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COMMISSION DECISION

of 9 July 2009

establishing the ecological criteria for the award of the Community eco-label to hard coverings

(Notified under document C(2009) 5613)

(Text with EEA relevance)

(2009/607/EC)

(OJ L 208, 12.8.2009, p. 21)

Amended by:

		Official Journal		
		No	page	date
►**M1**	Commission Decision 2013/295/EU of 17 June 2013	L 167	57	19.6.2013

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(Notified under document C(2009) 5613)

(Text with EEA relevance)

(2009/607/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Regulation (EC) No 1980/2000 of the European Parliament and of the Council of 17 July 2000 on a revised Community eco-label award scheme [1], and in particular the second subparagraph of Article 6(1) thereof,

After consulting the European Union Eco-labelling Board,

Whereas:

(1) Under Regulation (EC) No 1980/2000, the Community eco-label may be awarded to a product possessing characteristics which enable it to contribute significantly to improvements in relation to key environmental aspects.

(2) Regulation (EC) No 1980/2000 provides that specific eco-label criteria, drawn up on the basis of the criteria drafted by the European Union Eco-labelling Board, are to be established according to product groups.

(3) It also provides that the review of the eco-label criteria, as well as of the assessment and verification requirements related to those criteria, is to take place in due time before the end of the period of validity of the criteria specified for the product group concerned.

(4) Pursuant to Regulation (EC) No 1980/2000, a timely review has been carried out of the ecological criteria, as well as of the related assessment and verification requirements established by Commission Decision 2002/272/EC of 25 March 2002 establishing the ecological criteria for the award of the Community eco-label to hard floor coverings [2]. Those ecological criteria and the related assessment and verification requirements are valid until 31 March 2010.

(5) In the light of that review, it is appropriate, in order to take account of scientific and market developments, to modify the title and definition of the product group and to establish new ecological criteria.

[1] OJ L 237, 21.9.2000, p. 1.
[2] OJ L 94, 11.4.2002, p. 13.

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(6) The ecological criteria, as well as the related assessment and verification requirements, should be valid for four years from the date of adoption of this Decision.

(7) Decision 2002/272/EC should therefore be replaced.

(8) A transitional period should be allowed for producers whose products have been awarded the eco-label for hard coverings based on the criteria contained in Decision 2002/272/EC, so that they have sufficient time to adapt their products to comply with the revised criteria and requirements. Producers should also be allowed to submit applications set out under the criteria set in Decision 2002/272/EC or set out under the criteria set in this Decision until the lapse of validity of that Decision.

(9) Measures provided for in this Decision are in accordance with the opinion of the Committee instituted by Article 17 of Regulation (EC) No 1980/2000,

HAS ADOPTED THIS DECISION:

Article 1

The product group ‘hard coverings’ shall comprise — for internal/external use, without any relevant structural function — natural stones, agglomerated stones, concrete paving units, terrazzo tiles, ceramic tiles and clay tiles. For hard coverings, the criteria can be applied both to floor and wall coverings, if the production process is identical and uses the same materials and manufacturing methods.

Article 2

In order to be awarded the Community eco-label for products falling within the product group hard coverings under Regulation (EC) No 1980/2000 (hereinafter the eco-label), a hard covering shall comply with the criteria set out in the Annex to this Decision.

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Article 3

The ecological criteria for the product group ‘hard coverings’, as well as the related assessment and verification requirements, shall be valid until 30 November 2017.

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Article 4

For administrative purposes the code number assigned to the product group ‘hard coverings’ shall be ‘021’.

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Article 5

Decision 2002/272/EC is repealed.

Article 6

1. Applications for the eco-label for products falling within the product group hard covering submitted before the date of adoption of this Decision shall be evaluated in accordance with the conditions laid down in Decision 2002/272/EC.

2. Applications for the eco-label for products falling within the product group hard coverings submitted from the date of adoption of this Decision but by 31 March 2010 at the latest may be based either on the criteria set out in Decision 2002/272/EC or on the criteria set out in this Decision.

Those applications shall be evaluated in accordance with the criteria on which they are based.

3. Where the eco-label is awarded on the basis of an application evaluated according to the criteria set out in Decision 2002/272/EC, that eco-label may be used for 12 months from the date of adoption of this Decision.

Article 7

This Decision is addressed to the Member States.

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ANNEX

FRAMEWORK

The aims of the criteria

These criteria aim, in particular, at promoting:

— the reduction of impacts on habitats and associated resources,

— the reduction of energy consumption,

— the reduction of discharges of toxic or otherwise polluting substances into the environment,

— the reduction of use of dangerous substances in the materials and in the finished products,

— safety and absence of risk to health in the living environment,

— information that will enable the consumer to use the product in an efficient way which minimises the whole environmental impact.

