expanded product group and to take account of innovations introduced in the intervening period, it is appropriate to establish a new set of criteria for 'hard covering products'.
- (5) The EU Ecolabel Fitness check <sup>(4)</sup> of 30 June 2017, reviewing the implementation of Regulation (EC) No 66/2010, concluded on the need to develop a more strategic approach for the EU Ecolabel, also including the bundling of closely related product groups where appropriate.
- (6) In line with those conclusions and after consulting the European Union Ecolabelling Board (EUEB), it is appropriate to revise the criteria for the product group 'hard coverings' and to expand its scope to include other products used for similar primary purposes, which are made of the same materials and for which there is market interest.
- (7) The New Circular Economy Action Plan for a cleaner and more competitive Europe <sup>(5)</sup> adopted on 11 March 2020 stipulates that the durability, recyclability and recycled content requirements will be more systematically included in the EU Ecolabel criteria.

<sup>(1)</sup> OJ L 27, 30.1.2010, p. 1.

<sup>(2)</sup> Commission Decision 2009/607/EC of 9 July 2009 establishing the ecological criteria for the award of the Community eco-label to hard coverings (OJ L 208, 12.8.2009, p. 21).

<sup>(3)</sup> Commission Decision (EU) 2017/2076 of 7 November 2017 amending Decision 2009/607/EC as regards the period of validity of the ecological criteria for the award of the EU Ecolabel to hard coverings (OJ L 295, 14.11.2017, p. 74).

<sup>(4)</sup> Report from the Commission to the European Parliament and the Council on the review of implementation of Regulation (EC) No 122/2009 of the European Parliament and of the Council on 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) and the Regulation (EC) No 66/2010 of the Parliament and of the Council of 25 November 2009 on the EU Ecolabel (COM(2017) 355 final).

<sup>(5)</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, A new Circular Economy Action Plan for a cleaner and more competitive Europe (COM(2020) 98 final).

- (8) In the production of natural stone and precast concrete products, a significant proportion of the environmental impacts are associated with specific supply chain actors, who currently have little or no direct incentive to comply with the EU Ecolabel criteria. After consulting the EUEB, it is appropriate to allow for the EU Ecolabel to also be awarded to intermediate business-to-business products in the natural stone sector (i.e. dimension stone blocks produced in quarries) and in the precast concrete sector (i.e. hydraulic binders produced in kilns or alternative cements). This will also facilitate assessment and verification by competent bodies when such intermediate products are sold to EU Ecolabel license holders.
- (9) After consulting the EUEB, it is appropriate to introduce mandatory and optional criteria requirements, as well as a scoring system. Points may be granted in case of compliance with optional requirements or according to how far an applicant goes beyond compliance with some mandatory requirements. For a product to be awarded the EU Ecolabel, it must both comply with all mandatory requirements and attain a total minimum number of points.
- (10) The scoring system offers a more flexible approach to obtaining the EU Ecolabel for the best environmental performing hard covering products on the market, allows for greater weighting to be applied to criteria that are associated with the product's most significant environmental impacts, and both encourages and recognises continuous environmental improvement for license holders.
- (11) The EU Ecolabel criteria for hard covering products aim, in particular, at promoting products that have a lower environmental impact along their life cycle, are produced using material efficient and energy efficient processes, with reduced emissions to air, and reduced water consumption. Considering efforts towards climate neutrality and the decarbonisation of Union industry, limits have been set on process CO<sub>2</sub> emissions for combustion processes, and the use of renewable electricity and the calculation of the carbon footprint are incentivised by the award of points. In order to contribute towards the transition to a more circular economy, the criteria set mandatory requirements on the reuse of process waste and incentivise the incorporation of recycled/secondary material content, where appropriate.
- (12) The EU Ecolabel criteria and related assessment and verification requirements for the product group should remain valid until 31 December 2028, taking into account the innovation cycle for the product group.
- (13) For reasons of legal certainty, Decision 2009/607/EC should be repealed.
- (14) A transitional period should be allowed for producers whose products have been awarded the EU Ecolabel for hard coverings on the basis of the criteria set out in Decision 2009/607/EC, so that they have sufficient time to adapt their products to comply with the new criteria and requirements. For a limited period after adoption of this Decision, producers should also be allowed to submit applications based either on the criteria established by Decision 2009/607/EC or on the new criteria established by this Decision. EU Ecolabel licences awarded in accordance with the criteria set out in the old Decision may be used for 12 months from the date of adoption of this Decision.
- (15) 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,

HAS ADOPTED THIS DECISION:

#### *Article 1*

1. The product group 'hard covering products' shall comprise floor tile, wall tile, roof tile, block, slab, panel, paver, kerb, table-top, vanity top and kitchen-worktop products for internal or external use.
2. The product group 'hard covering products' shall not include:
  - (a) refractory ceramics, technical ceramics, clay pipes, ceramic tableware, ceramic ornamental ware or ceramic sanitary ware;

- (b) masonry units defined in the EN 771 series of standards;
  - (c) clay roof tiles and fittings defined in EN 1304;
  - (d) reinforced precast concrete products;
  - (e) ancillary products associated with the installation and fitting of hard covering products such as grouts, adhesives, mechanical fastenings and underlay materials.
3. Hard covering products shall be made of one of the following materials:
- (a) natural stone (also known as dimension stone);
  - (b) agglomerated stone based on resin binders;
  - (c) ceramic or fired clay;
  - (d) precast concrete or compressed earth based on hydraulic binders or alternative cements.

#### Article 2

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

- (1) 'agglomerated stone', means an industrial product manufactured from a mixture of aggregates of various sizes and natures (generally coming from natural stones), sometimes mixed with other compatible materials, additions and resin binder.
- (2) 'alternative cement' means any cement not meeting the compositional requirements for common cements defined in EN 197-1 <sup>(6)</sup>, including cements with very low Portland cement clinker contents as well as alkali-activated cements and geopolymers, which may contain no Portland cement clinker at all.
- (3) 'ceramic' means a material based on clay materials or other non-metallic inorganic materials whose characteristic properties of high strength, wear resistance, long service life, chemical inertness, non-toxicity and resistance to heat and fire are a consequence of a carefully optimised time-temperature transformation occurring during firing operation in a kiln.
- (4) 'compressed earth blocks' means products, which have regular and verified characteristics obtained by the static or dynamic compression of earth in a humid state followed by immediate demoulding and whose cohesion, both in the humid and dry state, is due to the clay fraction within the earth material and which may be enhanced by the use of additives.
- (5) 'fired clay' means a material produced predominantly from clay or other argillaceous materials by shaping (extrusion and/or pressing), drying and firing of the prepared clay, with or without additives.
- (6) 'floor tile' means a flat, usually square or rectangular shaped tile within standardised dimensional ranges, which may be shaped by extrusion, by direct moulding or be cut to size from slabs and that, when laid together, form the facing layer of internal or external floor structures that is normally intended to be visible to or come into contact with users of the floor area.
- (7) 'hydraulic binder' means a common cement or a hydraulic lime, i.e. a finely ground inorganic material which, when mixed with water, forms a paste which sets and hardens by means of hydration reactions and processes and which, after hardening, retains its strength and stability even under water. Common cements must fall within one of the 27 cement classes defined in EN 197-1 and hydraulic limes must meet the requirements defined in EN 459-1 <sup>(7)</sup> for natural hydraulic limes, formulated limes or hydraulic limes.
- (8) 'kerb' means straight or curved units within standardised dimensional ranges, which may be chamfered or sloped on the facing edge and whose primary purpose is to separate surfaces of the same or different levels, for example as edging to a road or footpath.
- (9) 'kitchen-worktop' means a work surface, directly moulded or cut to size from slabs and fixed to a structure either mechanically or by means of specific adhesives that is primarily intended to be used for preparing food.

<sup>(6)</sup> EN 197-1:2011. Cement-Part 1: Composition, specifications and conformity criteria for common cements.

<sup>(7)</sup> EN 459-1:2015. Building lime – Part 1: Definitions, specifications and conformity criteria.

- (10) 'natural stone product' and 'dimension stone' mean pieces of naturally occurring rock, where the natural stone products have been cut and finished to specified sizes, shapes and surface properties in a transformation plant, whereas dimension stone is the intermediate input material to the transformation plant, consisting of large blocks or slabs of naturally occurring rock obtained from quarrying operations.
- (11) 'paver' means a unit within standardised dimensional ranges that is rectangular or any other shape that allows it to be laid in a repeating pattern in the surface course of a flexible pavement or rigid pavement and that may be joined using mortar, adhesives or interlocking mechanisms.
- (12) 'precast concrete', means products made of concrete and manufactured in accordance with specific product standards in a place different from the final destination of use, protected from adverse weather conditions during production and which is the result of an industrial process under a factory production control system and with the possibility of sorting before delivery, including single and dual-layered 'terrazzo tiles', as per EN 13748-1:2004 and 13748-2:2004 <sup>(8)</sup>.
- (13) 'roof tile' means a product for discontinuous laying on pitched roofs.
- (14) 'table-top' means the top part of a piece of table furniture, directly moulded or cut to size from slabs, and fixed to a table structure either mechanically or by means of specific adhesives that is primarily intended to provide a surface where users can rest, sit, eat, study or work, indoors or outdoors, and in domestic or non-domestic environments.
- (15) 'vanity top' means a surface, directly moulded or cut to size from slabs, and fixed to a structure either mechanically or by means of specific adhesives, that is primarily intended to be used in domestic and non-domestic bathrooms or similar facilities where personal hygiene practices are regularly carried out (e.g. splash zone).
- (16) 'wall tile' means a thin, usually square or rectangular shaped tile within standardised dimensional ranges, which may be shaped by extrusion, by direct moulding or be cut to size from slabs, and that, when laid together, form the facing layer of interior or exterior facing wall structures that is normally intended to be visible to or come into contact with passers-by.

#### *Article 3*

In order for a product to be awarded the EU Ecolabel under Regulation (EC) No 66/2010 for the product group 'hard covering products', it shall fall within the definition of that product group as specified in Article 1 of this Decision, shall comply with all of the mandatory requirements of the criteria and shall obtain at least the required minimum number of scoring points as set out in the Annex to this Decision.

#### *Article 4*

The EU Ecolabel criteria for the product group 'hard covering products' and the related assessment and verification requirements shall be valid until 31 December 2028.

#### *Article 5*

For administrative purposes, the code number assigned to the product group 'hard covering products' shall be '021'.

#### *Article 6*

Decision 2009/607/EC is repealed.

<sup>(8)</sup> EN 13748-1:2004: Terrazzo tiles – Part 1: Terrazzo tiles for internal use. And EN 13748-2:2004: Terrazzo tiles – Part 2: Terrazzo tiles for external use.

*Article 7*

1. Notwithstanding Article 6, applications submitted before the date of adoption of this Decision for the EU Ecolabel for the product group 'hard covering products', as defined in Decision 2009/607/EC shall be evaluated in accordance with the conditions laid down in Decision 2009/607/EC.
2. Applications for the EU Ecolabel for products falling within the product group 'hard covering products' submitted on or within two months from the date of adoption of this Decision may be based either on the criteria set out in this Decision, or on the criteria set out in Decision 2009/607/EC for the product group 'hard coverings'. Those applications shall be evaluated in accordance with the criteria on which they are based.
3. EU Ecolabel licenses awarded on the basis of an application evaluated in accordance with the criteria set out in Decision 2009/607/EC may be used for 12 months from the date of adoption of this Decision.

*Article 8*

This Decision is addressed to the Member States.

Done at Brussels, 16 March 2021.

*For the Commission*  
Virginijus SINKEVIČIUS  
*Member of the Commission*

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## ANNEX

**EU Ecolabel criteria for awarding the EU Ecolabel for hard covering products****FRAMEWORK****Aims of the criteria**

The EU Ecolabel criteria target the best hard covering products on the market, in terms of environmental performance. The criteria focus on the main environmental impacts associated with the life cycle of these products and promote circular economy aspects.

In particular and where relevant, the criteria aim to: (i) promote energy efficient production processes; (ii) reduce emissions that contribute to global warming (CO<sub>2</sub>), to acidification (SO<sub>x</sub> and NO<sub>x</sub>), to eutrophication (NO<sub>x</sub>), to photochemical oxidation potential (dust, NO<sub>x</sub> and VOCs) and to human toxicity (dust and VOCs); (iii) promote water efficient production processes and (iv) promote material efficient products.

