

HARD COVERINGS
EU ECOLABEL AWARD SCHEME
USER MANUAL



EU Ecolabel

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For further information:

1) each of the Competent Bodies

http://ec.europa.eu/environment/ecolabel/contacts/competent_bodies_en.htm

2) the Ecolabel Helpdesk

http://ec.europa.eu/environment/ecolabel/contacts/helpdesk_en.htm

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MANUAL PURPOSE AND USE

This “User Manual ” or "application pack" , describes and explains the procedures for applying for the EU Ecolabel. The aim is to provide guidance to those companies that want to demonstrate their commitment to an integrated European product policy (IPP) by applying for the Ecolabel for Hard Covering products (abbreviated as HC) and the unique EU 'Flower' logo.

The manual provides background information to help Firms interpret the technical criteria for this product group and makes recommendations on the checks that the applicant and the corresponding Competent Body will need to carry out during the assessment and verification of the application.

Please note that this user manual, may be subject to amendment by the European Union Ecolabelling Board (EUEB) or at if requested by one of its members.

The manual is divided into two parts. The first (Part A) includes general information concerning the 'Flower', information manly on the standard contract, application fees, assessment of compliance and validity of the criteria compliance, monitoring, etc. The second, (Part B) comprises the product group definition, the requirements of the product and the documentation useful for the application. In addition, an Appendix (Checklist) and an Annex (Commission Decision) is attached.



A. GENERAL INFORMATION

Please read all these notes carefully. They are designed to help you to prepare the EU Ecolabel application correctly. An incomplete dossier may delay the processing of your application.

(see Checklist 1: details of the applicant and the product, decision-making questions)

A.1 Introduction

The European Ecolabel is the voluntary ecological quality label established by the European Union with the aim of promoting products that, during their whole life-cycle, have a lower environmental impact. The label offers detailed, objective and scientifically based information on the key environmental impacts of the product to the European consumer or purchaser. The EU Ecolabel Award Scheme is administered by designated organisations called Competent Bodies (CBs) appointed by each Member State. The Competent Bodies are required to assess any application against the product group definition and the criteria published by the European Commission under the provisions of Council and Parliament Regulation (EC) No.1980/2000 of 17 July 2000 on a revised Community Ecolabel award scheme (all documents can be downloaded from the Ecolabel web-site: <http://ec.europa.eu/environment/ecolabel/> or may be requested to Competent Bodies, EUEB stakeholders, the Ecolabel helpdesk (e-mail: ecolabel@biois.com) or the European Commission. Details of the general application procedures are provided in Article 7 of the revised EC Regulation. Any application for the EU Ecolabel must be made to a Competent Body (list of Competent Bodies: http://ec.europa.eu/environment/ecolabel/contacts/competent_bodies_en.htm) in the country or the countries where the product is produced or is sold. In the case of a product manufactured outside the European Economic Area (EEA), application must be made in a country in which the product is to be or has been placed on the market (compare Article 7 of the Regulation, paragraph 3 a, b, c). Products bearing the European Ecolabel, represented by the Flower logo, are usually consumer products selected by Member States and the European Commission rewarded both for environmental excellence and a high product performance.

A.2 Criteria for the Award of an Ecolabel

Commission Decision (2009/607/CE) establishes the ecological criteria for the award of the EU Ecolabel to Hard Coverings (HC) and supersedes “Commission Decision 2002/272/EC of 25th March 2002”.

To be eligible for award of the EU Ecolabel, products must comply with all the criteria set by the new decision. Products awarded the EU Ecolabel must also comply with the general requirements of the EC Ecolabel Regulation N°1980/2000 setting out the basic rules of the Flower scheme.

A.3 Application Fee

Along with the completed application form, an applicant must submit a non-refundable application fee of € 300 to € 1.300 with obligatory reductions of 25% for SMEs (small and medium enterprises) and applicants from developing countries.

A copy of the general decision on fees is downloadable from the web-site or may be obtained from any of the Competent Bodies



(http://ec.europa.eu/environment/ecolabel/ecolabelled_products/application_procedure_en.htm) or via the helpdesk.

Only if an application is successful will have to pay an annual fee, based on a percentage of sales. The minimum annual fee is € 500 per product group per applicant. The maximum annual fee is € 25.000 per product group per applicant. Note that there are several opportunities to get reductions of up to 50% on this annual fee e.g. as a SME, as an applicant from a developing country, if EMAS/ISO 14001 certification is achieved and/or as a 'first mover' (i.e. for the first three applicants in a given product group in a Member State). It is recommended to make contact with 'your' Competent Body as early as possible for this aspect.

A.4 Applicant's Undertaking

The applicant must sign the undertaking to abide by the terms and conditions contained in the standard contract for use of the EU Ecolabel logo and the product group criteria. This standard contract includes provisions on advertising and the use of the logo.

A.5 Assessment of Compliance with Specific Criteria

The product is assessed against the specified criteria for the award of the 'Flower' set in the decision. In order to demonstrate that the product fully complies with the criteria, detailed information and data relating to the performance of the product may be collated in the dossier. Application for an EU Ecolabel is made by assessing the candidate product and by providing complete documentation. The applicant must submit test results and information for which product testing has been carried out by an Independent Testing Organisation or have been approved by a third party (compare the Decision's Annex and its requirements specified in the text item by item). Information related to the assessment must be presented and is to be signed by the person(s) responsible for conducting the assessment (i.e. Firm's Legal representative). Certification must also be given by signing the declarations required in several cases. If required by the decision, test data relating to the product must demonstrate compliance with the requirements set out in the criteria.

A.6 Cost of Testing

All costs arising from testing and certifications are to be met by the applicant and are additional to the application fees mentioned above. The C.B.'s are recommended to take into account the implementation of recognised environmental management schemes, such as EMAS or ISO 14001, when assessing applications and monitoring compliance (note: it is not required to implement such management schemes for an application). With regard to some criteria, quality management systems or permanent measurements on or close to the site may also help in saving costs.

A.7 Compliance Monitoring

If the application is successful, the product is subject to a regime of compliance monitoring. The applicant has to agree to the terms set out in the standard contract concerning the full use of the Eco-label logo (box 1 and 2). The applicant must also sign the undertaking of this application form agreeing to maintain the product in conformity with the product group criteria and abide by the terms and conditions laid down in the contract for use of the Ecolabel, during the period of the contract.

A.8 Validity of Criteria

The product group definition and the specific ecological criteria are valid from 09 July 2009 for 4 years.



B. SPECIFIC INFORMATION

Please read all these notes carefully. They are designed to help you prepare the application correctly. An incomplete dossier may delay the processing of your application. (see Checklist 2: specific information)

B.1 Introduction

The Applicant shall assemble a dossier containing all relevant data and manufacturers' declarations related to the candidate product. This dossier should be presented as a part of the application to verify compliance with the criteria. If there is more than one candidate product, the information in the application dossier might be separated into one product specific part and one site specific part, in order to avoid duplicates in the application dossier information that is common to several candidate products. In the following notes, the levels of data collection (registrations) are specified for each of the nine criteria of the system. These specifications aim to be as product specific as possible, without causing unacceptable costs for data collection and laboratory tests. This means that the level of specificity generally is lower for those parts of the production process that usually are part of a complex production facility where a number of different products are processed at the same time. For each Ecolabelled product covered by the application, the applicant has to specify the product composition. All data will be treated confidentially by the C.B.

Raw materials, chemical products added and water content must be referred according to their percentages of the content in the HC products sold at the market.