The criteria are set at levels that promote the labelling of hard coverings that are produced with low environmental impact.

Assessment and verification requirements

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

This group can be divided into ‘natural products’ and ‘processed products’.

‘Natural products’ includes the natural stones, that, as defined by CEN TC 246 are pieces of naturally occurring rock, and include marble, granite and other natural stones.

‘Other’ natural stones refer to natural stones whose technical characteristics are on the whole different from those of marble and granite as defined by CEN/TC 246/N.237 EN 12670 ‘Natural stones — Terminology’. Generally, such stones do not readily take a mirror polish and are not always extracted by blocks: sandstone, quartzite, slate, tuff, schist.

The group of ‘processed products’ can be further divided into hardened and fired products. Hardened products are agglomerated stones, concrete paving units and terrazzo tiles. Fired products are ceramic tiles and clay tiles.

‘Agglomerated stones’ are industrial products manufactured from a mixture of aggregates, mainly from natural stone grit, and a binder as defined by JWG 229/246 EN 14618. The grit is normally composed of marble and granite quarry granulate and the binder is made from artificial components as unsaturated polyester resin or hydraulic cement. This group includes also artificial stones and compacted marble.

‘Concrete paving units’ are products for outer floor-coverings obtained by mixing sands, gravel, cement, inorganic pigments and additives, and vibro-compression as defined by CEN/TC 178. This group also includes concrete flags and concrete tiles.

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‘Terrazzo tiles’ are a suitably compacted element of uniform shape and thickness, which meets specific geometrical requirements as defined by CEN/TC 229. The tiles are single or dual-layered. The single-layered are tiles completely made of granulates or chipping of a suitable aggregate, embedded in grey and white cement and water. The dual-layered tiles are terrazzo tiles made up of the first face or wear layer (with single-layered composition) and a second layer, known as backing or base concrete layer, whose surface is not exposed during normal use and which may be partially removed.

‘Ceramic tiles’ are thin slabs from clays and/or other inorganic raw materials, such as feldspar and quartz as defined by CEN/TC 67. They are usually shaped by extruding or pressing at room temperature, dried and subsequently fired at temperatures sufficient to develop the required properties. Tiles can be glazed or unglazed, are non-combustible and generally unaffected by light.

‘Clay tiles’ are units which satisfy certain shape and dimensional requirements, used for the surface course of pavements and manufactured predominantly from clay or other materials, with or without additions as defined by CEN 178.

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

Where possible, testing should be performed by appropriately accredited laboratories or laboratories that meet the general requirements expressed in standard EN ISO 17025.

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

The competent bodies are recommended to take into account the implementation of recognised environmental management schemes, such as EMAS, ISO 14001 when assessing applications and monitoring compliance with the criteria (*note:* it is not required to implement such management schemes).

HARD COVERINGS

CRITERIA

1. **Raw material extraction**

1.1. *Extraction management (for natural products only)*

General requirements

The raw material extraction management for natural stones shall be ‘scored’ according to a matrix of six main indicators. The total score shall be based on the sum of individual scores given for each indicator, multiplied by a corrective weighting (W). Quarries must obtain a weighted score of at least 19 points to be eligible for the eco-label award. In addition, the score for each indicator must be higher or lower than the threshold specified, as appropriate.

See matrix overleaf.

In addition to the scoring table, all of the following mandatory conditions shall be met:

— there shall be no interference with any deep confined waterbed,

— there shall be no interference with surface water bodies with civil catching or springs, or if the water body is included in the Register of protected areas established by Directive 2000/60/EC of the European Parliament and of the Council ([1]) or if the watercourse's average flow is > 5 m^3/s,

([1]) OJ L 327, 22.12.2000, p. 1.

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— there shall be a waste water recovery closed system for avoiding sawing waste dispersion to the environment and to feed the recycling loop. Water shall be contained in close proximity to the place where it is used in quarrying operations and then it shall be conveyed by closed pipes to the suitable processing plant. After clearing, water shall be recycled.

Assessment and verification: the applicant shall provide the calculation of their total 'score' (weighted accordingly), and related data for each of the six indicators (showing, amongst others, that each score is above the minimum score, if one is given) according to the matrix overleaf and to the associated instructions in the Technical appendix — A1. The applicant shall also provide appropriate documentation and/or declarations that prove compliance with all of the above-mentioned criteria.