To this end, the criteria:

- set maximum limits for specific energy consumption where benchmarks can be defined, and require energy consumption reduction plans where benchmarks cannot be defined;
- recognise and reward the use of energy from renewable energy sources;
- set specific limits on emissions of CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub> and dust from processes where fuel is combusted;
- set best practice management requirements for processes where dust originates from diffuse sources;
- set requirements for process wastewater reuse or limits for specific water consumption rates, where appropriate;
- set requirements for minimum process waste reuse and reward the incorporation of content originating from recycled or secondary materials, where appropriate.

The importance of choosing the correct performance class and dimensions of hard covering products for a given use is addressed by setting requirements on fitness for use. The importance of correct installation and maintenance of hard covering products on life cycle impacts is also addressed by setting requirements on user information.

Due to the variety of materials and related production processes for the products that are included in the scope, the criteria for awarding the EU Ecolabel to 'hard covering products' consist of both criteria that are common to all products and criteria that are product-specific, directly related to the associated production process.

The EU Ecolabel criteria for 'hard coverings products' include both mandatory and optional criteria. Scoring points are awarded either for going beyond the minimum mandatory requirements or for complying with optional criteria.

For the EU Ecolabel to be awarded for a specific product, applicants must comply with all mandatory requirements and must attain the minimum required number of points set for the specific product. The criteria are as follows:

*Table 1*

**Overview of applicable criteria according to the specific product (some of the long criteria titles have been abbreviated):**

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<b>1. Criteria common to all hard covering products</b>
1.1. Industrial and construction mineral extraction
1.2. Restricted substances
1.3. VOC emissions
1.4. Fitness for use
1.5. User information

1.6. Information appearing on the EU Ecolabel

1.7. Environmental Management System (optional)

**Material and technology specific criteria**

2. Natural stone	3. Agglomerated stone based on resin binders	4. Ceramic and fired clay	5. Precast concrete or compressed earth blocks based on hydraulic binders or alternative cements
2.1. Energy consumption at the quarry *	3.1. Energy consumption	4.1. Fuel consumption for drying and firing	5.1. Clinker factor **
2.2. Material efficiency at the quarry *	3.2. Dust control and air quality	4.2. CO <sub>2</sub> emissions	5.2. CO <sub>2</sub> emissions **
2.3. Water/wastewater management at the quarry *	3.3. Recycled/secondary material content	4.3. Process water consumption	5.3. Emissions of dust, NOx and SOx to air **
2.4. Dust control at the quarry *	3.4. Resin binder content	4.4. Emissions of dust, HF, NOx and SOx to air	5.4. Recovery and responsible sourcing of raw materials
2.5. Personnel safety and working conditions at the quarry *	3.5. Reuse of process waste	4.5. Wastewater management	5.5. Energy consumption
2.6. Quarry landscape impact ratios * (optional)		4.6. Reuse of process waste	5.6. Environmentally innovative product designs (optional)
2.7. Energy consumption at the transformation plant		4.7. Glazes and inks	
2.8. Water/wastewater management at the transformation plant			
2.9. Dust control at the transformation plant			
2.10. Reuse of process waste from the transformation plant			
2.11. Regionally integrated production at the transformation plant (optional)			

\* criteria applicable for awarding the EU Ecolabel to intermediate blocks of dimension stone from natural stone quarries.

\*\* criteria applicable for awarding the EU Ecolabel to intermediate hydraulic binders or alternative cement products.

**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 and/or his supplier(s) and/or their supplier(s), etc. as appropriate.*

*Competent bodies shall preferentially recognise attestations and verifications that are issued by bodies accredited according to the relevant harmonised standard for testing and calibration laboratories, and verifications issued by bodies that are accredited according to the relevant harmonised standard for bodies certifying products, processes and services.*

*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 on-site inspections to check compliance with these criteria.*

*Changes in suppliers and production sites pertaining to products to which the EU Ecolabel has been granted shall be notified to competent bodies, together with supporting information to enable verification of continued compliance with the criteria.*

*As a prerequisite, the hard covering product(s) shall meet all applicable legal requirements of the country or countries in which the product is placed on the market. The applicant shall declare the product's compliance with this requirement.*

The following definitions shall apply:

- (1) 'Process scrap' means fragments and trimmings from cutting operations and reject products in the production of natural stone or agglomerated stone hard covering products.
- (2) 'Process sludge' means solids recovered from the onsite treatment of wastewater resulting from dust control, cutting and/or finishing operations in the production of natural stone or agglomerated stone hard covering products.
- (3) 'Renewable energy' means energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogas.



## EU ECOLABEL CRITERIA

## 1. HORIZONTAL CRITERIA COMMON TO ALL HARD COVERING PRODUCTS

## 1.1 Industrial and construction mineral extraction

The extraction of industrial and construction minerals (e.g. limestone, clay, aggregates, dimension stone etc.) for the manufacture of an EU Ecolabel hard covering product shall only take place on sites which are covered by the following documentation:

- an environmental impact assessment and, where relevant, a report in accordance with Directive 2014/52/EU of the European Parliament and of the Council <sup>(1)</sup>;
- a valid authorisation for the extraction activity issued by the relevant regional or national authority;
- a rehabilitation management plan associated with the authorisation for the extraction activity;
- a map indicating the location of the quarry;
- a declaration of conformity with Regulation (EU) No 1143/2014 of the European Parliament and of the Council <sup>(2)</sup> on the prevention and management of the introduction and spread of invasive alien species;
- a declaration of conformity with Council Directive 92/43/EEC <sup>(3)</sup> (habitats) and Directive 2009/147/EC of the European Parliament and of the Council <sup>(4)</sup> (birds).

With regards to the last point above, in cases where extraction sites are located in Natura 2000 network areas, composed of Special Areas of Conservation under Directive 92/43/EEC and Special Protection Areas under Directive 2009/147/EC, extraction activities shall have been assessed and authorised in accordance with the provisions laid down in Article 6 of Directive 92/43/EEC and have taken into account the relevant EC Guidance document <sup>(5)</sup>.

Also with regards to the last point above, in cases where extraction sites are located outside the EU, if materials are extracted from areas officially nominated as candidates for or adopted as Areas of Special Conservation Interest; part of the Emerald network pursuant to Recommendation No 16 (1989) and Resolution No 3 (1996) of the Bern Convention <sup>(6)</sup> or protected areas designated as such under the national legislation of the sourcing/exporting countries, the extraction activities shall have been assessed and authorised in accordance with provisions that provide assurances equivalent to Directives 92/43/EEC and 2009/147/EC.

**Assessment and verification:** *The applicant shall provide a declaration of compliance with this requirement issued by the competent authorities, or a copy of the authorisations issued by the competent authorities and any other required declarations and documentation.*

*The rehabilitation management plan shall include the objectives for the rehabilitation of the quarry, the conceptual final landform design, including the proposed post quarry land use, details on the implementation of an effective revegetation program and details of an effective monitoring programme to assess performance of the rehabilitated areas.*

<sup>(1)</sup> Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (OJ L 124, 25.4.2014, p. 1).

<sup>(2)</sup> Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species (OJ L 317, 4.11.2014, p. 35).

<sup>(3)</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7).

<sup>(4)</sup> Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p. 7).

<sup>(5)</sup> Guidance document on non-energy mineral extraction and Natura 2000. A summary. ISBN: 978-92-79-99542-2.

<sup>(6)</sup> Convention on the Conservation of European Wildlife and Natural Habitats. Council of Europe. European Treaty Series – No 104.

*In case industrial or construction mineral extraction activities have been carried out in Natura 2000 network areas (in the Union), the Emerald network or protected areas designated as such under the national legislation of the sourcing/exporting countries (outside the Union), the applicant shall provide a declaration of compliance with this requirement issued by the competent authorities or a copy of their authorisation issued by the competent authorities.*

## 1.2 Restricted substances

The basis for demonstrating compliance with each of the sub-criteria under criterion 1.2 shall be the applicant providing a list of all the relevant chemicals used together with appropriate documentation (safety data sheet and/or a declaration from the chemical supplier). As a minimum, all process chemicals used by the applicant in relevant production processes must be screened.

### 1.2 (a) Restrictions on Substances of Very High Concern (SVHCs)

All ingoing chemicals used in the production process by the applicant and any supplied materials that form part of the final product shall be covered by declarations from suppliers stating that they do not contain, in concentrations greater than 0,10 % (weight by weight), substances meeting the criteria referred to in Article 57 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council <sup>(7)</sup> that have been identified according to the procedure described in Article 59 of that Regulation and included in the candidate list for substances of very high concern for authorisation. No derogation from this requirement shall be granted.

**Assessment and verification:** *The applicant shall provide a declaration that the product has been produced using supplied chemicals or materials that do not contain any SVHC in concentrations greater than 0,10 % (weight by weight). The declaration shall be supported by safety data sheets of process chemicals used or appropriate declarations from chemical or material suppliers.*

*The list of substances identified as SVHCs and included in the candidate list in accordance with Article 59 of Regulation (EC) No 1907/2006 can be found here:*

*[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp).*

*Reference to the list shall be made on the submission date of the EU Ecolabel application.*

### 1.2 (b) Restrictions on substances classified under Regulation (EC) No 1272/2008 of the European Parliament and of the Council <sup>(8)</sup>

Unless derogated in Table 2, the product shall not contain substances or mixtures in concentrations greater than 0,10 % (weight by weight) that are assigned any of the following hazard classes, categories and associated hazard statement codes, in accordance with Regulation (EC) No 1272/2008:

- Group 1 hazards: Category 1A or 1B carcinogenic, mutagenic and/or toxic for reproduction (CMR): H340, H350, H350i, H360, H360F, H360D, H360FD, H360Fd, H360Df.
- Group 2 hazards: Category 2 CMR: H341, H351, H361, H361f, H361d, H361fd, H362; Category 1 aquatic toxicity: H400, H410; Category 1 and 2 acute toxicity: H300, H310, H330; Category 1 aspiration toxicity: H304; Category 1 specific target organ toxicity (STOT): H370, H372.
- Group 3 hazards: Category 2, 3 and 4 aquatic toxicity: H411, H412, H413; Category 3 acute toxicity: H301, H311, H331; Category 2 STOT: H371, H373.

<sup>(7)</sup> 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).

<sup>(8)</sup> 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).

The use of substances or mixtures that are chemically modified during the production process, so that any relevant hazard for which the substance or mixture has been classified under Regulation (EC) No 1272/2008 no longer applies, shall be exempted from the above requirement.

Table 2

**Derogations to restrictions on substances classified under Regulation (EC) No 1272/2008 and applicable conditions**

Substance/ mixture type	Applicability	Derogated hazard class, category and hazard statement code	Derogation conditions
Titanium dioxide (TiO <sub>2</sub> )	All materials within scope	Carcinogenic, category 2, H351 (inhalation)	TiO <sub>2</sub> is not intentionally added to the product but is present because it is a naturally occurring impurity in the raw materials used. TiO <sub>2</sub> content (expressed as TiO <sub>2</sub> ) in any raw material used to manufacture the final product is less or equal to 2,0 % (w/w).
Crystalline silica	All materials within scope	Specific Target Organ Toxicity, (repeated exposure), category 1 and 2, H372, H373	The applicant provides a declaration of compliance with any relevant instructions for safe handling and dosing specified in the safety data sheet or supplier declaration. Factory cutting operations are carried out using wet process tools or dry processes where a vacuum hood is in place to collect dust. Safety instructions regarding exposure to dust during any cutting operations carried out by installers are provided with the product.

**Assessment and verification:** The applicant shall provide a list of all relevant chemicals used in their production process, together with the relevant safety data sheet or chemical supplier declaration.

Any chemicals containing substances or mixtures with restricted CLP classifications under Regulation (EC) No 1272/2008 shall be highlighted. The approximate dosing rate of the chemical, together with the concentration of the restricted substance or mixture in that chemical (as provided in the safety data sheet or supplier declaration) and an assumed retention factor of 100 %, shall be used to estimate the quantity of the restricted substance or mixture remaining in the final product.

Since multiple products or potential products using the same process chemicals may be covered by one license, the calculation for each chemical only needs to be presented for the worst-case product covered by the EU Ecolabel license (e.g. the most heavily surface-treated or pigmented or printed product).

Justifications for any deviation from a retention factor of 100 % or for chemical modification of a restricted hazardous substance or mixture must be provided in writing.

For any restricted substances or mixtures that exceed 0,10 % (weight by weight) of the final hard covering product, a relevant derogation must be in place and proof of compliance with any relevant derogation conditions must be provided.

### 1.3 VOC emissions

No surface treatments using formaldehyde-based resins shall be permitted.

Any natural stone, ceramic, fired clay or precast concrete products based on hydraulic binders or alternative cements that have been surface-treated with VOC-containing compounds shall be tested for VOC emissions and shall comply with the limits defined below.