The product group is structured in the following way (CEN definitions are reported in brackets) and can be subdivided into 2 major subgroups, "**natural products**" and "**processed products**" as follows.

"**Natural stones**" (CEN TC 246) are pieces of naturally occurring rock, and includes marble, granite and other natural stones.

"**Other natural stones**" refers 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 stones**" can be 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.



“**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 and manufactured predominantly from clay or other materials, with or without additions as defined by CEN 178.

The following classification shall be used to identify the candidate product (Table 1).

Table 1 - HC product group family classification

Hard Covering	Natural Product	Natural Stone (CENT 246)	Marble
			Granite
			Other
	Processed Product	A) Hardened Product	Agglomerate Stone JWG 229/246 EN 14618
			Concrete paving units CEN/TC 178
			Terrazzo tiles CEN/TC 229
		B) Fired Product	Ceramic tiles CEN/TC 67
Clay tiles CEN 178			

B.2 Testing Methods

The first part of the Annex of the decision specifies the adoption of test methods approved or in progress of approval by CEN or by ISO. Other test methods may be used if their equivalence is accepted by the Competent Body. For instance, if other consolidated and approved test methods for HC are used in Member States or third countries, they may substitute some of those set by CEN/ISO. In this case, the applicant should request approval for use from the Competent Body (CB) sufficiently in advance and provide a reasonable justification in writing underpinning the equivalence and comparability of such methods. The Competent Body can ask for additional documentation if appropriate. Where required testing is neither covered by CEN/ISO standards nor by CEN/ISO standards in progress of approval, other test methods are in some cases pointed out in this User Manual. These methods are indicative by nature and, as stated above, may be substituted by other methods in use. Again, request for approval for their use shall be addressed to the C.B. sufficiently in advance, accompanied by written justification. Independent or accredited institutes or laboratories should carry out the tests and the sampling must be performed in a competent manner. Where



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

Testing performed by on-site laboratories will be accepted, if the results are approved by the respective local authorities responsible for the working or emission permission of the plant or if the producer has been awarded a certificate for ISO 14001 or EMAS. There may be a case where the producer has to report the emission situation of plant continuously to the local authorities. In this case the verifying CB may check this situation and regard this as sufficient for the application. However, please contact your C.B. for approval before using different test and/or data requirement not indicated within the Decision.

B.3 Hard covering – definition

The product group definition for ‘hard coverings’ is defined as “— 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” (art. 1 Commission Decision 2009/607/CE)

B.4 Criteria

According to the criteria structure in Figure 1, it is possible to identify the main phases for each sub-product group reflected by a corresponding EU Ecolabel criterion.

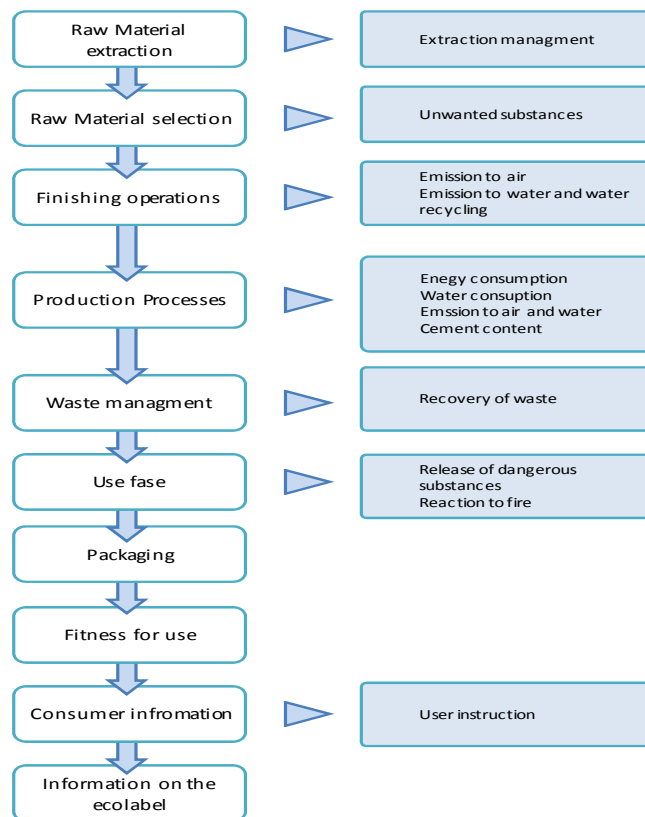


Figure 1- The criteria structure with the main phases considered



This separation of requirements and processes should facilitate the calculation of the ecological criteria .
Table 2 summarises the criteria that are required for each product family.



Table 2 - Scheme of the different HC criteria sub divided per families.

Criteria	Natural products			Processed products				
	Marble	Granite	Other	Hardened products			Fired products	
				Agglomerated	Concrete	Terrazzo	Ceramic tiles	Clay tiles
1 Raw material extraction								
1.1 Extraction management	•	•	•					
1.2 Extraction management				•	•	•	•	•
2 Raw material selection	•	•	•	•	•	•	•	•
3 Finishing operation	•	•	•					
4 Production processes								
4.1 Energy consumption				•		•	•	•
4.2 Water consumption and use				•	•	•	•	•
4.3 Emissions to air				•	•	•	•	•
4.4 Emissions to water				•	•	•	•	•
4.5 Cement				•	•	•		
5 Waste management	•	•	•	•	•	•	•	•
5.1 Waste management	•	•	•					
5.2 Recovery of waste				•	•	•	•	•
6 Use phase								
6.1 Release of dangerous substances							•	•
7 Packaging	•	•	•	•	•	•	•	•
8 Fitness for use	•	•	•	•	•	•	•	•
9 Consumer information	•	•	•	•	•	•	•	•
10 Information appearing on the EU Ecolabel	•	•	•	•	•	•	•	•



The following paragraphs are explained in the same order of the criteria Decision document.

B 4.1 Raw Material Extraction

Generally, raw material extraction activities concern all the products families. Thus, some general criteria have been defined to limit environmental impacts deriving from these phases. These criteria are related to quarries in terms of operating and closing activities, habitat impact or destruction, materials and waste management, environmental recovery of the quarry, air and water quality. For processed products, due to the lower relative importance in a life-cycle- analysis perspective versus the other impacts, the extraction activities are related to the environmental recovery of the involved area

4.1.1 Extraction Management (natural products)

First of all, there are three starting conditions to be met by the applicant:

1) There shall be no interference with a deep confined waterbed; the expression “confined waterbed” identifies an artesian waterbed. An artesian waterbed is an imprisoned waterbed when a permeable layer is compressed between two sloping waterproof layers. The applicant shall provide to the C.B. a copy of an official hydro -geological map of the site to prove compliance with this condition.

2) 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 a Member State according to Directive 2000/60/EC of the European Parliament and the Council of 23 October establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1) or if the watercourse's average flow is $>5 \text{ m}^3/\text{s}$ (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 (section = width multiplied with average depth, expressed in m^2) by the velocity of the water (in m/s). The values shall be representative of at least 12 months and the C.B. is entitled to ask you for additional documentation or to check some values on the spot if appropriate);

The applicant shall provide the C.B. with a copy of an official hydro-graphic map of the site to prove compliance for this condition. In addition, it shall be provided an official Register of Surface Water Body and an official Register of Protected Areas. The applicant may obtain this information by contacting the responsible water Directive Authorities. In the absence of an appropriate register of protected areas according to the Water Framework Directive, a self-declaration including contacts taken should be submitted. Further, information on the European water legislation may be available at http://europa.eu/legislation_summaries/environment/water_protection_management/index_en.htm and through the water authorities. Generally, a register of protected areas is set up for all areas lying in each river basin district which have been designated as requiring special protection under specific Community legislation for the protection of their surface water and groundwater for the conservation of habitats and species depending on water. The register will also include all bodies of water used for the abstraction of drinking water, e.g. areas designated for the protection of economically significant aquatic species, recreational bodies including such under the bathing water directive, nutrient sensitive areas, areas designated for nature protection including relevant Natura 2000 sites etc.