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Matrix for scoring raw material extraction management for natural stones

Indicator	Notes	Score				
		5 (excellent)	3 (good)	1 (sufficient)	Threshold	Relative weights
I.1. Water recycling ratio	$\frac{\text{Waste Water Recycled}}{\text{Total Water Leaving the Process}} \cdot 100$ See Technical appendix — A3	> 80	80 — 70	69 — 65	< 65	W3
I.2. Quarry impact ratio	m^2 affected area (quarry front + active dump) / m^2 authorised area [%]	< 15	15 — 30	31 — 50	> 50	W1, W2
I.3. Natural resource waste	m^3 usable material / m^3 extracted material [%]	> 50	50 — 35	34 — 25	< 25	—
I.4. Air quality	Yearly limit value measured along the border of quarry area. PM 10 suspended particles [$\mu g/Nm^3$] Testing method EN 12341	< 20	20 — 100	101 — 150	> 150	W2
I.5. Water quality	Suspended solids [mg/l] Testing method ISO 5667-17	< 15	15 — 30	31 — 40	> 40	W1, W2, W3
I.6. Noise	Measured along the border of quarry area (dB(A)) Testing method ISO 1996-1	< 30	30 — 55	56 — 60	> 60	W2

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List of weightings (to be used only where specified):

W1. Soil protection: (weightings: 0,3 — 0,8, see table) — for quarry impact ratio (I.2) and water quality (I.5) indicators, three different values of weights are considered, as a function of land use potentialities (see Technical appendix — A1 for details):

Soil protection	Classes I — II	Classes III — IV — V	Classes VI — VII — VIII
Weight	0,3	0,5	0,8

Assessment and verification: the applicant shall provide appropriate documentation, including a map, of the land capability classification of the quarry site.

W2. Population density of settlements which lie within a 5 km radius (distance) from the quarry site: (weightings: 0,5 — 0,9, see table) quarry impact ratio (I.2), air quality (I.4), water quality (I.5) and noise (I.6) indicators are weighted in function of three density ranges:

Population density	> 100 hab/km^2	20 to 100 hab/km^2	< 20 hab/km^2
Weight	0,5 (0,6)	0,7 (0,84)	0,9

Assessment and verification: the applicant shall provide a map and appropriate documentation to verify the population density of settlements lying within 5 km radius (distance) from the quarry border (authorised area). In the case of existing quarries and expanding settlements in the area concerned, the weight factor indicated in brackets shall be used. This does not refer to major extensions of the already authorised area of such quarries (> 75 %).

W3. (weightings: 0,5) — If the quarry interferes with surface water bodies (average flow < 5 m^3/s) there is a weight of 0,5 on both the indicators about water recycling ratio (I.1) and water quality (I.5).

Assessment and verification: the applicant shall provide appropriate documentation to show whether or not there is any interference between the quarry and the surface water body.

1.2. *Extraction management (for all hard covering products)*

The raw materials used in the production of hard coverings shall comply with the following requirements for the related extraction activities:

Parameter	Requirement
Extraction activity project and environmental recovery	The applicant shall provide a technical report including the following documents: the authorisation for the extraction activity; the environmental recovery plan and/or environmental impact assessment report; the map indicating the location of the quarry;

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Parameter	Requirement
	the declaration of conformity to Council Directive 92/43/EEC (1) (habitats) and Council Directive 79/409/EEC (2) (birds) (3). In areas outside the Community, a similar technical report is required to demonstrate compliance with the UN conservation on biological diversity (1992) and provide information on any national biodiversity strategy and action plan, if available.

(1) OJ L 206, 22.7.1992, p. 7.
(2) OJ L 103, 25.4.1979, p. 1.
(3) For detailed information see http://ec.europa.eu/environment/nature/index_en.htm

Assessment and verification: the applicant shall provide the related data and documents including a map of the area. If the extraction activity is not directly managed by the producers, the documentation shall always be requested to the extractor(s).

2. **Raw materials selection (for all hard coverings products)**

These requirements apply both to raw and secondary or recovered materials used in the production processes and to semi-processed products (1) (mixtures) that are purchased externally (i.e. suppliers shall also have to comply with the criteria.)

2.1. *Absence of risk phrases in raw materials*

No substances or preparations that are assigned, or may be assigned at the time of application, any of the following risk phrases (or combinations thereof):

— R45 (may cause cancer),

— R46 (may cause heritable genetic damage),

— R49 (may cause cancer by inhalation),

— R50 (very toxic to aquatic organisms),

— R51 (toxic to aquatic organisms),

— R52 (harmful to aquatic organisms),

— R53 (may cause long-term adverse effects in the aquatic environment),

— R54 (toxic to flora),

— R55 (toxic to fauna),

— R56 (toxic to soil organisms),

— R57 (toxic to bees),

— R58 (may cause long-term adverse effects in the environment),

— R59 (dangerous for the ozone layer),

— R60 (may impair fertility),

— R61 (may cause harm to the unborn child),

— R62 (possible risk of impaired fertility),

(1) Semi-processed products are balanced mixtures of different raw materials ready to be introduced in the production process.