All agglomerated stone products based on resin binders shall be tested for VOC emissions regardless of the nature of any surface treatments used and shall comply with the limits defined below.

	Limit (after 28 days)	Method
Total VOC	300 µg/m <sup>3</sup>	EN 16516
Formaldehyde	10 µg/m <sup>3</sup>	
R-value	< 1	
Carcinogenic 1A and 1B VOCs listed in Annex H of EN 16516:2017 (excluding formaldehyde and acetaldehyde)	1 µg/m <sup>3</sup> per individual substance	

**Assessment and verification:** The applicant shall declare if the final product surface has been treated with any waxes, adhesives, coatings, resins or similar surface treatment chemicals and provide any related safety data sheets or supplier declarations about the VOC content of the surface treatment chemicals used.

In cases where VOC emission testing is required, the applicant shall provide a declaration of compliance, supported by a test report carried out according to EN 16516. If compliance with the chamber concentration limits specified at 28 days can be met at any other time between 3 and 28 days, the chamber test may be stopped prematurely.

### 1.4 Fitness for use

This criterion does not apply to intermediate products (i.e. dimension stone blocks, hydraulic binders or alternative cements).

The applicant shall have a quality control and quality assessment procedure in place to ensure that products are fit for use.

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, supported by the following documents:

- Certification of the production site according to ISO 9001 or a copy of the in-house quality management system and associated quality assurance and quality control procedures.
- A detailed description of the procedure for handling consumer complaints.
- CE marking of the product(s) in accordance with Regulation (EU) No 305/2011 <sup>(\*)</sup> of the European Parliament and of the Council (with the exception of table-top, vanity top and kitchen-worktop products).

Where relevant, further evidence demonstrating fitness for use shall be provided. Such evidence should be based on appropriate EN or ISO standards, or equivalent methods. An indicative, non-exhaustive list of potentially relevant standards is provided below:

- Natural stone products: EN 1341, EN 1342, EN 1343, EN 1467, EN 1468, EN 1469, EN 12057, EN 12058 or EN 12059;
- Agglomerated stone products based on resin binders: EN 15285, EN 15286, EN 15388 or EN 16954;
- Ceramic and fired clay products: EN 1344, EN 13006 or EN 14411;
- Precast concrete products based on hydraulic binders or alternative cements: EN 1338, EN 1339, EN 1340 or EN 13748.

<sup>(\*)</sup> Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC (OJ L 88, 4.4.2011, p. 5).

### 1.5 User information

*This criterion does not apply to intermediate products (i.e. dimension stone blocks, hydraulic binders or alternative cements).*

The product shall be sold with relevant user information, which provides advice on the product's proper installation, maintenance and disposal.

The product packaging or documentation accompanying the product shall provide contact details (telephone or email) and a reference to online information for consumers that have enquiries or need specific advice regarding installation, maintenance or disposal of the hard covering product. Specific information that should be made available includes:

- Details about any relevant technical performance classes that indicate the appropriate use environment for the hard covering product, for example, tensile strength, frost resistance/water absorption, stain resistance and resistance to chemicals.
- Details about any necessary preparation of the underlying surface prior to installation, recommended installation techniques as well as specifications for any other relevant materials used during installation such as grouts, sealants, coatings, adhesives, mortars and cleaning agents used by the installer.
- For hard covering products with surfaces exposed to interior or exterior environments, instructions on routine cleaning operations and recommended cleaning agents. Where relevant, information on less periodic maintenance operations, such as rejuvenation of floor surfaces with high-pressure cleaners or by recoating and polishing shall be provided as well.
- Information on the correct recycling or environmentally preferable disposal of packaging provided with the hard covering product, off-cuts of the hard covering product created during installation and the product itself at the end of life.

**Assessment and verification:** *The applicant shall provide to the competent body a declaration of compliance with this criterion, a high resolution image of the packaging and a link to the online version of the user information.*

### 1.6 Information appearing on the EU Ecolabel

If the optional label with text box is used, it shall contain the following three statements, as appropriate:

For natural stone products (intermediate blocks of dimension stone or final products):

- material efficient production process;
- reduced dust emissions;
- production with closed loop wastewater recycling.

For agglomerated stone products based on resin binders:

- material efficient production process;
- energy efficient production process;
- reduced dust emissions.

For ceramic and fired clay products:

- material efficient production process;
- energy efficient and low CO<sub>2</sub> production process;
- reduced emissions of dust and acidifying compounds to air.

For hydraulic binders or alternative cements (intermediate products in the manufacture of precast concrete or compressed earth products):

- reduced CO<sub>2</sub> emissions;
- reduced dust emission;
- reduced emissions of acidifying compounds to air.

For precast concrete products or compressed earth blocks based on hydraulic binders or alternative cements:

- material efficient production process;
- energy efficient production process;
- uses low environmental impact binder.

The applicant shall follow the instructions on how to properly use the EU Ecolabel logo provided in the EU Ecolabel Logo Guidelines:

[http://ec.europa.eu/environment/ecolabel/documents/logo\\_guidelines.pdf](http://ec.europa.eu/environment/ecolabel/documents/logo_guidelines.pdf)

**Assessment and verification:** *The applicant shall provide a declaration of compliance with this criterion, supported by a high resolution image of the product packaging that clearly shows the label, the registration/licence number and, where relevant, the statements that can be displayed together with the label.*

#### 1.7 Environmental Management System (optional)

*This criterion applies to the production site of the applicant where the licensed EU Ecolabel product is produced.*

3 points shall be awarded for applicants that have a documented environmental management system in place according to ISO 14001 and certified by an accredited organization;

or

5 points shall be awarded for applicants that have a documented environmental management system in place according to the EU Eco-Management and Audit Scheme (EMAS) <sup>(10)</sup> and registered by an accredited organization.

**Assessment and verification:** *The applicant shall provide a copy of the valid ISO 14001 certificate or evidence of their EMAS registration, as appropriate, and provide the details of the organization which carried out the accreditation.*

*In cases where an applicant has both ISO 14001 and EMAS certification, only the points for the EMAS certification shall be awarded.*

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<sup>(10)</sup> Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC (OJ L 342, 22.12.2009, p. 1).

## 2. CRITERIA FOR NATURAL STONE PRODUCTS

### Scoring system

The EU Ecolabel may be awarded both to intermediate quarry products (large blocks or slabs of dimension stone) directly produced by quarry operators and to final natural stone products produced by transformation plants.

In cases where the applicant is not the quarry operator and the quarry operator is not covered by and EU Ecolabel license, the applicant shall declare the quarry from which the material used to produce the EU Ecolabel natural stone product has been sourced, supported by delivery invoices dating no more than 1 year prior to the application date.

In that case, the applicant shall provide all relevant declarations from the quarry operator that are demonstrating compliance with all the quarry-related EU Ecolabel requirements and any other relevant optional requirements that may result in points being granted.

The scoring system and the minimum number of points necessary for EU Ecolabel natural stone products are presented in the table below.

Criteria where points can be awarded	Intermediate blocks or slabs of dimension stone	Final transformed natural stone hard covering products
1.7. Environmental Management System of the quarry (optional)	0, 3 or 5 points	n/a
1.7. Environmental Management System of the transformation plant (optional)	n/a	0, 3 or 5 points
2.1. Energy consumption at the quarry	Up to 20 points	Up to 20 points
2.2. Material efficiency at the quarry	Up to 25 points	Up to 25 points
2.6. Quarry landscape impact ratios (optional)	Up to 10 points	Up to 10 points
2.7. Energy consumption at the transformation plant	n/a	Up to 20 points
2.8. Water and waste water management at the transformation plant	n/a	Up to 5 points
2.10. Reuse of process waste from the transformation plant	n/a	Up to 10 points
2.11. Regionally integrated production at the transformation plant (optional)	n/a	Up to 5 points
<b>Total maximum points</b>	<b>60</b>	<b>100</b>
<b>Minimum points required for EU Ecolabel</b>	<b>30</b>	<b>50</b>

### Quarry requirements

#### 2.1. Energy consumption at the quarry

The quarry operator shall have established a program to systematically monitor, record and reduce specific energy consumption and specific CO<sub>2</sub> emissions to optimal levels. The applicant shall report energy consumption as a function of energy source (e.g. electricity and diesel) and purpose (e.g. use of onsite buildings, lighting, cutting equipment operation, pumps and vehicle operation). The applicant shall report on energy consumption for the site both on an absolute basis (in units of kWh or MJ) and on a specific production basis (in units of kWh or MJ per m<sup>3</sup> of quarried material and per m<sup>3</sup> or t of material sold/produced and ready for sale) for a given calendar year.

A plan to reduce specific energy consumption and CO<sub>2</sub> emissions shall describe measures already taken or planned to be taken (e.g. more efficient use of existing equipment, investment in more efficient equipment, improved transportation and logistics etc.).

In addition, a total of 20 points may be granted as follows:

- Up to 10 points shall be awarded in proportion to how much of the energy consumed (fuel plus electricity) is from renewable sources (from 0 points for 0 % renewable energy up to 10 points for 100 % renewable energy).
- Up to 5 points shall be awarded depending on the manner in which any renewable electricity is purchased as follows: via private energy service agreements for on-site or near-site renewables (5 points); corporate power purchase agreements for on-site or near-site renewables (5 points); long term corporate power purchase agreements for grid-connected or remote grid renewables <sup>(11)</sup> (4 points); green electricity certifications <sup>(12)</sup> (3 points); purchase of renewable energy guarantees of origin certificates for the full electricity supply or green tariff from utility supplier <sup>(13)</sup> (2 points).
- 3 points shall be awarded where a carbon footprint analysis has been carried out for the product in accordance with ISO 14067 or 5 points if the Product Environmental Footprint method's elements related to greenhouse gas emissions <sup>(14)</sup> has been used.

**Assessment and verification:** *The applicant shall provide an energy inventory for the quarry for a period of at least 12 months prior to the date of award of the EU Ecolabel license and shall commit to maintaining such an inventory during the validity period of the EU Ecolabel license. The energy inventory shall distinguish the different types of fuel consumed, highlighting any renewable fuels or renewable content of mixed fuels. As a minimum, the specific-energy consumption and specific CO<sub>2</sub> emission reduction plan must define the baseline situation with energy consumption at the quarry when the plan was established, identify and clearly quantify the different sources of energy consumption at the quarry, identify and justify actions to reduce energy consumption and to report results on a yearly basis.*

*The applicant shall provide details of the electricity purchasing agreement in place and highlight the share of renewables that applies to the electricity being purchased. If necessary, a declaration from the electricity provider shall clarify (i) the share of renewables in the electricity supplied, (ii) the nature of the purchasing agreement in place (i.e. private energy service agreement, corporate power purchase agreement, independent green energy certified or green tariff) and (iii) whether the purchased electricity is from on-site or near-site renewables.*

*In cases where guarantee of origin certificates are purchased by the applicant to increase the renewables share, the applicant shall provide appropriate documentation to ensure that the guarantee of origin certificates have been purchased in accordance with the principles and rules of operation of the European Energy Certificate System.*

*In cases where points are claimed for a carbon footprint analysis, the applicant shall provide a copy of the analysis, which shall be in accordance with ISO 14067 or the Product Environmental Footprint method and have been verified by an accredited third party. The footprint analysis must cover all manufacturing processes directly related to stone production at the quarry, onsite and offsite transportation during production, emissions relating to administrative processes (e.g. operation of onsite buildings) and transport of the sold product to the quarry gate or local transportation hub (e.g. train station or port).*

## 2.2. Material efficiency at the quarry

The quarry operator shall provide the following data relating to the extraction and commercial activities at the quarry for the most recent calendar year or rolling 12 month period prior to the date of award of the EU Ecolabel license:

- **A:** Total quantity of material extracted (m<sup>3</sup>).
- **B:** Saleable blocks produced from A (m<sup>3</sup>).

<sup>(11)</sup> According to Article 15(8) of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82).

<sup>(12)</sup> Based on guarantees of origin with independent third party verification of additional requirements according to Article 19 of Directive (EU) 2018/2001.

<sup>(13)</sup> Renewable energy sources disclosed according to Article 19(8) of Directive (EU) 2018/2001 and point 5 of Annex I to Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (OJ L 158, 14.6.2019, p. 125).

<sup>(14)</sup> [https://eplca.jrc.ec.europa.eu/permalink/PEF\\_method.pdf](https://eplca.jrc.ec.europa.eu/permalink/PEF_method.pdf)



- **C:** Total quantity of extractive waste and materials produced from A that qualify as by-products (i.e. block fragments, stones and fines) that are sold (m<sup>3</sup>).
- **D:** Total quantity of extractive waste and materials produced from A that qualify as by-products (i.e. block fragments, stones and fines) that is used internally for useful purposes by replacing other materials which otherwise would have been used to fulfil that particular function or stored in the by-products deposition area (m<sup>3</sup>).
- **E:** Total quantity of extractive waste produced from A that are transferred to the extractive waste deposition area or landfill plus the total quantity of materials produced from A that qualify as by-products that are stored in the by-products deposition area (m<sup>3</sup>).