3) There shall be a waste water recovery closed system, that is a system of water collection for avoiding sawing waste dispersion to the environment, and for avoiding transfer pollution load by rain water into the soil. 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.

The raw material extraction management shall be 'scored' according to a matrix of **six main indicators (I)**. 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 EU Ecolabel award, for this criteria. In addition, the score for each indicator must be higher or lower than the threshold specified, as appropriate.

Table 4 - Table for extraction management criterion (outlined cells in grey : corrective weights applicable with relative multipliers).

Indicator \ Weight	Value	Score	W1	W2	W3	Weighted score
I. 1 - Water recycling ratio					if I.1 and I.5 both >0,5 : 0,5	
I. 2 - Quarry impact ratio			cl. I-II: 0,3 cl. III-V: 0,5 cl. VI-VIII: 0,8	> 100 hab/km ² : 0,5 (0,6) 20 to 100 hab/km ² : 0,7 (0,84) < 20 hab/km ² : 0,9		
I. 3 - Natural resource waste						
I. 4 - Air quality				> 100 hab/km ² : 0,5 (0,6) 20 to 100 hab/km ² : 0,7 (0,84) < 20 hab/km ² : 0,9		
I. 5 - Water quality			cl. I-II: 0,3 cl. III-V: 0,5 cl. VI-VIII: 0,8	> 100 hab/km ² : 0,5 (0,6) 20 to 100 hab/km ² : 0,7 (0,84) < 20 hab/km ² : 0,9	if I.1 and I.5 both >0,5 : 0,5	
I. 6 - Noise				> 100 hab/km ² : 0,5 (0,6) 20 to 100 hab/km ² : 0,7 (0,84) < 20 hab/km ² : 0,9		
Total						

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 for scoring raw material extraction management for natural stones 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 abovementioned criteria. The three weights to be applied to the indicators are explained below



INDICATORS

I. 1) Water recycling ratio.

Information required	* Total waste water recycled in m ³ * Total water that exits the process in m ³		
Applicable corrective WEIGHT	W3	Threshold	< 65

The calculation of **I. 1** shall be consistent with the following formula based on the flows highlighted in Figure 2.

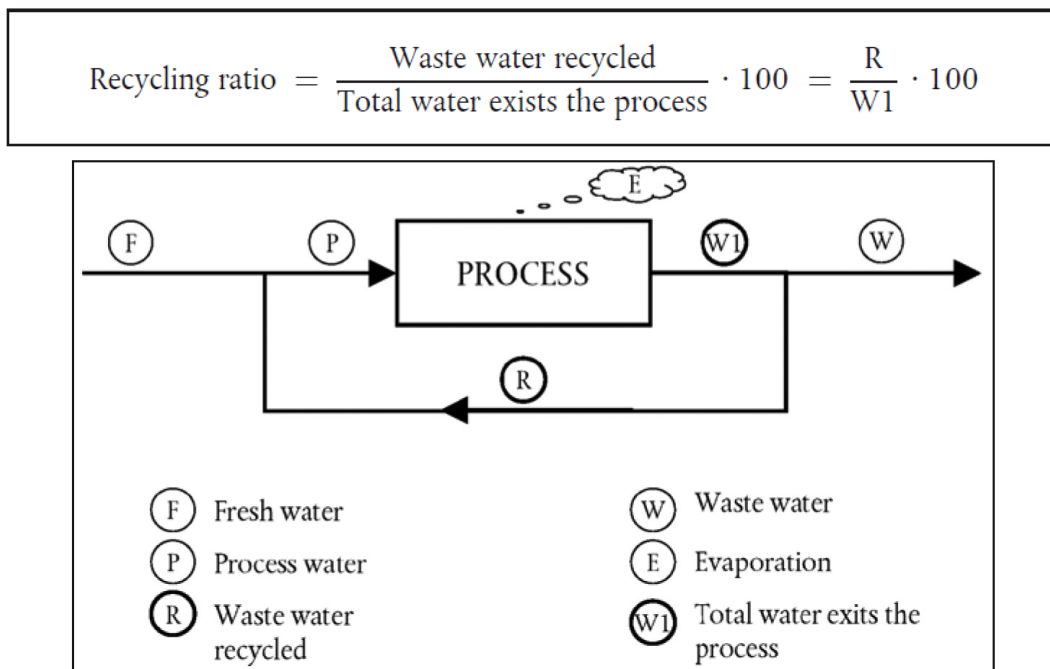


Figure 2 Water flow scheme that shall be used to calculate I1 (W means the waste water discharged into the environment).

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

Definition:

- 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.



I. 2) Quarry impact ratio.

Information required	* Total affected area: Quarry front Active dump areas; * Authorised area.		
Applicable corrective WEIGHT	W1 W2	Threshold	> 50

The calculation of **I2** consists of the ratio of the affected area, which includes the area that is actively used i.e. the quarry front, active dump areas and the authorised area. For **authorised area**, this is defined as the area that is permitted by the authority for extractive activities. These areas should be measured during operating activities.

Quarry impact ratio Formula:

$$\mathbf{I.2 \text{ [\%]} = \frac{\text{affected area (quarry front + active dump) [m}^2\text{]}}{\text{authorised area [m}^2\text{]}}$$

I. 3) Natural resource waste

Information required	* Total m ³ of usable material produced in the year of reference		
Applicable corrective WEIGHT	No weight applicable	Threshold	< 25

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 is not destined for dumps: e.g. commercial blocks, aggregate materials and everything else suitable for further processing and use.

Natural resource waste formula:

$$\mathbf{I.3 \text{ [\%]} = \frac{\text{usable material [m}^3\text{]}}{\text{extracted material [m}^3\text{]}}$$

I. 4) Air quality

Information required	*PM 10 suspended particles in along the border of the authorised area measured in µg/m ³		
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Applicable corrective WEIGHT	W2	Threshold	> 150
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This indicator is described in Council Directive 1999/30/EC of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air. The calculation of **I. 4** consists of the measurement, along the border of quarry area, of the **PM 10** suspended particles based on the specific requirements of the test method and the general provisions of the Council Directive (PM 10 are defined in article 2-11 as particulate matter which passes through a size-selective inlet with a 50% efficiency cut-off at 10µm aerodynamic diameter). The test method is defined in EN 12341.

Air quality formula:

I. 4 [$\mu\text{g}/\text{m}^3$] = Yearly limit value measured along the border of authorised area: PM 10 suspended particles

I. 5) Water quality

Information required	*Suspended solids in mg/l		
Applicable corrective WEIGHT	W1;W2;W3	Threshold	> 40

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**.

Water quality -- Sampling -- Part 17: Guidance on sampling of suspended sediments (available in English only e.g. via standardization institutes or ISO <http://www.iso.org>). Other standard may also be used if accepted by the CB e. g. SFS EN 872

Water quality formula:

I.5 [mg/l] = Suspended solids

I. 6) Noise

Information required	*Measurement of dB(A)		
Applicable corrective WEIGHT	W2	Threshold	> 60



This indicator considers the noise level recorded along the border of the quarry area. Only 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**.