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— R63 (possible risk of harm to the unborn child),

— R68 (possible risk of irreversible effects),

as laid down in Council Directive 67/548/EEC ([1]) (Dangerous Substances Directive), and considering Directive 1999/45/EC of the European Parliament and of the Council ([2]) (Dangerous Preparations Directive), may be added to the raw materials.

Alternatively, classification may be considered according to Regulation (EC) No 1272/2008 of the European Parliament and of the Council ([3]). In this case no substances or preparations may be added to the raw materials that are assigned, or may be assigned at the time of application, with and of the following hazard statements (or combinations thereof): H350, H340, H350i, H400, H410, H411, H412, H413, EUH059, H360F, H360D, H361f, H361d, H360FD, H361fd, H360Fd, H360Df, H341.

Due to the environmental advantages of the recycling of materials, these criteria do not apply to the quota of closed-loop recycled materials ([4]) used by the process and as defined in Appendix A2.

Assessment and verification: in terms of chemical and mineralogical analysis, the material formulation shall be provided by the applicant together with a declaration of compliance with the abovementioned criteria.

2.2. *Limitation of the presence of some substances in the additives (for glazed tiles only)*

Where lead, cadmium and antimony (or any of their compounds) are used in the glazes, their content shall not exceed the following specific limits:

(% in weight of the glazes ([1]))

Parameter	Limit
Lead	0,5
Cadmium	0,1
Antimony	0,25

([1]) Glazes are all the substances applied on the tiles surface between the tile shaping and the firing stage.

Assessment and verification: in terms of chemical and mineralogical analysis, the material formulation shall be provided by the applicant together with a declaration of compliance with the abovementioned limits.

2.3. *Limitation of the presence of asbestos and polyester resins in the materials*

No asbestos shall be present in the raw materials used for natural and processed products, as laid down in Council Directive 76/769/EEC ([5]).

([1]) OJ 196, 16.8.1967, p. 1.
([2]) OJ L 200, 30.7.1999, p. 1.
([3]) OJ L 353, 31.12.2008, p. 1.
([4]) 'Close loop recycling' means recycling a waste product into the same product. For secondary material arising from a manufacturing process (such as leftovers or remnants), 'closed loop recycling' means that the materials are used again in the same process.
([5]) OJ L 262, 27.9.1976, p. 201.

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The use of polyester resins in the production shall be limited by 10 % of the total weight of raw materials.

Assessment and verification: in terms of chemical and mineralogical analysis, the material formulation shall be provided by the applicant together with a declaration of compliance with the abovementioned requirements.

3. **Finishing operations (for natural products only)**

Finishing operations on natural products shall be made according to the following requirements:

Parameter	Limit (to pass)	Test method
Particulate emission to air	PM10 < 150 μg/Nm^3	EN 12341
Styrene emission to air	< 210 mg/N m^3	
Water recycling ratio	$\text{Recycling ratio} = \frac{\text{Waste Water Recycled}}{\text{Total Water Leaving the Process}} \cdot 100 \geq 90\ \%$	Technical appendix — A3
Suspended solid emission to water	< 40 mg/l	ISO 5667-17
Cd emission to water	< 0,015 mg/l	ISO 8288
Cr(VI) emission to water	< 0,15 mg/l	ISO 11083
Fe emission to water	< 1,5 mg/l	ISO 6332
Pb emission to water	< 0,15 mg/l	ISO 8288

Assessment and verification: the applicant shall provide the corresponding analysis and test reports for each emission parameter measured at all emission points. Where no test method is specified, or is mentioned as being for use in verification or monitoring, competent bodies should rely as appropriate on declarations and documentation provided by the applicant and/or independent verifications.

4. **Production process (for processed products only)**

4.1. *Energy consumption*

The energy consumption shall be calculated as process energy requirement (PER) for agglomerated stones and terrazzo tiles or as energy requirement for firing (ERF) for ceramic tiles and clay tiles.

(a) Process energy requirement (PER) limit

The process energy requirement (PER) for agglomerated stones and terrazzo tiles manufacturing processes shall not exceed the following levels:

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	Requirement (MJ/kg)	Test method
Agglomerated stones	1,6	Technical appendix — A4
Terrazzo tiles	1,3	Technical appendix — A4

Note: all the requirements are expressed in MJ per kg of final product ready to be sold. This criterion does not apply to concrete paving units.