In cases where data is available in tonnes, it should be converted to m<sup>3</sup> using a fixed bulk density factor for the rock material being extracted.

The extraction efficiency ratio shall be at least 0,50, and shall be calculated as follows:

$$\text{Extraction efficiency ratio} = \frac{\mathbf{B + C}}{\mathbf{A}}$$

In addition, up to 25 points shall be awarded in proportion to how much the applicant demonstrates a higher extraction efficiency ratio up to the environmental excellence threshold of 1,00 (from 0 points for an extraction efficiency ratio of 0,50, up to 25 points for an extraction efficiency ratio of 1,00).

**Assessment and verification:** A declaration from the quarry operator shall be provided that states the values of A, B, C, D and E, expressed in m<sup>3</sup> and the calculation of the extraction efficiency ratio.

For calculation purposes, it should be assumed that A-B = C+D+E. For any material calculated under C that was sold, invoices of the material delivery to the other sites shall be provided.

### 2.3. Water and wastewater management at the quarry

The applicant shall provide a description of water use in quarrying operations including strategies and methods for collection, recirculation and reuse of water.

In general:

- The site shall make provisions for the opportune collection of storm water run-off to compensate for water lost in wet sludge and evaporation.
- The site shall make provisions for the diversion of storm water run-off via a drainage network to prevent the surface flow of rainwater across the working area from carrying suspended solid loads into any impermeable ponds (that supply water to the cutting equipment) or into natural watercourses.

In cases where wet cutting techniques are used:

- Water for use by wet cutting equipment shall be stored in an impermeable container (for example a tank, lined pond or an excavated pond set in impermeable rock).
- The separation of solids from cutting wastewater shall be achieved by sedimentation systems, retention basins, cyclone separators, inclined plate clarifiers, filter presses or any combination thereof. Clarified water shall be returned to the impermeable pond or container which supplies the cutting equipment.
- Settled sludge shall be dewatered prior to: internal use for useful purposes, external use for useful purposes or transport offsite to a suitable waste disposal facility.

**Assessment and verification:** The quarry operator shall provide a declaration of compliance with this criterion, supported by relevant documentation describing how water is used onsite and providing details of the water management system, sludge separation and sludge disposal operations and destinations.

### 2.4. Dust control at the quarry

The applicant shall demonstrate that operational site measures that have been implemented for dust control at the quarry site. Measures may vary from site to site but should include the following aspects for all sites:

- Use of dust suppression water sprays or vacuum hoods linked to dust filter bags/electrostatic precipitators for any dry cutting, crushing or other activities that are likely to generate significant quantities of dust.
- A plan in place for the relocation, modification or stoppage of operations onsite in order to prevent or minimise dust emissions to air during periods of adverse weather (not applicable to underground quarries).
- Inclusion of wind protection features in the quarry design that aim to reduce wind speed and thus minimise dust emissions and soil erosion onsite (e.g. wind fences or windbreaks consisting of one or more rows of plants along the border of the extractive waste deposition area, including the extractive waste facility and/or extractive waste handling area).
- Provision of an enclosed storage area for all dewatered sludge from wet cutting and/or all dust from dry cutting operations prior to sale, prior to shipment to landfill or reuse onsite.
- Covering of the most heavily used road surfaces with concrete or asphalt paving.
- Provision of appropriate training to employees about good practice for dust control and the provision adequate personal protective equipment to employees and visitors.
- Provision of routine medical check-ups for employees with the possibility for more frequent monitoring for the identification of respiratory problems and possible onset of silicosis (the latter point being applicable only to granite and other siliceous rock quarries).

**Assessment and verification:** *The quarry operator shall provide a declaration of compliance with this criterion, supported by relevant documentation and (i) a description of the dust control measures implemented at the quarry site and (ii) details of the medical check-up system for employees, as appropriate.*

## 2.5. Personnel safety and working conditions at the quarry

The applicant shall provide a description of the occupational health and safety policy in force at the quarry. The policy shall cover, as a minimum:

- A systematic analysis of all risks and major hazards that may occur in the quarry.
- A training plan for employees that is related to specific work procedures that are carried out at the quarry.
- An inspection and maintenance plan for all machinery, tools, electrical installations, vehicles, ladders, walkways, staircases, safety barriers and other relevant equipment.
- Placement of fixed guards around moving parts of machinery such as belts, pulleys, gears and adjustable guards for circular saws.
- Quick-release controls to shut off power to handheld electric power tools and emergency stop buttons on control panels for all heavy machinery.
- Safe storage of any explosives onsite.
- Appropriate transportation and lifting gear for the movement and positioning of dimension stone blocks and large fragments of blocks.
- Emergency plans and first-aid training for personnel.
- Personal Protective Equipment provision for all personnel and site visitors.
- Clear identification of areas with risks of high noise levels.

The following aspects relating to working conditions shall be guaranteed:

- Access to toilet, changing room and lunchroom facilities for workers and the provision of drinking water at all times.
- Compliance with national laws and regulations or with the fundamental conventions of the International Labour Organisation (ILO), whichever is the more stringent.

- Labour contracts for all employees that clearly describe the relevant work, maximum obligatory hours of work, salary, social insurance contributions (or other suitable insurance against accidents in countries where social insurance does not exist), holiday entitlements and notice period.
- Full compliance with EU or national occupational health and safety legislation.

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, supported by a copy of their occupational health and safety policy.

In cases where compliance with ILO conventions is provided, the applicant shall obtain third party verification, supported by site audits, that the applicable principles included in the fundamental ILO conventions identified below, have been respected at the quarry:

Fundamental conventions of the ILO:

- a) *Child Labour:*
  - i. *Minimum Age Convention, 1973 (No 138);*
  - ii. *Worst Forms of Child Labour Convention, 1999 (No 182);*
- b) *Forced and Compulsory Labour:*
  - i. *Forced Labour Convention, 1930 (No 29) and 2014 Protocol to the Forced Labour Convention;*
  - ii. *Abolition of Forced Labour Convention, 1957 (No 105);*
- c) *Freedom of Association and Right to Collective Bargaining:*
  - i. *Freedom of Association and Protection of the Right to Organise Convention, 1948 (No 87);*
  - ii. *Right to Organise and Collective Bargaining Convention, 1949 (No 98);*
- d) *Discrimination:*
  - i. *Equal Remuneration Convention, 1951 (No 100);*
  - ii. *Discrimination (Employment and Occupation) Convention (No 111).*

In cases where the quarry is not located in a Member State, a third party verification (for example by Fairstone or other schemes with at least equivalent criteria on the occupational health and safety and working conditions listed above) shall be required.

## 2.6. Quarry landscape impact ratios (optional)

The quarry operator shall provide the following data relating to the quarry site in order to permit the calculation of the quarry footprint ratio or the quarry beneficial land use ratio, based on a satellite view of the site no more than 1 year prior to the date of award of the EU Ecolabel licence.

- **QF:** Quarry Front (active) area (m<sup>2</sup>).
- **EWDA:** Extractive Waste Deposition Area (m<sup>2</sup>).
- **BPDA:** By-Products Deposition Area (m<sup>2</sup>).
- **TAA:** Total Authorised Area for the site where the extraction activity takes place (m<sup>2</sup>).
- **BA:** Biodiverse Area, where (i) topsoil and vegetation cover or wetlands/engineered reed-beds have been established using native species as part of progressive rehabilitation and/or (ii) where topsoil and vegetation has simply not been disturbed in the first place and is not isolated in pockets within the quarry (m<sup>2</sup>).
- **REA:** Renewable Energy Area, where land has been occupied for the generation of electricity via solar, hydroelectric, wind or biomass energy (m<sup>2</sup>).

	Quarry footprint ratio	Beneficial land use ratio
Calculation	Extraction efficiency ratio = $\frac{B + C}{A}$	Extraction efficiency ratio = $\frac{B + C}{A}$
Threshold for 0 points	0,70	0,00
Threshold for 5 points	0,20	0,40

Up to a total of 10 points shall be awarded (5 for each ratio) in proportion to how much the applicant demonstrates that ratios approach or exceed the relevant thresholds for 5 points.

**Assessment and verification:** A declaration from the quarry operator shall be provided, together with documentation including maps or satellite images in which the QF, EDWA, BPDA, TAA, BA and REA are outlined, and with estimations of the surface of each area.

## Transformation plant requirements

### 2.7. Energy consumption at the transformation plant

The applicant shall have established a program to systematically monitor, record and reduce specific energy consumption and specific CO<sub>2</sub> emissions in the transformation plant to optimal levels. The applicant shall report energy consumption as a function of energy source (e.g. electricity and diesel) and purpose (e.g. use of onsite buildings, lighting, cutting equipment operation, pumps and vehicle operation). The applicant shall report on energy consumption for the site both on an absolute basis (in units of kWh or MJ) and on a specific production basis (in units of kWh or MJ per m<sup>3</sup>, m<sup>2</sup> or t of material sold/produced and ready for sale) for a given calendar year.

A plan to reduce specific energy consumption and specific CO<sub>2</sub> emissions shall describe measures already taken or planned to be taken (e.g. more efficient use of existing equipment, investment in more efficient equipment, improved transportation and logistics etc.).

In addition, a total of 20 points may be granted as follows:

- Up to 10 points shall be awarded in proportion to how much of the energy consumed (fuel plus electricity) is from renewable sources (from 0 points for 0 % renewable energy, up to 10 points for 100 % renewable energy).
- Up to 5 points shall be awarded depending on the manner in which any renewable electricity is purchased as follows: via private energy service agreements for on-site or near-site renewables (5 points); corporate power purchase agreements for on-site or near-site renewables (5 points); long term corporate power purchase agreements for grid-connected or remote grid renewables <sup>(15)</sup> (4 points); green electricity certifications <sup>(16)</sup> (3 points); purchase of renewable energy guarantees of origin certificates for the full electricity supply or green tariff from utility supplier <sup>(17)</sup> (2 points).
- 3 points shall be awarded where a carbon footprint analysis has been carried out for the product in accordance with ISO 14067 or 5 points if the Product Environmental Footprint method's elements related to greenhouse gas emissions <sup>(18)</sup> has been used.

**Assessment and verification:** The applicant shall provide an energy inventory for the transformation plant for a period of at least 12 months prior to the date of award of the EU Ecolabel license and shall commit to maintaining such an inventory during the validity period of the EU Ecolabel license. The energy inventory shall distinguish the different types of fuel consumed, highlighting any renewable fuels or renewable content of mixed fuels. As a minimum, the specific-energy consumption and CO<sub>2</sub> emission reduction plan must define the baseline situation with specific energy consumption at the transformation plant when the plan was established, identify and clearly quantify the different sources of energy consumption at the transformation plant, identify and justify actions to reduce specific energy consumption and to report results on a yearly basis.

<sup>(15)</sup> According to Article 15(8) of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82).

<sup>(16)</sup> Based on guarantees of origin with independent third party verification of additional requirements according to Article 19 of Directive (EU) 2018/2001.

<sup>(17)</sup> Renewable energy sources disclosed according to Article 19(8) of Directive (EU) 2018/2001 and point 5 of Annex I to Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (OJ L 158, 14.6.2019, p. 125).

<sup>(18)</sup> [https://eplca.jrc.ec.europa.eu/permalink/PEF\\_method.pdf](https://eplca.jrc.ec.europa.eu/permalink/PEF_method.pdf)

The applicant shall provide details of the electricity purchasing agreement in place and highlight the share of renewables that applies to the electricity being purchased. If necessary, a declaration from the electricity provider shall clarify (i) the share of renewables in the electricity supplied, (ii) the nature of the purchasing agreement in place (i.e. private energy service agreement, corporate power purchase agreement, independent green energy certified or green tariff) and (iii) whether the purchased electricity is from on-site or near-site renewables.

In cases where guarantee of origin certificates are purchased by the applicant to increase the renewables share, the applicant shall provide appropriate documentation to ensure that the guarantee of origin certificates have been purchased in accordance with the principles and rules of operation of the European Energy Certificate System.

In cases where points are claimed for a carbon footprint analysis, the applicant shall provide a copy of the analysis, which shall be in accordance with ISO 14067 or the Product Environmental Footprint method and have been verified by an accredited third party. The footprint analysis must cover all manufacturing processes directly related to stone production at the quarry and the transformation plant, onsite and offsite transportation during production, emissions relating to administrative processes (e.g. operation of onsite buildings) and transport of the sold product to the transformation plant gate or local transportation hub (e.g. train station or port).