The quarry may be surrounded or neighboured by another particular noisy source outside the authorised area e.g. transport activities such as highways, railways, ports or industrial activities such as sawmills etc. In such cases, in order to identify the real noise connected with the extraction activities only, the measurements shall be taken during the working hours of the quarry and when activities of such conflicting sources are either stopped or at least at a minimum level.

Noise level formula:

$$\mathbf{I.8 [dB(A)] = noise level measured along the border of quarry area}$$

WEIGHTS

The following **weights** must be used where appropriate to calculate the final score as indicated in the matrix of Table 3.1.

WI)

Soil protection: 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.

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 indicate below:

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, forestland, 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, forestland, 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, forestland, 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.



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 an official geo-pedological chart of the quarry area and a pedological documentation or other analysis focused on the land capability classification of the quarry site. Other systems of soil classification may be used provided sufficient compatibility with the system indicated above.

W2)

Population density of settlements which lying within a 5 km radius (distance) from the quarry site: quarry impact ratio (I. 2), air quality (I. 4), water quality (I. 5) and noise (I. 6)ranges:

Population density	> 100 hab/ km ²	20-100 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 the most recent official census to verify the population density of settlements lying within 5 km radius (distance) from the quarry border (authorised area). 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%). In case of existing quarries and expanding settlements other appropriate documentation may also be used e.g. from previous and current land use using GIS or EIS data or from maps and records showing previous permits and land use.

W3)

water-body interference if the quarry interferes with surface water-bodies average flow <5 m /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 an official hydro-graphic chart or appropriate records e.g. of the site's permit to show whether or not there is any interference between the quarry and the surface water- body.



4.1.2 Extraction management

Applicable to the following PRODUCT	NATURAL PRODUCTS and PROCESSED PRODUCTS
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The raw materials used in the production of processed hard floor-coverings shall comply with the following requirements for the related extraction activities (Table 5).

Table 5 - Hurdle for the extraction management of processed products.

Parameter	Requirement
<i>Extraction activity project and environmental recovery</i>	<p><i>The applicant shall provide a technical report including the following documents:</i></p> <ul style="list-style-type: none"> • <i>the authorisation for the extraction activity;</i> • <i>the environmental recovery plan and/or Environmental Impact Assessment report;</i> • <i>the map indicating the location of the quarry;</i> • <i>the declaration of conformity to the Directive 92/43/CEE (habitats)¹ and Directive 79/409/CEE² (birds)³ and their subsequent amendments. In areas outside the European 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.</i>

Extraction activity project and a technical report including a statement of the applicant is required environmental recovery to demonstrate that the extraction activity and the environmental recovery are in full compliance with both Directive 92/43/EEC (habitats) and Directive 79/409/EEC (birds), and their subsequent amendments. In areas outside the European Community, a similar technical report is required to demonstrate the conformity to the criteria.

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.

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



B 4.2 Raw material selection (for all products)

Applicable to the following PRODUCT	NATURAL PRODUCTS and PROCESSED PRODUCTS
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B 4.2.1 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)
- R63 (possible risk of harm to the unborn child)
- R68 (possible risk of irreversible effects)

as laid down in Council Directive 67/548/EEC of 27 June 1967 (Dangerous Substances Directive) on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances⁴, and its subsequent amendments, and considering the Council Directive 1999/45/EC (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 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 1907/2006⁵. 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

⁴ (1) OJ 196, 16.8.1967, p. 1.

⁵ OJ L 353, 31.12.2008, p.1.



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 used by the process and as defined in Appendix A2. "Close loop recycling" means "recycling a waste product into the same product and 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.

Assessment and verification: the applicant shall provide a valid chemical and mineralogical analysis about the raw material formulation and a declaration of compliance with the criteria. A brief technical report including a statement of the applicant is required to demonstrate the implementation of a closed-loop recycling management system of material used by the process. Obviously, this aspect may take also shape of implementing e.g. a certified environmental management system such as EMAS/ISO 14001 and/or an ISO quality system ensuring a reliable monitoring particularly of the whole input side of the process. In such cases, the verifier may also include a similar statement on behalf of the applicant.

B 4.2.2 Limitation of the presence of some substances in the additives

Applicable to the following PRODUCT	GLAZED PRODUCTS
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Where lead, cadmium and antimony (or any of their compounds) are used in the "additives", their content shall not exceed the following specific limits (Table 6). **Here the term "additive" is used instead of "glaze"**. Glazes are all the substances applied on the tiles surface between the tile shaping and the firing stage.

Table 6 - Specific hurdle for glazes

Parameter	Limit (% in weight of the glazes ⁶)
Lead	0.5
Cadmium	0.1
Antimony	0.25

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.

B. 4.2.3 Limitation of the presence of asbestos and polyester resins in the materials

Applicable to the following PRODUCT	NATURAL PRODUCTS PROCESSED PRODUCTS
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⁶ Glazes are all the substances applied on the tiles surface between the tile shaping and the firing stage.



No asbestos shall be present in the raw materials used for natural and processed products, as laid down in the EU Directive 1999/77/EC. 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.

B. 4.3 Finishing Operations

Applicable to the following PRODUCT	NATURAL PRODUCTS
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After quarry activities all finishing operations on natural products must fulfil following limits (Table 7):

Table 7 - Specific hurdle for glazes

Parameter	Limit (to pass)	Test method
Particulate emission to air	$PM_{10} < 150 \mu\text{g}/\text{Nm}^3$	EN 12341
Styrene emission to air	$< 210 \text{ mg}/\text{N m}^3$	
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	$< 40 \text{ mg}/\text{l}$	ISO 5667-17
Cd emission to water+	$< 0,015 \text{ mg}/\text{l}$	ISO 8288
Cr(VI) emission to water	$< 0,15 \text{ mg}/\text{l}$	ISO 11083
Fe emission to water	$< 1,5 \text{ mg}/\text{l}$	ISO 6332
Pb emission to water	$< 0,15 \text{ mg}/\text{l}$	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.

The testing of the emission parameter either to air or to water shall be performed according to the methods given below or to respective equivalent standards when not Hyperlink indicated (Table 3.5.2):

- for EN standards also see <http://www.cenorm.be>
- for ISO standards also see http://www.iso.org/iso/en/Standards_Search.StandardsQueryForm

The applicant is requested to provide, on voluntary basis, the Competent Body with quantitative data on the water use for the polishing, i.e. liters of water used/m² final product.



Parameter	Test Method
Particulate emission to air	EN 12341: Air quality - Determination of the PM 10 fraction of suspended particulate matter - Reference method and field test procedure to demonstrate reference equivalence of measurement methods.
Styrene emission to air	Self made measurement
Water recycling ratio	See I.1, Technical Appendix A.3
Suspended Solid emission to water	ISO 5667-17: Water quality -- Sampling -- Part 17: Guidance on sampling of bulk suspended solids
Cd emission to water	ISO 8288: Water quality -- Determination of cobalt, nickel, copper, zinc, cadmium and lead -- Flame atomic absorption spectrometric methods
Cr+6 emission to water	ISO 11083: Water quality -- Determination of chromium(VI) -- Spectrometric method using 1,5-diphenylcarbazine
Fe emission to water	ISO 6332: Water quality -- Determination of iron – Spectrometric method using 1,10-phenanthroline
Pb emission to water	ISO 8288 : Water quality -- Determination of cobalt, nickel, copper, zinc, cadmium and lead -- Flame atomic absorption spectrometric methods, 1.