Assessment and verification: the applicant shall calculate the PER according to the Technical appendix — A4 instructions and provide the related results and supporting documentation.

(b) Energy requirement for firing (ERF) limit

The energy requirement for firing (ERF) stages for ceramic tiles and clay tiles shall not exceed the following requirements:

	Requirement (MJ/kg)	Test method
Ceramic and clay tiles	3,5	Technical appendix — A4

Note: requirement expressed in MJ per kg of final product ready to be sold.

Assessment and verification: the applicant shall calculate the ERF according to the Technical appendix — A4 instructions and provide the related results and supporting documentation.

4.2. *Water consumption and use*

(a) The water consumption at the manufacturing stage, from raw material preparation to firing operations, for the fired products shall not exceed the following requirement:

(litres/kg of product)

Parameter	Requirement
Fresh water specific consumption (Cw_{p-a})	1

Assessment and verification: the applicant shall provide the calculation of fresh water specific consumption as indicated in the Technical appendix — A5. For fresh water, only groundwater, shallow water or water from the aqueduct should be considered.

(b) The waste water produced by the processes included in the production chain shall reach a recycling ratio of at least 90 %. The recycling ratio shall be calculated as the ratio between the waste water recycled or recovered by applying a combination of process optimisation measures and process waste water treatment systems, internally or externally at the plant, and the total water that leaves the process, as defined in the Technical appendix — A3.

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Assessment and verification: the applicant shall provide the calculation of the recycling ratio including raw data on total wastewater produced, water recycled and the quantity and source of fresh water used in the process.

4.3. *Emissions to air*

(a) Agglomerated stones

The emissions to air for the following parameters for the whole manufacturing process shall not exceed the following:

Parameters	Limit value (mg/m^2)	Test method
Particulate matter (dust)	300	EN 13284-1
Nitrogen oxides (as NO_x)	1 200	EN 14792
Sulphur dioxide (SO_2)	850	EN 14791
Styrene	2 000	—

Assessment and verification: the applicant shall provide appropriate documentation and test reports for each emission parameter mentioned above, following the indications of the Technical appendix — A6. Where no testing method is specified, or is mentioned as being for use in verification or monitoring, competent bodies should rely, as appropriate, on declarations and documentation provided by the applicant and/or independent verifications.

(b) Ceramic tiles

The total emissions to air of particulates for pressing, glazing and spray drying ('cold emissions') shall not exceed 5 g/m^2.

Assessment and verification: the applicant shall provide appropriate documentation and test reports, following the indications of the Technical appendix — A6.

The emissions to air for the firing stage only shall not exceed the following:

Parameters	Limit value (mg/m^2)	Test method
Particulate matter (dust)	200	EN 13284-1
Fluorides (as HF)	200	ISO 15713
Nitrogen oxides (as NO_x)	2 500	EN 14792
Sulphur dioxide (SO_2) Sulphur content in raw material $\leq$ 0,25 %	1 500	EN 14791
Sulphur dioxide (SO_2) Sulphur content in raw material > 0,25 %	5 000	EN 14791

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Assessment and verification: the applicant shall provide appropriate documentation and test reports for each emission parameter mentioned above, following the indications of the Technical appendix — A6.

(c) Clay tiles

The emissions to air for the following parameters for the clay tiles firing stage shall not exceed the specific limits calculated using the formula:

Value (mg/m^2) = Emission rate (mg/[m^2 *(area)* x cm *(thickness)*])

referred to in the following table:

Parameters	Emission rate ($mg/m^{2*}cm$)	Limit value (mg/m^2)	Test method
Particulate matter (dust)	250	1 000	EN 13284
Fluorides (as HF)	200	800	ISO 15713
Nitrogen oxides (as NO_x)	3 000	12 000	EN 14792
Sulphur dioxide (SO_2)	2 000	8 000	EN 14791

The limits calculated in this way shall not exceed the limit values provided in the table.

Assessment and verification: the applicant shall provide appropriate documentation and test reports for each emission parameter mentioned above, following the indications of the Technical appendix — A6.

(d) Terrazzo tiles and concrete paving units

The emissions to air for the following parameters for the whole manufacturing process shall not exceed the following values:

Parameters	Limit (mg/m^2)	Test method
Particulate matter (dust)	300	EN 13284-1
Nitrogen oxides (as NO_x)	2 000	EN 14792
Sulphur dioxide (SO_2)	1 500	EN 14791

Assessment and verification: the applicant shall provide appropriate documentation and test reports for each emission parameter mentioned above, following the indications of the Technical appendix — A6.