## 2.8. Water and wastewater management at the transformation plant

The applicant shall provide a description of water use in the natural stone transformation plant, including strategies and methods for collection, recirculation and reuse of water.

The recovery of solids from wastewater from cutting operations must be carried out onsite using sedimentation and/or filtration principles.

Clarified wastewater must be stored onsite and recirculated for cutting operations, dust control or other purposes.

In addition, 5 points shall be awarded for the installation of a rainwater collection system to collect and store rainwater that lands on impermeable areas onsite and prevents the surface flow of rainwater across working areas, and carrying suspended solid loads into any impermeable ponds (that supply water to the cutting equipment) or into natural watercourses.

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, supported by the relevant documentation describing water use onsite, of the wastewater/rainwater collection network and of the wastewater treatment and recirculation system.

## 2.9. Dust control at the transformation plant

The applicant shall demonstrate that operational site measures have been implemented for dust control at the transformation plant. Measures may vary from site to site but should include the following aspects for all sites:

- Use of dust suppression water sprays or vacuum hoods linked to dust filter bags/electrostatic precipitators for any dry cutting or shaping activities that are likely to generate significant quantities of dust.
- Regular cleaning of dust from indoor floor areas using either water sprays on surfaces that drain to a water treatment system onsite or the use of a vacuum device for dry dust removal (sweeping of dry dust should not be carried out).
- Provision of an enclosed storage area for all dewatered sludge from wet cutting and/or all dust from dry cutting operations prior to sale, prior to shipment for reuse, prior to reuse onsite or prior to shipment to landfill.
- Covering the most heavily used road areas with concrete or asphalt paving.
- Provision of appropriate training to employees about good practice for dust control and provision of adequate personal protective equipment to employees and visitors.
- Provision of routine medical check-ups for employees, with the possibility for more frequent monitoring for the identification of respiratory problems and possible onset of silicosis (the latter point being applicable only to transformation plants processing granite and other siliceous rock).

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, supported by relevant documentation and: (i) a description of the dust control measures implemented at the transformation plant and (ii) details of the medical check-up system for employees, as appropriate.

#### 2.10. Reuse of process waste from the transformation plant

The applicant shall complete an inventory of process waste production for the transformation plant. The inventory shall detail the type and quantity of waste produced (e.g. process scrap and process sludge).

The process waste inventory shall cover a 12 month period and, during that same period, the total product output shall be estimated both in terms of mass (kg or tonne) and surface area (m<sup>2</sup>).

At least 80 % by mass of the process scrap generated from natural stone processing operations onsite shall be reused in other applications or stored onsite in preparation for future sale.

In addition, a total of 10 points may be granted as follows:

- Up to 5 points shall be awarded in proportion to how much the applicant demonstrates a higher reuse rate of process scrap, up to a maximum of 100 % reuse by mass (from 0 points for 80 % process scrap reuse, up to 5 points for 100 % process scrap reuse).
- Up to 5 points shall be awarded in proportion to how much the applicant demonstrates any reuse of process sludge, up to a maximum of 100 % (from 0 points for 0 % process sludge reuse, up to 5 points for 100 % process sludge reuse).

**Assessment and verification:** The applicant shall provide a waste inventory for the transformation plant for a period of at least 12 months prior to the date of award of the EU Ecolabel license and shall commit to maintaining such an inventory during the validity period of the EU Ecolabel license.

The applicant shall provide a declaration of compliance with the mandatory requirement of this criterion, supported by a calculation of total production process scrap (in kg or t). Details about the destination of these process wastes shall also be provided with clarifications about whether it is external reuse in another process or sent to landfill. For any external reuse or landfill disposal, shipment notes shall be presented.

#### 2.11. Regionally integrated production at the transformation plant (optional)

This criterion applies to the transport distance between the quarry gate and the transformation plant gate and is specific to natural stone products originating from a given quarry.

Up to 5 points shall be awarded in proportion to the extent that applicants can demonstrate that the transportation distance for the intermediate dimension stone blocks from the quarry to the transformation plant is less than 260km (from 0 points if  $\geq 260$ km, up to 5 points if  $\leq 10$ km).

**Assessment and verification:** The applicant shall provide the address of the transformation plant and the address or the geographical location of the relevant quarry gate. The applicant shall also describe the transport mode(s) used to bring the intermediate dimension stone blocks to the transformation plant.

The transport route and total distance shall be estimated and indicated on a map using satellite image maps and freely available distance estimating software.

### 3. CRITERIA FOR AGGLOMERATED STONE PRODUCTS BASED ON RESIN BINDERS

#### Scoring system

The scoring system and the minimum number of points necessary for EU Ecolabel agglomerated stone products are presented in the table below.

Criteria where points can be awarded	Agglomerated stone products
1.7. Environmental Management System (optional)	0, 3 or 5 points
3.1. Energy consumption	Up to 30 points
3.3. Recycled/secondary material content	Up to 35 points
3.4. Resin binder content	Up to 20 points
3.5. Reuse of process waste	Up to 10 points
<b>Total maximum points</b>	<b>100</b>
<b>Minimum points required for EU Ecolabel</b>	<b>50</b>

#### 3.1. Energy consumption

The specific process electricity consumption for agglomerated stone production (including raw material batching, primary mixing, secondary mixing, moulding and finishing) shall not exceed 1,1 MJ/kg.

If grinding of stone raw material is carried out, the specific electricity consumption of the grinding process (in MJ/kg) shall be reported separately but shall not be added to the total for the process.

In addition, a total of 30 points may be granted as follows:

- Up to 10 points shall be awarded in proportion to how much the specific process electricity consumption is reduced towards a threshold of environmental excellence of 0,7 MJ/kg (from 0 points for 1,1 MJ/kg up to 10 points for 0,7 MJ/kg).
- Up to 10 points can be awarded in proportion to how much of the electricity consumed is from renewable sources (from 0 points for 0 % renewable electricity up to 10 points for 100 % renewable electricity).
- Up to 10 points shall be awarded depending on the manner in which any renewable electricity is purchased as follows: via private energy service agreements for on-site or near-site renewables (10 points); corporate power purchase agreements for on-site or near-site renewables (10 points); long term corporate power purchase agreements for grid-connected or remote grid renewables <sup>(19)</sup> (8 points); green electricity certifications <sup>(20)</sup> (6 points); purchase of renewable energy guarantees of origin certificates for the full electricity supply or green tariff from utility supplier <sup>(21)</sup> (4 points).

**Assessment and verification:** Specific process electricity consumption shall be calculated by dividing the electricity consumption for relevant process equipment by the volume of production (in kg or m<sup>3</sup>). Data reported shall be representative of the product(s) applying for the EU Ecolabel. In cases where different products covered by the same application have significantly different values, the data shall be reported separately for each product. In cases where production data is available in m<sup>3</sup>, it should be converted to kg using the relevant bulk density factor (in kg/m<sup>3</sup>) for the agglomerated stone product.

<sup>(19)</sup> According to Article 15(8) of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82).

<sup>(20)</sup> Based on guarantees of origin with independent third party verification of additional requirements according to Article 19 of Directive (EU) 2018/2001.

<sup>(21)</sup> Renewable energy sources disclosed according to Article 19(8) of Directive (EU) 2018/2001 and point 5 of Annex I to Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (OJ L 158, 14.6.2019, p. 125).

The applicant shall provide details of the electricity purchasing agreement in place and highlight the share of renewables that applies to the electricity being purchased. If necessary, a declaration from the electricity provider shall clarify (i) the share of renewables in the electricity supplied, (ii) the nature of the purchasing agreement in place (i.e. private energy service agreement, corporate power purchase agreement, independent green energy certified or green tariff) and (iii) whether the purchased electricity is from on-site or near-site renewables.

In cases where guarantee of origin certificates are purchased by the applicant to increase the renewables share, the applicant shall provide appropriate documentation to ensure that the guarantee of origin certificates have been purchased in accordance with the principles and rules of operation of the European Energy Certificate System.

### 3.2. Dust control and air quality

Any working areas where there is a risk of exposure to styrene, where the styrene concentration may exceed 20 ppm (or 85 mg/m<sup>3</sup>) according to monitoring data, shall be clearly indicated and be well ventilated.

Resin formulations shall be dosed and mixed using closed systems.

The applicant shall demonstrate site measures that have been implemented for dust control at the site. Measures may vary from site to site but should include the following aspects for all sites:

- Use of dust suppression water sprays or vacuum hoods linked to dust filter bags/electrostatic precipitators for any dry cutting, crushing or other activities that are likely to generate significant quantities of dust.
- Regular cleaning of dust from indoor floor areas using either water sprays on surfaces that drain to a water treatment system onsite or the use of a vacuum device for dry dust removal (sweeping of dry dust should not be carried out).
- Provision of an enclosed storage area for all dewatered sludge from wet cutting and/or all dust from dry cutting operations prior to sale, prior to shipment for reuse, prior to reuse onsite or prior to shipment to landfill.
- Covering the most heavily used road areas with concrete or asphalt paving.
- Provision of appropriate training to employees about good practice for dust control and the provision of adequate personal protective equipment to employees and visitors.
- Provision of routine medical check-ups for employees, with the possibility for more frequent monitoring for the identification of respiratory problems and possible onset of silicosis (the latter point being applicable only to plants working with quartz-based products).

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, supported by relevant documentation and: (i) a description of any working areas with an exposure risk to styrene and details of the ventilation system in place; (ii) a description of the dust control measures implemented at the production site and (iii) details of the medical check-up system in place for employees, as appropriate.

### 3.3. Recycled/secondary material content

The applicant shall assess and document the regional availability of virgin material, of recycled material from wastes produced by different production processes and of secondary material from by-products of different production processes. The approximate transport distances of the documented material sources shall be stated.

In addition, up to 35 points shall be awarded in proportion to the incorporation of recycled/secondary materials into the agglomerated stone product up to a threshold of environmental excellence threshold of 35 % w/w content (from 0 points for 0 % w/w, up to 35 points for ≥ 35 % w/w of recycled/secondary material content).

The incorporation of dust, cuttings and rejects of agglomerated stone products into new products shall not be considered as recycled content if it is going back into the same process that generated it.

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirement of this criterion, supported by documentation stating the identification and regional availability of virgin, recycled and secondary materials.



Recycled or secondary materials shall only be counted as contributing towards the content of recycled/secondary material if they are obtained from sources that are  $\leq 2,5$  times distant from the agglomerated stone production site than the main virgin materials used (e.g. marble and quartz).

A monthly balance sheet of recycled/secondary materials shall be presented for the 12 months of production prior to the date of award of the EU Ecolabel license and the applicant shall commit to maintaining such a balance sheet during the validity period of the EU Ecolabel license. The balance sheet shall provide the quantities of ingoing recycled/secondary materials (justified by delivery notes and invoices) and outgoing recycled/secondary materials in all sold or ready for sale agglomerated stone production with recycled/secondary material content claims (justified by product quantities and % claims).

Claims for recycled and/or secondary material content shall be representative of the mix composition(s) used at the batch level for the EU Ecolabel product(s). A general allocation of recycled and/or secondary materials shall not be permitted.

In cases where different products covered by the same license application have significantly different values, the data shall be reported separately for each product.

#### 3.4. Resin binder content

The use of polyester, epoxy or other resins in the production shall be limited to maximum 10 % of the total weight of the final product.

In addition, up to 20 points shall be awarded in proportion to how much the resin binder content is reduced towards the threshold of environmental excellence of 5 % (from 0 points for 10 % binder content, up to 20 points for 5 % binder content).

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirements of the criterion, supported by a calculation of the total use of resin binder as a % of the total weight of the agglomerated stone product.

Claims for binder content shall be representative of the mix composition(s) used at the batch level for the EU Ecolabel product(s).

In cases where different products covered by the same license application have significantly different values, the data shall be reported separately for each product.

#### 3.5. Reuse of process waste

The applicant shall complete an inventory of process waste production for the agglomerated stone production process. The inventory shall detail the type and quantity of waste produced (e.g. process scrap and process sludge).

The process waste inventory shall cover a 12 month period prior to the date of award of the EU Ecolabel and, during that same period, the total product output shall be estimated both in terms of mass (kg or tonne) and surface area (m<sup>2</sup>).

At least 70 % of process waste (scrap plus sludge) generated from agglomerated stone slab and block production shall be reused in other production processes.

In addition, up to 10 points shall be awarded in proportion to how much the applicant can demonstrate reuse of process waste, up to a maximum of 100 % (from 0 points for 70 % process waste reuse, up to 10 points for 100 % process waste reuse).