B 4.4 Production Process (for processed products only)

Applicable to the following PRODUCT	PROCESSED PRODUCTS ONLY
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4.4.1 Energy consumption

Applicable to the following PRODUCT	AGGLOMERATED STONES, TERRAZZO TILES, CERAMIC TILES AND CLAY TILES
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There are two kinds of energy requirements that shall be calculated depending on the product family (Table 8).

Table 8 - Criterion application

Energy Requirements	Product family	Criterion
Process Energy Requirements (PER)	Agglomerated Stones, Terrazzo Tiles	4.1 (a) - PER
Energy Requirement for Firing (ERF)	Ceramic Tiles, Clay Tiles	4.1 (b) - ERF

Concrete paving units and the firing stage exclusively for tracery (decoration) are excluded from this criterion.



The process energy requirement (PER) and the energy requirement for firing (ERF) shall not exceed the limits showed below (Table 9).

It should be highlighted, take care that the functional unit is changed from the former criteria (Decision 2002/272/EC): **all the hurdle are expressed in MJ per kg of final product ready to be sold.**

Table 9 - Hurdles Energy Requirements

Product Family	Limit (MJ/kg)	Manufacturing stage
Agglomerated stones	1.6	Mixturing and hardening
Terrazzo tiles	1.3	
Ceramic and Clay tiles	3.5	Firing

In a calculation of PER or of ERF the correct energy carriers shall be taken into account for the entire plant or for the firing stage only respectively.

Gross calorific values of fuels shall be used to convert energy units to MJ (Table 10); in case of use of other types of fuels, the calorific value used for calculation shall be indicated:

Table 10 - Table for calculation of PER and ERF.

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	
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)				

Electricity means net imported electricity coming from the grid and internal generation of electricity measured as electric power; evaluation of PER shall consider all energy flows entering the production plant both as fuels and electricity. On the other hand, the evaluation of ERF shall consider all energy flow entering all the kilns as fuels for the firing stage (compare appendix A.4).



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

4.4.2 Water consumption and use

Applicable to the following PRODUCT	PROCESSED PRODUCTS
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The criterion is divided in two parts: the first concerning the limitation of the water consumption during the manufacturing stage and the second dealing with the recycle of the process water.

(a) Water Consumption

Applicable to the following PRODUCT	FIRED PRODUCTS
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The water consumption at the manufacturing stage, from raw material preparation to firing operations, shall not exceed the following requirement:

Parameter	Requirement (Litres/kg of product)
Fresh Water Specific Consumption (CW_{p-a})	1

The calculation of fresh water specific consumption shall be provided by the applicant using the following formula (see also Technical Appendix – A5):

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

Where:

CW_{p-a} = Fresh Water Specific Consumption. The results are expressed in **m³/tonnes**, equivalent to **l/kg**;

P_t = total stored production in **tonnes**;

W_p = water from wells and intended for exclusive use industrial (excluding water from wells for domestic use, irrigation and any other non-industrial use), in **m³**;

W_a = water from aqueduct and intended for exclusive use industrial (excluding water from aqueduct for domestic use, irrigation and any other non-industrial use) in **m³**;

Note: for fresh water, only groundwater, shallow water or water from the aqueduct should be considered.

(a) Water Use

Applicable to the following PRODUCT	PROCESSED PRODUCTS
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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.

The calculation shall be made using the following formula:

$$\frac{\text{Waste Water Recycled}}{\text{Total Water Leaving the Process}} \cdot 100$$

For a better explanation please, see also Technical Appendix – A3 of the Criteria.

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.

4.4.3 Emissions to air

Applicable to the following PRODUCT	PROCESSED PRODUCTS
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The parameters of emission to air and related limits to not exceed depend on the product family.

The applicant shall provide the analysis and test reports for each emission parameter measured at all emission points. The testing of emission parameter to air shall be performed according to the methods indicated; where no testing methods are specified the CB should rely as appropriate on declarations and documentation provided by the applicant and/or independent verifications. The sampling shall be sufficiently representative of the considered production on a yearly basis.

The limits to not be exceeded are referred to the flow after the treatment of emissions.

All limits are expressed in mg per m² of final ecolabelled product ready to be sold; the production scraps have not to be considered for the calculation.

(a) Agglomerated stones

The values of air pollutant emissions factors for agglomerated stones must not exceed the following limits:

Table 11 - Ecolabel hurdles and Test Methods for total air emissions for agglomerated stones referred to the total emission (including all emissions points)

Parameters	Limit value (mg/m ²)	Test Method
Particulate matter (<i>Dust</i>)	300	EN 13284-1: Stationary Source Emissions - Determination of Low Range Mass Concentration of Dust - Part 1: Manual Gravimetric Method.
Nitrogen oxides (as NO _x)	1.200	EN 14792: Stationary source emissions. Determination of mass concentration of nitrogen oxides (NO _x). Reference method: Chemiluminescence.
Sulphur dioxides (SO ₂)	850	EN 14791: Stationary source emissions. Determination of mass concentration of sulphur dioxide.
Styrene	2.000	Self made measurement



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/m².

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

The values of air pollutant emissions factors for ceramic tiles shall not exceed the following limits (Table 12):

Table 12 - Ecolabel hurdles and Test Methods for total air emissions for ceramic tiles

Parameters	Limit (mg/m ²)	Test Method
Particulate matter (Dust)	200	EN 13284-1: Stationary Source Emissions - Determination of Low Range Mass Concentration of Dust - Part 1: Manual Gravimetric Method.
Fluorides (as HF)	200	ISO 15713: Stationary source emissions -- Sampling and determination of gaseous fluoride content
Nitrogen oxides (as NO _x)	2,500	EN 14792: Stationary source emissions. Determination of mass concentration of nitrogen oxides (NO _x). Reference method: Chemiluminescence.
Sulphur dioxides (SO ₂) Sulphur content in raw material ≤ 0,25%	1.500	EN 14791: Stationary source emissions. Determination of mass concentration of sulphur dioxide.
Sulphur dioxides (SO ₂) Sulphur content in raw material > 0,25%	5.000	EN 14791: Stationary source emissions. Determination of mass concentration of sulphur dioxide.

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

Due to the very different thickness of the clay tiles products, the calculation of the related emission values have to be made considering both the emission rate referred to a m² of tile of 1 cm of thickness (provided in the Table 13) and the real thickness of the tile (in cm).

Table 13 - Emission rate for tile of 1 m² of surface and 1 cm of thickness

Parameters	Emission rate (mg/m ² * 1 cm)
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Particulate matter (Dust)	250
Fluorides (as HF)	200
Nitrogen oxides (as NO _x)	3.000
Sulphur dioxides (SO ₂)	2.000

The calculation must be made using the following formula:

$$\text{Value (mg/m}^2\text{)} = \text{Emission rate (mg/[m}^2\text{ (area) x cm (thickness)])}$$

In any case, however, the emission to air for the following parameters for the clay tiles at firing stage shall exceed the following maximum limits (Table 14), corresponding to a tile of 4 cm thickness:

Table 14 - Ecolabel hurdles and Test Methods for total air emissions for clay tiles

Parameters	Limit value (mg/m ²)	Test Method
Particulate matter (Dust)	1.000	EN 13284-1: Stationary Source Emissions - Determination of Low Range Mass Concentration of Dust - Part 1: Manual Gravimetric Method.
Fluorides (as HF)	800	ISO 15713: Stationary source emissions -- Sampling and determination of gaseous fluoride content
Nitrogen oxides (as NO _x)	12.000	EN 14792: Stationary source emissions. Determination of mass concentration of nitrogen oxides (NO _x). Reference method: Chemiluminescence.
Sulphur dioxides (SO ₂)	8.000	EN 14791: Stationary source emissions. Determination of mass concentration of sulphur dioxide.