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4.4. *Emissions to water*

After waste water treatment, whether on-site or off-site, the following parameters shall not exceed the following limits:

Parameter	Limit	Test methods
Suspended solid emission to water	40 mg/l	ISO 5667-17
Cd emission to water	0,015 mg/l	ISO 8288
Cr(VI) emission to water	0,15 mg/l	ISO 11083
Fe emission to water ([1])	1,5 mg/l	ISO 6332
Pb emission to water	0,15 mg/l	ISO 8288

([1]) The 'Fe' parameter is applicable to all the processed products 'with the exclusion of ceramic tiles'.

Assessment and verification: the applicant shall provide appropriate documentation and test reports showing compliance with this criterion.

4.5. *Cement*

The use of raw materials for cement production shall be consistent with extraction management for processed products requirements (criterion 1.2).

Those producers who use cement in the production process shall comply with the following requirements:

— cement included in any product shall be produced using not more than 3 800 MJ/t of process energy requirement (PER), calculated as explained in the Technical appendix — A4,

— the cement included in any product shall be produced respecting the following air emission limits:

Parameter	Current limit (g/t)	Test methods
Dust	65	EN 13284-1
SO_2	350	EN 14791
NO_x	900	EN 14792

Assessment and verification: the applicant shall provide the relevant test reports and documentation related to the PER and the air emissions deriving from the cement production.

5. **Waste management**

All plants involved in the production of the product shall have a system for handling the waste and residual products deriving from the production of the product. The system shall be documented and explained in the application form and shall at least include information on the following three items:

— procedures for separating and using recyclable materials from the waste stream,

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— procedures for recycling materials for other uses,

— procedures for handling and disposing of hazardous waste.

Assessment and verification: the applicant shall provide appropriate documentation.

5.1. *Waste management (for natural products only)*

The applicant shall provide appropriate documentation about waste management deriving from quarrying and from finishing operation. Waste management and the reuse of by-products (sawing included) have to be declared.

Assessment and verification: the applicant shall provide a declaration of conformity with the requirement in accordance with the Directive 2006/21/EC of the European Parliament and of the Council ([1]).

5.2. *Recovery of waste (for processed products only)*

The applicant shall provide an appropriate documentation on the procedures adopted for the recycle of the by-products originated from the process. The applicant shall provide a report including the following information:

— kind and quantity of waste recovered,

— kind of disposal,

— information about the reuse (internally or externally to the production process) of waste and secondary materials in the production of new products.

At least 85 % (by weight) of the total waste generated by the process or the processes ([2]) shall be recovered according to the general terms and definitions established by Council Directive 75/442/EEC ([3]).

Assessment and verification: the applicant shall provide appropriate documentation based on, for example, mass balance sheets and/or environmental reporting systems showing the rates of recovery achieved whether externally or internally, for example, by means of recycling, reuse or reclamation/regeneration.

6. **Use phase**

6.1. *Release of dangerous substances (glazed tiles only)*

In order to control the potential release of dangerous substances in the use phase and at the end of the glazed tile's life, the products shall be verified according to the EN ISO 10545-15 test. The following limits shall not be exceeded:

Parameter	Limit (mg/m^2)	Testing method
Pb	80	EN ISO 10545-15
Cd	7	EN ISO 10545-15

Assessment and verification: the applicant shall provide an analysis and test reports with regard to the emission parameters mentioned above. This shall include a declaration of conformity of the product with the requirements of Council Directive 89/106/EEC ([4]) and with relevant harmonised standards created by CEN once published in the *Official Journal of the European Union*.

([1]) OJ L 102, 11.4.2006, p. 15.
([2]) Process wastes do not include maintenance wastes, organic wastes and urban wastes produced by auxiliary and office activities.
([3]) OJ L 194, 25.7.1975, p. 39.
([4]) OJ L 40, 11.2.1989, p. 12.

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7. **Packaging**

Paperboard used for the packaging of the final product should be designed for reuse or be made out of 70 % recycled materials.

Assessment and verification: a sample of the product packaging shall be provided together with a corresponding declaration of compliance with all the requirements.

8. **Fitness for use**

The product shall be fit for use. This evidence may include data from appropriate ISO, CEN or equivalent test methods, such as national or in-house test procedures.

An indication of the kind of use for which the product is fit for use has to be clearly specified: wall, floor or wall/floor if suitable for both purposes.

Assessment and verification: details of the test procedures and results shall be provided, together with a declaration that the product is fit for use based on all other information about the best application by the end-user. According to Directive 89/106/EEC a product is presumed to be fit for use if it conforms to a harmonised standard, a European technical approval or a non-harmonised technical specification recognised at Community level. The EC conformity mark 'CE' for construction products provides producers with an attestation of conformity easily recognisable and may be considered as sufficient in this context.