**Assessment and verification:** The applicant shall provide a waste inventory for the agglomerated stone production plant for a period of at least 12 months prior to the date of award of the EU Ecolabel license and shall commit to maintaining such an inventory up to date during the validity period of the EU Ecolabel license.

The applicant shall provide a declaration of compliance with the mandatory requirements of this criterion, supported by a calculation of total production process scrap and sludge (in kg or t). Details about the destination of these process wastes shall also be provided with clarifications about whether it is external reuse in another process or sent to landfill. For any external reuse or landfill disposal, shipment notes shall be presented.

In case it is not possible to provide specific data for a production line or product, the applicant shall refer to data for the entire plant.

## 4. CRITERIA FOR CERAMIC AND FIRED CLAY PRODUCTS

**Scoring system**

The scoring system and the minimum number of points necessary for EU Ecolabel ceramic and fired clay products are presented in the table below.

In cases where the applicant uses spray dried powder as a raw material and is not the producer of that raw material, the applicant shall declare the spray dried powder used to make the ceramic or fired clay product(s), supported by delivery invoices dating no more than 1 year prior to the application date. In that case, the applicant shall provide all relevant declarations from the producer of the spray dried powder that demonstrate compliance with all related EU Ecolabel requirements and any other relevant optional requirements that may result in points being granted.

For criteria 4.1 and 4.2, two sets of limits are defined for ceramic tiles depending on whether the EU Ecolabel license applies to a limited number of products (where stable operational data during the production run for representative periods should be submitted) or where the license applies to large numbers of product formats of a given product family <sup>(22)</sup> (where annual average data should be submitted). The limit values for annual average production are higher in order to account for energy needed to maintain kiln temperatures when the production line is not running (e.g. when changing tile formats) or when it is not running at full capacity (e.g. during night-shift or weekends).

Criteria where points can be awarded	Ceramic and fired clay products
1.7. Environmental Management System (optional)	0, 3 or 5 points
4.1. Fuel consumption for drying and firing	Up to 20 points
4.2. CO <sub>2</sub> emissions	Up to 25 points
4.4. Emissions of dust, HF, NO <sub>x</sub> and SO <sub>x</sub> to air	Up to 40 points
4.6. Reuse of process waste	Up to 10 points
<b>Total maximum points available</b>	<b>100</b>
<b>Minimum points required for EU Ecolabel</b>	<b>50</b>

## 4.1. Fuel consumption for drying and firing

Coal, petroleum coke, light fuel oil and heavy fuel oil shall not be used as fuels in dryers or kilns.

The specific fuel energy consumption for drying and firing processes shall not exceed the relevant mandatory limits defined below.

	Spray dryer		Ware dryer & kiln	
	Mandatory limit	Threshold of environmental excellence	Mandatory limit	Threshold of environmental excellence
Ceramic tile: individual product **	1,8 MJ/kg powder *	1,3 MJ/kg powder **	4,1 MJ/kg	3,2 MJ/kg
Ceramic tile: family of products ***			5,5 MJ/kg	4,3 MJ/kg
Fired clay pavers	n/a	n/a	3,5 MJ/kg	2,1 MJ/kg

\* limit applies only to fuel consumed in the spray dryer, 1 kg of dried powder includes any residual moisture content, which would typically be 5-7 %

\*\* data measured under stable operating conditions that are representative of the product during the production run

\*\*\* data measured over a period of one year, including baseline fuel consumption between production runs

<sup>(22)</sup> Three families of ceramic tile products are considered as per class I, II and III in EN 14411

In addition, up to 20 points shall be awarded in proportion to how much the specific fuel consumption for drying and firing processes is reduced towards the relevant threshold of environmental excellence in the table above (e.g. for fired clay pavers: from 0 points for 3,5 MJ/kg, up to 20 points for  $\leq 2,1$  MJ/kg).

For ceramic tile products where spray-dried powder is used (either produced onsite or offsite), two scores shall be calculated as per the previous paragraph: one for the spray-dried powder (SDP) and one for the ceramic tile kiln and ware dryer (KWD). The two scores shall then be converted into a single score as follows:

$$\text{Fuel}_{\text{score}} = 0,35(\text{SDP}) + 0,65(\text{KWD})$$

**Assessment and verification:** The applicant shall declare the specific fuel consumption value(s) for the relevant product(s) together with calculations to convert value(s) into a specific score. The specific fuel consumption shall be calculated by dividing the fuel consumption (in MJ) for relevant process equipment by production volume (in kg) during the relevant production period.

In cases where production data is only available in  $\text{m}^2$  but needs to be reported in kg, the value should be converted using a fixed bulk density factor (in  $\text{kg}/\text{m}^2$ ) for the product or family of products.

Data for an entire family of products shall be representative of any production line(s) for a 12 month period prior to the date of award of the EU Ecolabel. Data for specific individual products, shall be representative of stable conditions during the actual production run(s).

Volumetric or mass inputs of fuel to the kiln and dryer systems shall be taken from site readings and be converted into MJ by multiplying the volume/mass of fuel consumed over the defined production period (e.g. in kg, t, L or  $\text{Nm}^3$ ) by a specific or generic calorific value for the same fuel (e.g. in  $\text{MJ}/\text{kg}$ ,  $\text{MJ}/\text{t}$ ,  $\text{MJ}/\text{L}$  or  $\text{MJ}/\text{Nm}^3$ ).

In cases where fuel used to generate heat for drying operations is fed to a cogeneration system, the electricity generated by the system during the defined production period (measured in kWh and converted into MJ) should be subtracted from the total dryer fuel consumption reading.

#### 4.2. CO<sub>2</sub> emissions

The specific CO<sub>2</sub> emissions associated with fuel combustion and process emissions from raw material decarbonation during drying and firing processes shall not exceed the relevant mandatory limits defined below.

	Spray dried powder production		Ware dryer & kiln *	
	Mandatory limit	Threshold of environmental excellence	Mandatory limit	Threshold of environmental excellence
Ceramic tile: individual product ***	84 kgCO <sub>2</sub> /t powder *	54 kgCO <sub>2</sub> /t powder *	280 kgCO <sub>2</sub> /t	230 kgCO <sub>2</sub> /t
Ceramic tile: family of products ****			360 kgCO <sub>2</sub> /t	290 kgCO <sub>2</sub> /t
Fired clay pavers	n/a	n/a	192 kgCO <sub>2</sub> /t	129 kgCO <sub>2</sub> /t

\* limit applies only to fuel consumed in the spray dryer, 1 kg of dried powder includes any residual moisture content, which would typically be 5-7 %

\*\* limit applies only to fuel consumed in the ware dryer and kiln and estimated process emissions in the kiln

\*\*\* based on fuel consumption data measured under stable operating conditions that are representative of the product during the production run and assumed process emissions in the kiln from raw material carbonate content

\*\*\*\* based on fuel consumption data measured over a period of one year, including baseline fuel consumption between production runs and assumed process emissions in the kiln from raw material carbonate content.

In addition, up to 25 points shall be awarded in proportion to how much the specific CO<sub>2</sub> emissions are reduced towards the relevant threshold of environmental excellence indicated in the table above (e.g. for fired clay pavers: from 0 points for 192 kgCO<sub>2</sub>/t, up to 25 points for 129 kgCO<sub>2</sub>/t).

For ceramic tile products where spray-dried powder is used (either produced onsite or offsite), two scores shall be calculated as per the previous paragraph, one for the spray dried powder (SDP) and one for the ceramic tile kiln and ware dryer (KWD). The two scores shall then be converted into a single score as follows:

$$CO_{2\text{score}} = 0,35(SDP) + 0,65(KWD)$$

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirement of this criterion, supported by a statement of the calculated specific CO<sub>2</sub> emission in accordance with the following relevant methodology described below.

For products from installations within the scope of Directive 2003/87/EC of the European Parliament and of the Council <sup>(23)</sup>, the calculation of specific emissions per tonne of product shall be based on the emissions level and activity levels as per the monitoring methodology plan established under Article 6 of Commission Delegated Regulation (EU) 2019/331 <sup>(24)</sup> on free allocation rules.

For products from installations not within the scope of Directive 2003/87/EC, results shall be declared in accordance with the relevant calculation methodology defined in Commission Regulation (EU) No 601/2012 <sup>(25)</sup>.

For ceramic products that use spray dried powder produced in a separate installation as a raw material, the applicant shall provide a declaration from the spray dried powder producer stating the value of the annual average specific CO<sub>2</sub> emission value, in accordance with one of the two calculation methods described above for the most recent year of reporting.

In all cases, the specific CO<sub>2</sub> emission value shall be estimated at the level of the EU Ecolabel product(s) covered by the EU Ecolabel license. The relevant fuel consumption values calculated for criterion 4.1, the carbon intensities of the fuel(s) used and the average carbonate content of the raw material shall be used as the basis for calculating CO<sub>2</sub> emissions.

#### 4.3. Process water consumption

The facility producing the ceramic or fired clay product shall either:

- Have a closed loop wastewater recycling system for process wastewater that facilitates zero liquid discharge; or
- Be able to demonstrate that specific freshwater consumption is less than or equal to the consumption limits defined in the table below.

Product type	Is spray drying carried out onsite?	Consumption limit
ceramic tiles and fired clay pavers	Yes	1,0 L/kg
	No	0,5 L/kg

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirement, stating by which means they comply.

In cases where a zero liquid discharge system is in place for recycling process wastewater, they shall provide a brief description of the system and its main operating parameters.

<sup>(23)</sup> Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32).

<sup>(24)</sup> Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council (OJ L 59, 27.2.2019, p. 8).

<sup>(25)</sup> Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council (OJ L 181, 12.7.2012, p. 30).

In cases where such a system is not in place, total process water consumption data (in L or m<sup>3</sup>) and the total ceramic or fired clay production data (in kg or m<sup>2</sup>) shall be provided for the most recent calendar year or rolling 12 month period prior to the date of award of the EU Ecolabel.

In case it is not possible to provide specific data for a production line or product, the applicant shall refer to data for the entire plant.

Water consumption due to toilets, canteens and other activities not directly relevant to the production process should be metered separately and not be included in the calculation.

#### 4.4. Emissions of dust, HF, NO<sub>x</sub> and SO<sub>x</sub> to air

Measures to reduce dust emissions from “cold” dusty operations at the ceramic tile production site shall cover at least the reception, blending and milling of raw materials and the shaping and glazing/decoration of tiles.

The specific dust, HF, NO<sub>x</sub> and SO<sub>x</sub> emissions to air associated with the production of ceramic or fired clay products shall not exceed the relevant mandatory limits defined in the table below.

Emission parameter	Mandatory limit	Threshold of environmental excellence	Test method	Points available
Dust (spray dryer) *	90 mg/kg	n/a	EN 13284	n/a
Dust (kiln)	50 mg/kg	10 mg/kg	EN 13284	Up to 10
HF (kiln)	20 mg/kg	6 mg/kg	ISO 15713	Up to 10
NO <sub>x</sub> as NO <sub>2</sub> (kiln)	250 mg/kg	170 mg/kg	EN 14792	Up to 10
SO <sub>x</sub> as SO <sub>2</sub> (kiln)	1300 mg/kg	750 mg/kg	EN 14791	Up to 10

\* Only relevant for products that use spray-dried powder as a raw material

In addition, up to 40 points shall be awarded in proportion to how much the actual specific emissions of dust, HF, NO<sub>x</sub> and SO<sub>x</sub> are reduced towards the relevant thresholds of environmental excellence indicated in the table above (e.g. for HF emissions: from 0 points for 20 mg/kg, up to 10 points for ≤ 6 mg/kg).

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirements of this criterion, supported by (i) a description of the measures in place to reduce dust emissions from “cold” dusty operations and, (ii) site data in mg/Nm<sup>3</sup> and expressed as an annual average value calculated from daily average values. The data shall have been generated via continuous or periodic monitoring according to relevant EN or ISO standards. In cases of periodic monitoring, at least three samples shall be taken during stable running of the spray dryer or kiln for production runs of the EU Ecolabel product(s).

In cases where production data is only available in m<sup>2</sup> but needs to be reported in kg, the value should be converted using a fixed bulk density factor (in kg/m<sup>2</sup>) for the product or family of products.

Data for an entire family of products should be representative of any production line(s) for a 12 month period prior to the date of award of the EU Ecolabel. Data for specific individual products should be representative of stable conditions during the actual production run(s).

To convert exhaust gas monitoring results from mg/Nm<sup>3</sup> (at 18 % O<sub>2</sub> content) into mg/kg of ceramic/fired clay product, it is necessary to multiply by the specific gas flow volume (Nm<sup>3</sup>/kg product). One Nm<sup>3</sup> refers to one m<sup>3</sup> of dry gas under standard conditions of 273K and 101,3 kPa.