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.

Example for clay tiles:

The limits that must be respected for the different parameters for the production of a generic clay tile with 2,5 cm thickness shall be calculated as follows:



Parameters	Emission rate (mg/m ² for each cm)		Thickness (cm)	Limits value (mg/m ²)
Particulate matter (Dust)	250	x	2,5	625
Fluorides (as HF)	200	x	2,5	500
Nitrogen oxides (as NO _x)	3000	x	2,5	7.500
Sulphur dioxides (SO ₂)	2000	x	2,5	5.000

(d) Terrazzo tiles and concrete paving units

The emissions for the following parameters for the whole manufacturing process shall not exceed the following limits (Table 15):

Table 15 - Ecolabel hurdles and Test Methods for total air emissions for terrazzo tiles and concrete paving units

Parameters	Limit (mg/m ²)	Test Method
Particulate matter (Dust)	300	EN 13284-1: Stationary Source Emissions - Determination of Low Range Mass Concentration of Dust - Part 1: Manual Gravimetric Method.
Nitrogen oxides (as NO _x)	2,000	EN 14792: Stationary source emissions. Determination of mass concentration of nitrogen oxides (NO _x). Reference method: Chemiluminescence.
Sulphur dioxides (SO ₂)	1,500	EN 14791: Stationary source emissions. Determination of mass concentration of sulphur dioxide.

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.

4.4.4 Emission to water

Applicable to the following PRODUCT	PROCESSED PRODUCTS
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After wastewater treatment, whether on site or off-site, the following parameters shall not exceed the following limits (Table 16):

**Table 16 - Ecolabel limits and Test Methods for water emissions.**

Parameter	Limits Value	Test methods
Suspended solid emission to water	40 mg/l	ISO 5667-17: Water quality -- Sampling -- Part 17: Guidance on sampling of bulk suspended solids
Cd emission to water	0.015 mg/l	ISO 8288: Water quality -- Determination of cobalt, nickel, copper, zinc, cadmium and lead -- Flame atomic absorption spectrometric methods
Cr(VI) emission to water	0.15 mg/l	ISO 11083: Water quality -- Determination of chromium(VI) -- Spectrometric method using 1,5-diphenylcarbazide
Fe emission to water*	1.5 mg/l	ISO 6332: Water quality -- Determination of iron -- Spectrometric method using 1,10-phenanthroline
Pb emission to water	0.15 mg/l	ISO 8288: Water quality -- Determination of cobalt, nickel, copper, zinc, cadmium and lead -- Flame atomic absorption spectrometric methods

*Note: The 'Fe' parameter is applicable to all the processed products 'with the exclusion of ceramic tiles'.

Assessment and verification: the applicant shall provide the analysis and test reports for each emission parameter measured at all emission points.

4.4.5 Cement

Applicable to the following PRODUCT	AGGLOMERATED STONES, CONCRETE, PAVING UNITS and TERRAZZO TILES
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Products that use cement in the production process shall be made according to the following requirements: The use of raw materials for cement production shall be in accordance with Extraction Management for processed products requirement (Criterion 1.2 of the Commission Decision 2009/607/CE).

The process energy requirement (PER) for cement included in any product shall not exceed 3800 MJ/t, calculated as explained in 4.4.1.

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

Table 17 - Limits to the air emissions and Tests Method for cement production

Parameter	Hurdle (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.

B 4.5 Waste management

Applicable to the following PRODUCT	NATURAL PRODUCTS PROCESSED PRODUCTS
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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, EN L 208/32 Official Journal of the European Union 12.8.2009;
- procedures for recycling materials for other uses;
- procedures for handling and disposing of hazardous waste.

Assessment and verification: the applicant shall provide appropriate documentation: applicants using EMAS or ISO 14001 or other management systems may make full use of their records and/or verification statements.

4.5.1 Waste management

Applicable to the following PRODUCT	NATURAL PRODUCTS
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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 (OJ L 102, 11.4.2006, p. 15.). Applicants using EMAS or ISO 14001 or other management systems may make full use of their records and/or verification statements.

4.5.2 Recovery of waste

Applicable to the following PRODUCT	PROCESSED PRODUCTS
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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 processes⁷ shall be recovered according to the general terms and definitions established by Council Directive 75/442/.

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. Applicants using EMAS or ISO 14001 or other management systems may make full use of their records and/or verification statements.

B 4.6 Use phase

Applicable to the following PRODUCT	GLAZED PRODUCTS
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4.6.1 Release of dangerous substances

During the use phase and at the end of the glazed tile's life the release of dangerous substances shall not exceed the limits indicated in Table 18. The products shall be verified according to the EN ISO10545-15. The product shall be also in compliance with the requirements of Council Directive 89/106/EEC ('Construction Products Directive') on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products and with relevant harmonised standards created by CEN once published in the Official Journal.

Table 18 – Limits to the release of dangerous substance form glazes

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 the analysis and test reports for each emission parameter measured and a declaration of conformity of the product with the provisions of above mentioned Council Directive. The testing of emission parameter shall be performed according to the methods given below.

B 4.7 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.

⁷ Process wastes do not include maintenance wastes, organic wastes and urban wastes produced by auxiliary and office activities



B 4.8 Fitness for use

Applicable to the following PRODUCT	NATURAL PRODUCTS and PROCESSED PRODUCTS
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The product shall be fit for use. According to the Council 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.

The applicant shall provide test procedures and results together with a declaration that the product is fit for use based on all information about the best application by the end user. 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. The testing shall be performed according to ISO, CEN or equivalent test methods, such as national or in-house test procedures.

For ceramic tiles for instance, the 10545 series of standards may be used e. g. 10545 -part 5 impact resistance, part 6 and 7 on abrasion resistance, part 9 determination of crazing resistance for glazed tiles, part 12 determination of frost resistance or 13 determination of chemical resistance, 14 on resistance to stains etc. Generally, there are ceramic tile classifications e.g. using ISO 13006 based on water absorption (as an important aspect in determining frost resistance) and the shaping methods or technical-commercial classification of ceramic tiles e.g. UNI EN 87 classes in Italy.

B 4.9 Consumer information

Applicable to the following PRODUCT	NATURAL PRODUCTS PROCESSED PRODUCTS
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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 EU Ecolabel 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 (explanation in order to give the consumer information about the high possible performance of such a product);
- (d) information on the EU Ecolabel and its related product groups, including the following text (or equivalent): *'for more information visit the EU Ecolabel website: <http://www.ecolabel.eu>'*.

Assessment and verification: the applicant shall provide a sample of the packaging and/or texts enclosed. Also catalogue samples can be accepted.

B 4.10 Information appearing on the Ecolabel

Applicable to the following PRODUCT	NATURAL PRODUCTS PROCESSED PRODUCTS
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Box 2 of the Ecolabel shall contain the following text:

Natural products:

- *reduced impact of extraction on habitats and natural resources,*
- *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.



APPENDIX 1: CHECK LISTS

Applicants should complete Checklist 1 and 2 of this form (in black, either typescript or manuscript) and submit paper copies (not e-mails) to the Competent Body.