9. **Consumer information**

The product shall be sold with relevant user information, which provides advice on the product's proper and best general and technical use as well as its maintenance. It shall bear the following information on the packaging and/or on documentation accompanying the product:

(a) information that the product has been awarded the Community eco-label together with a brief yet specific explanation as to what this means in addition to the general information provided by box 2 of the logo;

(b) recommendations for the use and maintenance of the product. This information should highlight all relevant instructions particularly referring to the maintenance and use of products. As appropriate, reference should be made to the features of the product's use under difficult climatic or other conditions, for example, frost resistance/water absorption, stain resistance, resistance to chemicals, necessary preparation of the underlying surface, cleaning instructions and recommended types of cleaning agents and cleaning intervals. The information should also include any possible indication on the product's potential life expectancy in technical terms, either as an average or as a range value;

(c) an indication of the route of recycling or disposal;

(d) information on the Community eco-label and its related product groups, including the following text (or equivalent): 'for more information visit the EU eco-label website: http://www.ecolabel.eu'.

Assessment and verification: the applicant shall provide a sample of the packaging and/or texts enclosed.

10. **Information appearing on the eco-label**

Box 2 of the eco-label shall contain the following text:

Natural products:

— reduced impact of extraction on habitats and natural resources,

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— limited emission from finishing operations,

— improved consumer information and waste management.

Processed products:

— reduced energy consumption of production processes,

— reduced emissions to air and water,

— improved consumer information and waste management.

Assessment and verification: the applicant shall provide a sample of the packaging and/or texts enclosed.

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Technical appendix for hard coverings

The applicant shall provide all the required information calculated, measured or tested for the period immediately before the application. Measurements shall be representative for the respective series of testing and it should be consistent for all parts of the application as appropriate.

A1 **Raw material extraction — indicators and weights definitions**

Confined waterbed

The expression 'confined waterbed' identifies an artesian waterbed.

Average flow of the surface water bodies

The average flow of the watercourse that interferes with the quarry shall be calculated taking into account the authorised area of the considered quarry. The calculation shall be made multiplying the section of the water body by the velocity of the water. The values shall be representative of at least 12 months.

Indicator description

I.1. Water recycling ratio

See A3.

I.2. Quarry impact ratio

The calculation of I.2 consists of the measurement of the affected area, which includes quarry front and active dump areas, and of the authorised area. These areas should be measured during operating activities.

I.3. Natural resource waste

The calculation of I.3 consists of the evaluation of the usable material and of the total volume extracted yearly. Usable material refers to all the volume which can be used in any process: for example, commercial blocks, aggregate materials, everything else suitable for further processing and use.

I.4. Air quality

This indicator is described in Council Directive 1999/30/EC ([1]). The calculation of I.4 consists of the measurement, along the border of quarry area, of PM 10 suspended particles based on the specific requirements of the test method and the general provisions of that Directive (PM 10 are defined in Article 2(11)). The test method is defined in EN 12341.

I.5. Water quality

This indicator considers the total emissions of suspended solids after treatment on surface water flowing out of the quarry site. The calculation of I.5 consists of the measurement of total suspended solids using the test method reported in ISO 5667-17.

I.6. Noise

This indicator considers the noise level recorded along the border of the quarry area. Non-impulsive noises are to be measured. The calculation of I.6 consists in the measurement of the noise using the test method reported in ISO 1996-1.

([1]) OJ L 163, 29.6.1999, p. 41.

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Weight description

W1. Soil protection/land capability classification

According to the European Soil Bureau's indication, land is graded on the basis of its potentialities and the severity of its limitations for crop growth into eight capability classes. An indicative description of the classes is as follows:

— Class I soils have slight limitations that restrict their use,

— Class II soils have moderate limitations that reduce the choice of plants or require moderate conservation practices,

— Class III soils have severe limitations that reduce the choice of plants or require special conservation practices, or both,

— Class IV soils have very severe limitations that restrict the choice of plants or require very careful management, or both,

— Class V soils have little or no hazard of erosion but have other limitations, impractical to remove, that limit their use mainly to pasture, range, forest land, or wildlife food and cover,

— Class VI soils have severe limitations that make them generally unsuited to cultivation and that limit their use mainly to pasture, range, forest land, or wildlife food and cover,

— Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forest land, or wildlife,

— Class VIII soils and miscellaneous areas have limitations that preclude their use for commercial plant production and limit their use to recreation, wildlife, or water supply or for aesthetic purposes.

A2 **Raw materials selection**

‘Closed loop recycling’ means recycling a waste product into the same kind of product; for ‘secondary material’ arising from a manufacturing process (such as leftovers or remnants), ‘closed loop recycling’ means that the materials are used again in the same process.