In case it is not possible to provide specific data for a production line or product, the applicant shall refer to data for the entire plant and allocate emissions to the EU Ecolabel production on a per mass basis.

#### 4.5. Wastewater management

Process wastewater from the production of ceramic or fired clay products shall be treated in line with one of the following options:

- Option 1: be treated onsite to remove suspended solids, with treated wastewater being returned to the production process as part of a zero liquid discharge system; or
- Option 2: be treated onsite to remove suspended solids (or not treated at all) prior to wastewater being sent to a third-party operated treatment works; or
- Option 3: be treated onsite to remove suspended solids prior to wastewater being discharged to local watercourses.

In cases where options 2 or 3 apply, the applicant or the third party wastewater treatment plant operator, as appropriate, must demonstrate compliance with the following limits for final treated effluent that is discharged to local watercourses.

Parameter	Limit	Test methods
Suspended solids	40 mg/l	ISO 5667-17
Cadmium	0,015 mg/l	ISO 8288
Lead	0,15 mg/l	ISO 8288

**Assessment and verification:** *The applicant shall provide a declaration of compliance, specifying which option applies to the production site.*

*In cases where a zero liquid discharge system is in place for recycling process wastewater, they shall provide a brief description of the system and its main operating parameters.*

*In cases where the treated or untreated wastewater is sent to a third party operated treatment plant, the operator of the plant shall declare the average concentrations of suspended solids, cadmium and lead in the final treated effluent and provide test reports based on weekly analysis of the discharged wastewater according to the standard test methods defined above or equivalent in-house laboratory methods. Less frequent testing may be permitted in cases where the operating permit allows.*

*In cases where process wastewater is treated onsite and effluent is discharged to the local watercourse, the applicant shall declare the average concentrations of suspended solids, cadmium and lead in the final treated effluent and provide test reports based on weekly analysis of the discharged wastewater according to the standard test methods defined above or equivalent in-house laboratory methods. Less frequent testing may be permitted in cases where the operating permit allows.*

#### 4.6. Reuse of process waste

The applicant shall complete an inventory of process waste production for the ceramic or fired clay production process. The inventory shall detail the type and quantity of process waste <sup>(26)</sup> produced.

The process waste inventory shall cover at least a 12 month period prior to the date of award of the EU Ecolabel and, during that same period, the total product output shall be estimated both in terms of mass (kg or tonne) and surface area (m<sup>2</sup>).

At least 90 % by mass of the process waste generated by ceramic or fired clay product manufacturing shall be reincorporated into the production process onsite, be reincorporated into ceramic or fired clay production processes offsite or be reused in other production processes.

In addition, up to 10 points shall be awarded in proportion to how much the reuse rates of process waste are increased towards the environmental excellence threshold of 100 % reuse (from 0 points for 90 % process waste reuse, up to 10 points for 100 % process waste reuse).

<sup>(26)</sup> Process waste shall be considered as sludge/dry solids from grinding, body preparation and glaze preparation, reject/broken material from shaping, drying, firing, rectification and surface finishing operations and residues from exhaust gas abatement systems such as separated dust/ashes, gas scrubbing residues and peelings from cascade adsorber bed materials.

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirements of this criterion, supported by a waste inventory for the ceramic or fired clay production plant for a period of at least 12 months prior to the date of award of the EU Ecolabel license and a calculation of total production process scrap and sludge (in kg or t). The applicant shall commit to maintaining such an inventory up to date during the validity period of the EU Ecolabel license.

Details about the destination of these process wastes shall also be provided with clarifications about whether it is internal reuse, external reuse in another process or sent to landfill. For any external reuse or landfill disposal, shipment notes shall be presented.

In case it is not possible to provide specific data for a production line or product, the applicant shall refer to data for the entire plant.

#### 4.7. Glazes and inks

In cases where ceramic tiles or fired clay products are glazed or decorated, the glaze formulation or ink shall contain less than 0,10 % wt. Pb and less than 0,10 % wt. Cd.

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirement of this criterion, supported by a relevant declaration or safety data sheet from the glaze or ink supplier.

5. **CRITERIA FOR PRECAST CONCRETE PRODUCTS OR COMPRESSED EARTH BLOCKS BASED ON HYDRAULIC BINDERS OR ALTERNATIVE CEMENTS**

**Scoring system**

The EU Ecolabel may be awarded both to the intermediate hydraulic binder or alternative cement product placed on the market and to final hard covering products made by mixing such binders or cements with aggregates and water, followed by further processing and curing.

In cases where the applicant is not the producer of the intermediate hydraulic binder or alternative cement product and the binder or cement product has not been awarded the EU Ecolabel, the applicant shall declare the binder(s) or the cement(s) used to produce the EU Ecolabel hard covering product(s), supported by delivery invoices dating no more than 1 year prior to the application date.

In that case, the applicant shall provide all relevant declarations from the producer of the hydraulic binder or the alternative cement that demonstrate compliance with all related EU Ecolabel requirements and any other relevant optional requirements that may result in points being granted.

The scoring system for each case and the minimum number of points necessary is presented in the table below.

	Hydraulic binder	Alternative cement	Cement-based hard covering products	Lime-based hard covering products
1.7. Environmental Management System for hydraulic binder production plant (optional)	0, 3 or 5 points	n/a	n/a	n/a
1.7. Environmental Management System for hard covering production plant (optional)	n/a	n/a	0, 3 or 5 points	0, 3 or 5 points
5.1. Clinker factor	Up to 15 points	Up to 15 points	Up to 15 points	n/a
5.2. CO <sub>2</sub> emissions	Up to 20 points	Up to 20 points	Up to 20 points	Up to 20 points
5.3. Emissions of dust, NO <sub>x</sub> and SO <sub>x</sub> to air	Up to 15 points	n/a or Up to 15 points	Up to 15 points	Up to 15 points
5.4. Recovery and responsible sourcing of raw materials	n/a	n/a	Up to 25 points	Up to 25 points
5.5. Energy consumption	n/a	n/a	Up to 20 points	Up to 20 points
5.6. Environmentally innovative product designs (optional)	n/a	n/a	Up to 10 points	Up to 15 points
<b>Total maximum points available</b>	<b>55</b>	<b>35 or 50</b>	<b>110</b>	<b>100</b>
<b>Minimum points required for EU Ecolabel</b>	<b>27,5</b>	<b>17,5 or 25</b>	<b>55</b>	<b>50</b>



## 5.1 Clinker factor

This criterion does not apply to lime-based hydraulic binders.

For hydraulic cement binders:

A clinker factor or at least the relevant EN 197-1 notation (which can be used as a proxy for the clinker factor according to the table below) shall be reported by the applicant or the supplier of the hydraulic cement binder.

EN 197-1 notation	Clinker factor assumed	EN 197-1 notation	Clinker factor assumed
CEM I	0,96	CEM II/A-L	0,83
CEM II/A-S	0,83	CEM II/B-L	0,68
CEM II/B-S	0,68	CEM II/A-LL	0,83
CEM II/A-D	0,88	CEM II/B-LL	0,68
CEM II/A-P	0,83	CEM II/A-M	0,80
CEM II/B-P	0,68	CEM II/B-M	0,68
CEM II/A-Q	0,83	CEM III/A	0,47
CEM II/B-Q	0,68	CEM III/B	0,25
CEM II/A-V	0,83	CEM III/C	0,09
CEM II/B-V	0,68	CEM IV/A	0,73
CEM II/A-W	0,83	CEM IV/B	0,52
CEM II/B-W	0,68	CEM V/A	0,72
CEM II/A-T	0,83	CEM V/B	0,57
CEM II/B-T	0,68		

Up to 15 points can be awarded to applicants in proportion to how much the clinker factor of the hydraulic cement binder is reduced towards the threshold for environmental excellence of 0,60 (from 0 points for clinker factor  $\geq 0,90$ , up to 15 points for clinker factor  $\leq 0,60$ ).

For alternative cements:

Up to 15 points can be awarded to applicants in proportion to how much the clinker factor of the cement is reduced towards the threshold for environmental excellence of 0,00 (from 0 points for clinker factor 0,30, up to 15 points for clinker factor 0,00).

**Assessment and verification:** The applicant shall provide a declaration of the specific clinker factor for the hydraulic binder or the relevant notation for the binder as per Table 1 of EN 197-1, for the hydraulic binder(s) supplied.

In cases where more than one hydraulic binder or alternative cement is used in the hard covering product (e.g. in dual layered terrazzo tile products), the applicant shall calculate the points that would apply to each hydraulic binder or alternative cement as if it was the only one used, then calculate a weighted average points total based on the relative addition of each hydraulic binder or alternative cement to the product.

## 5.2 CO<sub>2</sub> emissions

The CO<sub>2</sub> emissions associated with the production of Portland cement clinker, lime or alternative cements shall not exceed the relevant mandatory limits defined in the table below, when calculated using the relevant calculation method, also defined in the table below.

Product type	Mandatory limit	Threshold of environmental excellence	CO <sub>2</sub> calculation method
Grey Portland cement clinker	816 kgCO <sub>2</sub> /t clinker	751 kgCO <sub>2</sub> /t clinker	According to Regulation (EU) 2019/331 or Regulation (EU) No 601/2012, as appropriate
Lime	1028 kgCO <sub>2</sub> /t hydraulic lime	775 kg/CO <sub>2</sub> /t hydraulic lime	
White Portland cement clinker	1063 kgCO <sub>2</sub> /t clinker	835 kgCO <sub>2</sub> /t clinker	
Alternative cements	571 kgCO <sub>2</sub> /t cement	526 kgCO <sub>2</sub> /t cement	ISO 14067 carbon footprint for A1-A3 life cycle stages

In addition, up to 20 points shall be awarded in proportion to how much the CO<sub>2</sub> emissions are reduced towards the relevant threshold of environmental excellence indicated in the table above (e.g. for grey Portland cement clinker: from 0 points for 816 kgCO<sub>2</sub>/t clinker, up to 20 points for 751 kgCO<sub>2</sub>/t clinker).

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirement of this criterion, supported by a statement of the calculated specific CO<sub>2</sub> emission in accordance with the relevant methodology defined in the table above.

For products from installations within the scope of Directive 2003/87/EC, the calculation of specific emissions per tonne of product shall be based on the emissions level and activity levels as per the monitoring methodology plan established under Article 6 of Delegated Regulation (EU) 2019/331 on free allocation rules.

For products from installations not within the scope of Directive 2003/87/EC, results shall be declared in accordance with the relevant calculation methodology defined in Regulation (EU) No 601/2012.

In all cases, the specific CO<sub>2</sub> emission value shall be estimated at the level of the EU Ecolabel product(s) covered by the EU Ecolabel license. In cases where installations produce more than one type of product, the data shall be based on the actual production lines and processes used to manufacture the product to be licensed as far as is practical. In cases of emissions due to processes common to multiple products at the same installation, the emissions shall be allocated on a mass basis.

In cases where an alternative cement is used, the applicant shall provide a copy of the carbon footprint analysis, which shall be in accordance with ISO 14067 and have been verified by an accredited third party. The footprint analysis must cover production of all of the main raw materials used and all chemical activators for life cycle stages A1-A3. In the absence of specific data from material suppliers, the generic emission factors from a life cycle inventory database should be used.

In cases where more than one hydraulic binder or alternative cement is used in the hard covering product (e.g. dual layered terrazzo tiles), the applicant shall calculate the points that would apply to each hydraulic binder or alternative cement as if it was the only one used, then calculate a weighted average points total based on the relative addition of each hydraulic binder or alternative cement to the product.

### 5.3 Emissions of dust, NO<sub>x</sub> and SO<sub>x</sub> to air

This criterion applies to hydraulic binders, but not to alternative cements if their clinker content is ≤ 30 % w/w.

The specific dust, NO<sub>x</sub> and SO<sub>x</sub> emissions to air from the cement kiln or lime kiln shall not exceed the relevant mandatory limits defined in the table below:

Parameter	Mandatory specific emission limit	Threshold of environmental excellence	Test method	Points available
Dust	≤ 34,5 g/t clinker or hydraulic lime	≤ 11,5 g/t clinker or hydraulic lime	EN 13284	Up to 5
NO <sub>x</sub> (as NO <sub>2</sub> )	≤ 1472 g/t clinker or hydraulic lime	≤ 920 g/t clinker or hydraulic lime	EN 14791	Up to 5
SO <sub>x</sub> (as SO <sub>2</sub> )	≤ 460 g/t clinker or hydraulic lime	≤ 115 g/t clinker or hydraulic lime	EN 14792	Up to 5

In addition, up to 15 points can be awarded in proportion to how much the actual specific emissions (expressed as g/t clinker or g/t hydraulic lime) of dust, NO<sub>x</sub> and SO<sub>x</sub> are reduced towards the relevant thresholds for environmental excellence indicated in the table above (e.g. 0 points for 34,5 g/t clinker dust emissions, 5 points for 11,5 g/t clinker dust emissions).