Check list 1: applicant and product general information

A. THE APPLICANT
Full name of applicant company:
Address:
Contact name, and function:
Tel no., and fax no.:
E-mail:
Website:
In what capacity are you applying for the Eco-label? (as a manufacturer, importer, service provider, trader or retailer)



B. THE PRODUCT
Registered trade name(s) of product or product range:
Model names (or internal reference numbers) for products to be covered by the label within the product range above:
Please describe the type of product (which subgroup it belongs to):
Main composition:

**B. THE PRODUCT**

Name and address of manufacturing site (if different from above; where the product is made outside the EU, please confirm that it has been or will be placed on the market in Europe):

Other EU countries in which this product is manufactured in the same form (please give addresses of manufacturing sites):

Other EU countries in which this product is sold (if sold under different names, please give names):



B. THE PRODUCT

Rough estimate of annual number of articles produced; this means items as sold on store shelves – so if goods normally sell in double packs, the double pack is one item or unit):

Rough estimated value of annual sales, excluding VAT, in the European Economic Area (i.e. the European Community plus Norway, Iceland and Liechtenstein) of the product at ex-factory prices: i.e. before transport to the purchaser's premises or there is a wholesaler's or retailer's profit – so excluding the cost of carriage, carriage insurance, and settlement discounts, but including any bulk discount (which is where the customer is offered a percentage reduction in the total price when ordering large quantities of goods):



C. THIS APPLICATION

Is this the first application for the EU Eco-label for this product?
(if not, when and where was the first application made, and with what outcome?)

Please name any other environmental labelling schemes under which the product has already been registered, such as e.g. the Nordic Swan, Blauer Engel, etc.:

The assessment and certification method I have used is:

*certified self-assessment:

* independent third party assessment (please say which):

*The approved test centre is :



D. APPLICANT'S UNDERTAKING: ALL APPLICANTS MUST SIGN AND DATE THIS UNDERTAKING

As the applicant for an EU Eco-label, I hereby declare that: I understand and accept the provisions of Regulation EC No 1980 / 2000 on the EU Eco-label scheme, and in particular Article 2, which states that the Eco-label may not be awarded to goods manufactured by processes which are likely to significantly harm man and / or the environment, or which in their normal application could be harmful to the consumer;

I understand and accept the standard assessment and contract procedures proposed by the Competent Body, and accept its terms during the duration of the contract;

I undertake to ensure that the product complies with the Eco-label criteria at all times and to notify the Competent Body immediately of any significant modification to it or to the production processes;

I take responsibility for the correct and proper use of the EU Eco-label and its logo.

Signed:

Name in capitals:

Position in company:

Date:



Check list 2: Specific information

CRITERION 1: RAW MATERIAL EXTRACTION	
1.1 Extraction management (for natural products only)	
<p>Is there any interference with any deep confined waterbed ? (enclosed documentation required)</p>	<p>.... Yes: the application cannot proceed No: go on</p>
<p>Is there any interference with any surface water body ? * Is the same water body used for civil catching or civil springs ? * Is the water body included in the Protected Areas established by according to Directive 2000/60/EC of Parliament ?</p>	<p>....Yes: verify the next condition No: go on</p>
<p>*Has the water body an average flow >5 m³/s ? (enclosed documentation required)</p>	<p>.... Yes: the application cannot proceed No: go on</p>
<p>Is there a water closed recovery system? (enclosed documentation required)</p>	<p>....Yes: go on No: the application cannot proceed</p>

To get the Eco-Label the quarry must reach a minimum score of 19 that can be calculated using the matrix in the criteria document with the support of the following 2 tables; each score must be within the bounds of the corresponding exclusion hurdle, if one is given.



Weight	Weight value
W1) Soil protection cl. I-II: cl. III-V: cl. VI-VIII:	0,3 0,5 0,8
W2) Population density > 100 hab/km ² : 20 to 100 hab/km ² : < 20 hab/km ² :	0,5 (0,6) 0,7 (0,84) 0,9
W3) Water body interference if I.1 and I.5 both >0,5 :	0,5

About W2 parameter, 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%).

Indicator	Weight	Value	Score	W1	W2	W3	Weighted score
I. 1 - Water recycling ratio						if I.1 and I.5 both >0,5 : 0,5	
I. 2 - Quarry impact ratio				cl. I-II: 0,3 cl. III-V: 0,5 cl. VI-VIII: 0,8	> 100 hab/km ² : 0,5 (0,6) 20 to 100 hab/km ² : 0,7 (0,84) < 20 hab/km ² : 0,9		
I. 3 - Natural resource waste							
I. 4 - Air quality					> 100 hab/ km ² : 0,5 (0,6) 20 to 100 hab/km ² : 0,7 (0,84) < 20 hab/ km ² : 0,9		
I. 5 - Water quality				cl. I-II: 0,3 cl. III-V: 0,5 cl. VI-VIII: 0,8	> 100 hab/km ² : 0,5 (0,6) 20 to 100 hab/km ² : 0,7 (0,84) < 20 hab/km ² : 0,9	if I.1 and I.5 both >0,5: 0,5	
I. 6 - Noise					> 100 hab/ km ² : 0,5 (0,6) 20 to 100 hab/km ² : 0,7 (0,84) < 20 hab/km ² : 0,9		
Total							



CRITERION 1: RAW MATERIAL EXTRACTION

1.2 Extraction management (for all Hard Covering products)

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;
- the declaration of conformity to the Directive 92/43/CEE (habitats)⁸ and Directive 79/409/CEE⁹ (birds)¹⁰ and their subsequent amendments. In areas outside the European 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.

(enclosed all the documentation required)

....Yes: go on

.... No: the application cannot proceed

....Yes: go on

.... No: the application cannot proceed

....Yes: go on

.... No: the application cannot proceed

....Yes: go on

.... No: the application cannot proceed

⁸ OJ L 206, 22.7.1992, p. 7.

⁹ OJ L 103, 25.4.1979, p. 1

¹⁰ For detailed information see http://ec.europa.eu/environment/nature/index_en.htm



CRITERION 2: RAW MATERIAL SELECTION (FOR ALL HARD COVERING PRODUCTS)	
2.1 Absence of risk phrase	
<p>Raw material composition:</p> <p>None of the risk phrases listed in the Criterion 2.1 is present in the raw material composition?</p>	<p>....Yes: go on</p> <p>.... No: the application cannot proceed</p>
2.2 Limitation of the presence of some substances in the additives (for glazed tiles only)	
<p>Lead in additives (% in weight of the glazes)</p> <p>Cadmium in additives (% in weight of the glazes)</p> <p>Antimony in additives (% in weight of the glazes)</p>	<p>....</p> <p>If > 0.5: the application cannot proceed</p> <p>....</p> <p>If > 0.1: the application cannot proceed</p> <p>....</p> <p>If > 0.25: the application cannot proceed</p>
2.2 Limitation of the presence of some substances in the additives (for glazed tiles only)	
<p>Presence of asbestos in the raw materials used for natural and processed products</p>	<p>...Yes: the application cannot proceed</p> <p>... No: go on</p>



CRITERION 3: FINISHING OPERATIONS (FOR NATURAL PRODUCTS ONLY)

3 Emission to air and water (enclosed documentation required)

Particulate emission to air

If $PM_{10} > 150 \mu\text{g}/\text{Nm}^3$ the applicant cannot go on

Styrene emission to air

If $> 210 \text{ mg}/\text{Nm}^3$ the applicant cannot go on

Water recycling ratio

If Recycling ratio = $\frac{\text{Waste Water Recycled}}{\text{Total Water Leaving the Process}} \cdot 100 \geq 90\%$ the applicant can't go on.