A3 **Water recycling ratio**

The calculation of the water recycling ratio shall be consistent with the following formula based on the flows highlighted in Figure A1.

$$\text{Recycling ratio} = \frac{\text{Waste water recycled}}{\text{Total water exists the process}} \cdot 100 = \frac{R}{W1} \cdot 100$$

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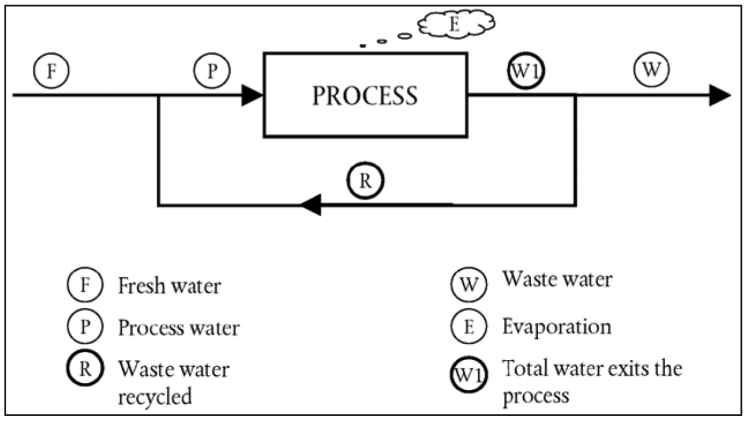


Figure A1: Water flow scheme that shall be used to calculate water recycling ratio ([1])

For waste water is meant only the water used in processing plants, not comprehensive of the fresh water coming from rain and subsoil water.

A4 **Energy consumption calculation (PER, ERF)**

When providing a calculation of process energy requirement (PER) or energy requirement for firing (ERF), the correct energy carriers shall be taken into account for the entire plant or for the firing stage only. Gross calorific values (high heat value) of fuels shall be used to convert energy units to MJ (Table A1). In case of use of other fuels, the calorific value used for the calculation shall be mentioned. Electricity means net imported electricity coming from the grid and internal generation of electricity measured as electric power.

Evaluation of PER for agglomerated stone production shall consider all energy flows entering the production plant both as fuels and electricity.

Evaluation of PER for terrazzo tiles production must consider all energy flows entering the production plant both as fuels and electricity.

Evaluation of ERF for ceramic tile production shall consider all energy flows entering all the kilns as fuels for the firing stage.

Evaluation of ERF for clay tile production shall consider all energy flows entering all the kilns as fuels for the firing stage.

Evaluation of PER for cement production shall consider all energy flows entering the production system both as fuels and electricity.

Table A1

Table for calculation of PER or ERF (see text for explanations)

Production period	Days	From	To	
Production (kg)				
Fuel	Quantity	Units	Conversion factor	Energy (MJ)
Natural gas		kg	54,1	
Natural gas		Nm^3	38,8	

([1]) 'W' means the waste water discharged into the environment.

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Production period	Days	From	To	
Production (kg)				
Fuel	Quantity	Units	Conversion factor	Energy (MJ)
Butane		kg	49,3	
Kerosene		kg	46,5	
Gasoline		kg	52,7	
Diesel		kg	44,6	
Gas oil		kg	45,2	
Heavy fuel oil		kg	42,7	
Dry steam coal		kg	30,6	
Anthracite		kg	29,7	
Charcoal		kg	33,7	
Industrial coke		kg	27,9	
Electricity (from net)		kWh	3,6	
			Total energy	
Specific energy consumption (MJ/kg of product)				

A5 **Water consumption calculation**

The fresh water specific consumption shall be calculated as follows:

$$CW_{p\text{-}a} = (W_p + W_a)/P_t$$

$Cw_{p\text{-}a}$ = fresh water specific consumption. The results are expressed in m^3/tonnes, equivalent to l/kg;

P_t = total stored production in tonnes;

W_p = water from wells and intended for exclusive industrial use (excluding water form wells for domestic use, irrigation and any other non-industrial use), in m^3;

W_a = water from aqueduct and intended for exclusive industrial use (excluding water form aqueduct for domestic use, irrigation and any other non-industrial use) in m^3.

The system boundaries are intended from raw materials to firing operation.

A6 **Emissions to air (for processed products only)**

The air pollutant emission factors shall be calculated as follows:

— the concentration in the exhaust gas emitted to the environment of each parameter considered in the tables shall be calculated,

— the measurements used for the calculation must be made following the testing methods indicated in the tables,

— the samplings shall be representative of the considered production.