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirements of this criterion, supported by site data for emissions from the cement kiln or lime kiln, in mg/Nm<sup>3</sup> and expressed as an annual average value calculated from daily average values. The site data shall have been generated via continuous monitoring according to relevant EN or ISO standards.

To convert exhaust gas monitoring results from mg/Nm<sup>3</sup> (at 10 % O<sub>2</sub> content) into g/t of clinker, it is necessary to multiply by the specific kiln gas flow volume (Nm<sup>3</sup>/t clinker). The specific gas flow volumes for cement kilns typically range from 1700 to 2500 Nm<sup>3</sup>/t clinker. The cement producer must clearly state the specific airflow rate in the calculations of dust, NO<sub>x</sub> and SO<sub>x</sub> emissions. One Nm<sup>3</sup> refers to one m<sup>3</sup> of dry gas under standard conditions of 273K and 101,3 kPa.

To convert exhaust gas monitoring results from mg/Nm<sup>3</sup> (at 11 % O<sub>2</sub> content) into g/t of lime, it is necessary to multiply by the specific kiln gas flow volume (Nm<sup>3</sup>/t lime). The specific gas flow volumes for lime kilns can generally range from 3000 to 5000 Nm<sup>3</sup>/t lime, depending on the kiln type used. The lime producer must clearly state the specific airflow rate in the calculations of dust, NO<sub>x</sub> and SO<sub>x</sub> emissions. One Nm<sup>3</sup> refers to one m<sup>3</sup> of dry gas under standard conditions of 273K and 101,3 kPa.

For continuous production campaigns, data should be representative of a 12 month period prior to the date of award of the EU Ecolabel license. For shorter production campaigns, the actual production period(s) shall be stated and site data should represent at least 80 % of the production campaign.

In case it is not possible to provide specific data for a production line or product, the applicant shall refer to data for the entire plant.

In cases where more than one hydraulic binder is used in the production of EU Ecolabel certified hard covering products (e.g. dual layered terrazzo tiles), the applicant shall calculate the points that would apply to each hydraulic binder as if it was the only one used, then calculate a weighted average points total based on the relative use of each hydraulic binder in the EU Ecolabel hard covering product production line.

#### 5.4 Recovery and responsible sourcing of raw materials

The applicant shall assess and document the regional availability of virgin material, recycled material from wastes produced by different production processes and secondary material from by-products of different production processes. The approximate transport distances of the documented material sources shall be stated.

The applicant shall have procedures in place for any batches of returned or rejected concrete in which all returned/rejected material is either:

- Recycled directly into new concrete batches which are cast prior to the returned/rejected concrete hardening; or
- Recycled as aggregate in new batches after returned/rejected concrete hardening; or
- Recycled offsite either prior to or after hardening as part of a contractual arrangement with a third party.

In addition, a maximum total of 25 points may be granted in relation to sourcing of raw materials as follows:

	<b>Cement-based products</b>	<b>Lime- or alternative cement-based products</b>
Recycled or secondary material content up to 30 %	Up to 20 points	Up to 25 points
Responsibly sourced virgin aggregate content up to 100 %	Up to 5 points	Up to 5 points
Responsibly sourced cement	5 points	n/a

**Assessment and verification:** The applicant shall provide a declaration of compliance with the mandatory requirements of this criterion, supported by documentation stating the transport distances of potential sources virgin, recycled and secondary materials. Alternatively, compliance with the mandatory aspects of this criterion can be demonstrated via a silver, gold or platinum certificate awarded by the Concrete Sustainability Council (CSC) to the concrete producer in accordance with version 2.0 of the CSC technical manual.

Recycled or secondary materials shall only be counted as contributing towards the content of recycled/secondary material if they are obtained from sources that are  $\leq 2,5$  times distant from the precast concrete production site than the main virgin materials used (e.g. coarse and fine aggregates and supplementary cementitious materials). The incorporation of dust and rejects of precast concrete products into new product shall not be considered as recycled content if it is going back into the same process that generated it.

Responsibly sourced materials shall have been certified as such by the Concrete Sustainability Council or an equivalent third party certification scheme.

A monthly balance sheet of recycled/secondary materials and responsibly sourced materials shall be presented based on the 12 months of production prior to the date of award of the EU Ecolabel license. The applicant shall commit to maintaining such an inventory up to date during the validity period of the EU Ecolabel license. The balance sheet shall provide the quantities of ingoing recycled/secondary and responsibly sourced materials (justified by delivery notes and invoices) and outgoing recycled/secondary materials and responsibly sourced materials in all sold or ready for sale precast concrete production with recycled/secondary material or responsibly sourced content claims (justified by product quantities and % claims).

Due to the batch nature of the precast concrete production process, recycled/secondary material content claims and claims on the use of responsibly sourced hydraulic binder, alternative cement or aggregates shall be based on mix compositions used at the batch level. Allocation of recycled/secondary/responsibly sourced materials shall not be permitted.

In cases where production data is only available in  $m^3$  but needs to be reported in kg, or vice versa, the value should be converted using a fixed bulk density factor for the relevant material.

## 5.5 Energy consumption

The applicant shall have established a program to systematically monitor, record and reduce energy consumption and specific CO<sub>2</sub> emissions in the precast concrete plant to optimal levels. The applicant shall report energy consumption as a function of energy source (e.g. electricity and diesel) and purpose (e.g. use of onsite buildings, lighting, cutting equipment operation, pumps and vehicle operation). The applicant shall report on energy consumption for the site both on an absolute basis (in units of kWh or MJ) and on a specific production basis (in units of kWh or MJ per  $m^3$ ,  $m^2$  or t of material sold/produced and ready for sale) for a given calendar year.

A plan to reduce specific energy consumption and CO<sub>2</sub> emissions shall describe measures already taken or planned to be taken (e.g. more efficient use of existing equipment, investment in more efficient equipment, improved transportation and logistics etc.).

In addition, a total of 20 points may be granted as follows:

- Up to 10 points shall be awarded in proportion to how much of the energy consumed (fuel plus electricity) is from renewable sources (from 0 points for 0 % renewable energy up to 10 points for 100 % renewable energy).

- Up to 5 points shall be awarded depending on the manner in which any renewable electricity is purchased as follows: via private energy service agreements for on-site or near-site renewables (5 points); corporate power purchase agreements for on-site or near-site renewables (5 points); long term corporate power purchase agreements for grid-connected or remote grid renewables <sup>(27)</sup> (4 points); green electricity certifications <sup>(28)</sup> (3 points); purchase of renewable energy guarantees of origin certificates for the full electricity supply or green tariff from utility supplier <sup>(29)</sup> (2 points).
- 3 points shall be awarded where a carbon footprint analysis has been carried out for the product in accordance with ISO 14067 or 5 points if the Product Environmental Footprint method's elements <sup>(30)</sup> related to greenhouse gas emissions has been used.

**Assessment and verification:** *The applicant shall provide an energy inventory for the precast concrete plant for a period of at least 12 months prior to the date of award of the EU Ecolabel license and shall commit to maintaining such an inventory during the validity period of the EU Ecolabel license. The energy inventory shall distinguish the different types of fuel consumed, highlighting any renewable fuels or renewable content of mixed fuels. As a minimum, the specific-energy consumption and specific CO<sub>2</sub> emission reduction plan must define the baseline situation with energy consumption at the precast concrete plant when the plan was established, identify and clearly quantify the different sources of energy consumption at the plant, identify and justify actions to reduce specific energy consumption and to report results on a yearly basis.*

*The applicant shall provide details of the electricity purchasing agreement in place and highlight the share of renewables that applies to the electricity being purchased. If necessary, a declaration from the electricity provider shall clarify (i) the share of renewables in the electricity supplied, (ii) the nature of the purchasing agreement in place (i.e. private energy service agreement, corporate power purchase agreement, independent green energy certified or green tariff) and (iii) whether the purchased electricity is from on-site or near-site renewables.*

*In cases where guarantee of origin certificates are purchased by the applicant to increase the renewables share, the applicant shall provide appropriate documentation to ensure that the guarantee of origin certificates have been purchased in accordance with the principles and rules of operation of the European Energy Certificate System.*

*In cases where points are claimed for a carbon footprint analysis, the applicant shall provide a copy of the analysis, which shall be in accordance with ISO 14067 or the Product Environmental Footprint method and have been verified by an accredited third party. The footprint analysis must cover all manufacturing processes directly related to hydraulic binder or alternative cement production, onsite and offsite transportation of raw materials to the precast concrete plant, precast concrete production, emissions relating to administrative processes (e.g. operation of onsite buildings) and transport of the sold product to the precast concrete plant gate or local transportation hub (e.g. train station or port).*

## 5.6 Environmentally innovative product designs (optional)

Precast concrete or compressed earth products that bring direct or indirect environmental benefits via one or more of the design features described below shall be awarded points in accordance with the design features they exhibit.

The total number of points granted under this criterion cannot exceed 15 points (for lime-based products) or 10 points (for all other precast concrete or compressed earth products).

<sup>(27)</sup> According to Art. 15(8) of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast) (OJ L 328, 21.12.2018, p. 82).

<sup>(28)</sup> Based on guarantees of origin with independent 3rd party verification of additional requirements according to Art. 19 of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast) (OJ L 328, 21.12.2018, p. 82).

<sup>(29)</sup> Renewable energy sources disclosed according to Art. 19.8 of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast) (OJ L 328, 21.12.2018, p. 82) and Annex I, paragraph 5 of Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast) (OJ L 158, 14.6.2019, p. 125).

<sup>(30)</sup> [https://eplca.jrc.ec.europa.eu/permalink/PEF\\_method.pdf](https://eplca.jrc.ec.europa.eu/permalink/PEF_method.pdf)

A total of up to 10 or 15 points, as appropriate, may be granted as follows:

- Up to 10 points shall be awarded in proportion to how the precast or pervious concrete floor tile, floor slab or paver product exceeds a minimum infiltration rate of 400 mm/h and approaches the threshold of environmental excellence of  $\geq 2000$  mm/h (from 0 points for 400 mm/h, up to 10 points for 2000 mm/h).
- Up to 10 points shall be awarded in proportion to how much the block, slab or panel product exceeds a minimum void space of 20 % and approaches the threshold of environmental excellence of  $\geq 80$  % void space (from 0 points for 20 % void space, up to 10 points for  $\geq 80$  % void space).
- Up to 15 points shall be awarded in proportion to how much the block, slab or panel product is below a maximum upper thermal conductivity limit of 0,45 W/m.K and approaches the threshold of environmental excellence of  $\leq 0,15$  W/m.K (from 0 points for  $\geq 0,45$  W/m.K, up to 15 points for  $\leq 0,15$  W/m.K).
- Up to 15 points shall be awarded in proportion to how much the hydraulic binder or alternative cement content has been reduced below a maximum upper limit of 10 % (expressed as % of total product weight) and approaches the threshold of environmental excellence of  $\leq 5$  % (from 0 points for  $\geq 10$  %, up to 15 points for  $\leq 5$  %).
- 10 points shall be awarded to paving units that are designed with void spaces to be filled with topsoil/sand/gravel and be seeded with grass and that can fit into permeable paving design solutions (commonly referred to a grass or turf pavers).

**Assessment and verification:** *The applicant shall provide a declaration stating whether or not this criterion is relevant to the product(s) subject to the EU Ecolabel application.*

*In cases where points are claimed due to infiltration rates of precast or pervious concrete floor tile, floor slab or paver products, the applicant shall provide test reports according to BS 7533-13, BS DD 229:1996 or similar standards.*

*In cases where the material efficient block, slab or panel criterion is relevant, the applicant shall provide a declaration of the % void content of the form by providing the dimensions of the product form in such detail that the total volume and the void volume can be calculated.*

*In cases where points are claimed due to highly insulating products with a low thermal conductivity, the applicant shall provide test reports according to EN 12667 or similar standards.*

*In cases where points are claimed due to a low hydraulic binder or alternative cement content, the applicant shall declare the specific binder content or at least a maximum upper binder content used.*

*In cases where the grass/turf open paver criterion is relevant, the applicant shall provide technical drawings of the concrete forms, images of real-life installations complete with vegetated surfaces and detailed installation instructions about how the products should be filled and seeded.*

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