Suspended solid emission to water

If $> 40 \text{ mg}/\text{l}$ the applicant cannot go on

Cd emission to water

If $> 0,015 \text{ mg}/\text{l}$ the applicant cannot go on

Cr(VI) emission to water

If $> 0,15 \text{ mg}/\text{l}$ the applicant cannot go on

Fe emission to water

If $> 1,5 \text{ mg}/\text{l}$ the applicant cannot go on

Pb emission to water

If $> 0,15 \text{ mg}/\text{l}$ the applicant cannot go on



CRITERION 4: PRODUCTION PROCESS (FOR PROCESSED PRODUCTS ONLY)

4.1 Energy consumption

Process Energy Requirement (PER) or Energy Requirement for Firing (ERF) enclosed documentation required

a) PER limit [MJ/m²]

- 1) Agglomerated stone
- 2) Terrazzo Tiles

If > 1,6 MJ/m² the applicant cannot go on

If > 1,3 MJ/m² the applicant cannot go on

b) ERF limit [MJ/m²]

- 1) Ceramic Tiles
- 2) Clay Tiles

If > 3,5 MJ/m² the applicant cannot go on

If > 3,5 MJ/m² the applicant cannot go on

4.2 Water consumption and use

Water Consumption and use (Enclosed document required)



CRITERION 4: PRODUCTION PROCESS (FOR PROCESSED PRODUCTS ONLY)

- | | |
|---|---|
| <p>a) Fresh Water specific consumption ($C_{w_{p-a}}$)</p> <p>b) Water recycling ratio</p> | <p>If > 1 litres/kg of product the applicant cannot go on</p> <p>If $< 90\%$ the applicant cannot go on</p> |
|---|---|

4.3 Emission to air (enclosed document required)

- | | |
|--|--|
| <p>a) Agglomerated Stone</p> <ol style="list-style-type: none"> 1) Particulate matter (<i>Dust</i>) 2) Nitrogen oxides (<i>as NO_x</i>) 3) Sulphur dioxides (<i>SO₂</i>) 4) Styrene <p>b) Ceramic Tiles</p> <ol style="list-style-type: none"> 1) Particulate matter (<i>Dust</i>) 2) Fluorides (<i>as HF</i>) 3) Nitrogen oxides (<i>as NO_x</i>) 4) Sulphur dioxides (<i>SO₂</i>) Sulphur content in raw material $\leq 0,25\%$ 5) Sulphur dioxides (<i>SO₂</i>) Sulphur content in raw material $> 0,25\%$ | <p>If > 300 (mg/m^2) the applicant cannot go on</p> <p>If > 1.200 (mg/m^2) the applicant cannot go on</p> <p>If > 850 (mg/m^2) the applicant cannot go on</p> <p>If $> 2,000$ (mg/m^2) the applicant cannot go on</p> <p>If > 200 (mg/m^2) the applicant cannot go on</p> <p>If > 200 (mg/m^2) the applicant cannot go on</p> <p>If $> 2,500$ (mg/m^2) the applicant cannot go on</p> <p>If > 1.500 (mg/m^2) the applicant cannot go on</p> <p>If > 5.000 (mg/m^2) the applicant cannot go on</p> |
|--|--|



CRITERION 4: PRODUCTION PROCESS (FOR PROCESSED PRODUCTS ONLY)	
<p>c) Clay Tiles.</p> <p>1) Particulate matter (Dust)</p> <p>2) Fluorides (as HF)</p> <p>3) Nitrogen oxides (as NO_x)</p> <p>4) Sulphur dioxides (SO₂)</p>	<p>The emission values for the different parameters do not exceed the limits calculated using the following formula.</p> $\text{Value (mg/m}^2\text{)} = \text{Emission rate (mg/[m}^2\text{(area) x cm (thickness)])}$ <p>or however the following maximum limits:</p> <p>If > 1,000 (mg/m²) the applicant can't go on</p> <p>If > 800 (mg/m²) the applicant can't go on</p> <p>If > 12,000 (mg/m²) the applicant can't go on</p> <p>If > 8,000 (mg/m²) the applicant can't go on</p>
<p>Terrazzo Tiles and Concrete paving units</p> <p>1) Particulate matter (Dust)</p> <p>2) Nitrogen oxides (as NO_x)</p> <p>3) Sulphur dioxides (SO₂)</p>	<p>If > 300 (mg/m²) the applicant cannot go on</p> <p>If > 2,000 (mg/m²) the applicant cannot go on</p> <p>If > 1,500 (mg/m²) the applicant cannot go on</p>
4.4 Emission to water	
<p>Water emission (Enclosed document required)</p> <p>a) Suspended solid emission to water</p> <p>b) Cd emission to water</p> <p>c) Cr(VI) emission to water</p> <p>d) Fe emission to water</p> <p>e) Pb emission to water</p>	<p>If > 40 mg/l the applicant cannot go on</p> <p>If > 0.015 mg/l the applicant cannot go on</p> <p>If > 0.15 mg/l the applicant cannot go on</p> <p>If > 1.5 mg/l the applicant cannot go on</p> <p>If > 0.15 mg/l the applicant cannot go on</p>
4.5 Cement	



CRITERION 4: PRODUCTION PROCESS (FOR PROCESSED PRODUCTS ONLY)

Cement (Enclosed Documentation Required)

a) PER

If > 3.800 MJ/t the applicant cannot go on

b) Air Emission

1) Dust

If > 65 g/t the applicant cannot go on

2) SO₂

If > 350 g/t the applicant cannot go on

3) NO_x

If > 900 g/t the applicant cannot go on



CRITERION 5: WASTE MANAGEMENT (FOR ALL HARD COVERING PRODUCTS)	
<p>Procedures for separating and using recyclable materials from the waste stream, (Enclosed Documentation Required).</p> <p>Procedures for recycling materials for other uses, (Enclosed Documentation Required).</p> <p>Procedures for handling and disposing of hazardous waste. (Enclosed Documentation Required).</p>	<p>....</p> <p>...</p> <p>....</p>
5.1 Waste management (for natural products only)	
<p>Declaration of conformity with the requirement in accordance with the Directive 2006/21/CEE of 15/03/2006.</p>	<p>....</p>
5.2 Recovery of waste (for processed products only)	
<p>a) kind and quantity of waste recovered; (Enclosed Documentation Required)</p> <p>b) kind of disposal; (Enclosed Documentation Required)</p> <p>c) information about the reuse (internally or externally to the production process) of waste and secondary materials in the production of new products. (Enclosed Documentation Required)</p>	<p>...</p> <p>...</p> <p>....</p>



d) Recovery waste ratio	If < 85% the applicant cannot go on
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CRITERION 6: USE PHASE

6.1 Release of dangerous substances (glazed tiles only)	
Release of dangerous substances (Enclosed Documentation Required) a) Pb b) Cd	If > 80 mg/m ² the applicant cannot go on If > 7 mg/m ² the applicant cannot go on

CRITERION 7: PACKAGING

Packaging (Enclosed Documentation Required) a) the packaging of the final product is designed for reuse b) Recycle material composition	... Yes: the applicant cannot go on ... NO: verifying the next condition if < 70% the applicant cannot go on
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CRITERION 8: FITNESS FOR USE

Fitness for use (Enclosed Documentation Required)	...
Include a sample of the packaging and/or texts enclosed	...

**CRITERION 9: CONSUMER INFORMATION**

Consumer information (Enclosed Documentation Required)	...
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