



**ECOMARK\_STD\_03 HARD  
COVERING PRODUCTS  
STANDARD**

**Document Code : ECOMARK\_STD\_03**

**Approval Date : 10.01.2020**

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

**Title:** ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

**Contact Adress :** Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey

**Contact Mail:** [info@ecomark.com.tr](mailto:info@ecomark.com.tr)

**Website:** [www.ecomark.com.tr](http://www.ecomark.com.tr)

**Phone:** +90 212 702 50 00

## ABOUT US

A directive numbered 1980/2000 (EC) was issued by the European Union in 2000 within the scope of harmonization laws. This directive sample is required to draw a circle on the contour lines. The directive in question calls for the removal of the environment and the removal of this product with the target target indicated in the environmental labeling. Ekomark © Standard has prepared this product to be grown in aquaculture products that are not grown in aquaculture products and in aquaculture standards. While designing this standard, the Eco-Label Regulation 66/2010/EC updated by the European Union and updated in 2010 was taken as a basis for certification studies. The example of the products within the scope of use in the Ekomark © Standard is in line with the application given by Europe.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## Part A: General Information

Chapter A "General information" is a standard document for all Ecomark products that describe in detail the different steps of the application process. Each Member State language has been translated and is available at:

## Part B: Product Evaluation and Verification

### 1 Scope

The scope of the criteria focuses on the final products. In the specifying of the formats of the product in Article 1(1) of the Commission Decision (e.g. floor tile, wall tile, etc.) and the materials contained in article 1 (i.e. natural stone, agglomerate stone, ceramic, precast concrete and compressed soil) article 1(3).

Some intermediate products are also covered (i.e. [The Commission's Decision 2021/476](#) maybe issued an Ecomark license), referring to recital 8 herein. For clarity, these **intermediates** include:

- **Quarry stone blocks (which also refer to the only dimension stone)** : these are large blocks or slabs that are cut from the only stone quarry and reached sizes up to 2x2x3 meters. Then the same quarry is finalized to its final final or sold to experimental conversion facilities by other companies in its way.
- **Hydraulic lutsals**: Together with this, en refers to all-dimensional re-common cement classes in EN 197-1 and hydraulic limes in EN 459-1. Hydraulic producing companies are most independent of its time fighting precast concrete or remanufactured dirt blocks.
- **Alternative cements** : This means cements, the compositions of EN 197-1. This represents a much smaller market than IN 197 cement in 2015, which averages newly blended Portlands as cement, alkaline-activated cements and obi geopolymers as precursors before pre-preceding concrete, but 7 and low environmental impact cements offer up to the big ones.

#### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Check if your candidate products are covered (read Recital 8 and Article 1 of Commission Resolution 2021/476 and check against the drop-down menu in cell E13 of the 'Application' worksheet in Sections C & d excel).

The user manual has a lot of information, most of which is specific to specific product types only. As a result, before starting the process, it is worth considering what criteria actually apply from suppliers and other third parties and what kind of information will be required.

Product type	Applicable criteria	External information required
Natural stone (intermediate block/sheet from quarry)	1.1, 1.2, 1.6, 1.7 and 2.1 to 2.6	Information about renewable content from the fuel and electricity supplier (for criterion 2.1)
Natural stone (final product(s) from the conversion plant.	1.1 to 1.7 and 2.1 to 2.11	Information from quarry operators (for criteria 1.1 and 2.1 and 2.6) from which blocks are obtained to make products within the scope of the application Information from suppliers of chemicals used (for criterion 1.2) (Potentially) information on testing VOC emissions (criterion 1.3) Information about renewable content from the fuel and electricity supplier (for criterion 2.1)

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Product type	Applicable criteria	External information required
Agglomerate stone based on resin binder*	1.1 to 1.7 and 3.1 to 3.5	Information about quarry from virgin raw material suppliers (for criterion 1.1) Information from suppliers of chemicals used (for criterion 1.2) Information on testing VOC emissions (criterion 1.3) Information about renewable content from fuel and electricity supplier (for criterion 3.1)
Ceramic or ignition clay product	1.1 to 1.7 and 4.1 to 4.7th	Information about quarry from virgin raw material suppliers (for criterion 1.1) Information from suppliers of chemicals used (for criterion 1.2) Information on testing VOC emissions (criterion 1.3) (Potentially) information from the spray dried powder supplier (criterion 4.1) (Potentially) information from the spray dried powder supplier (criterion 4.2) (Potentially) information from the operator of the wastewater treatment plant (criterion 4.5)
EN 197-1 cement – intermediate	1.1, 1.2, 1.6, 1.7 and 5.1 to 5.3	Information about quarry from virgin raw material suppliers (for criterion 1.1) Information from suppliers of chemicals used (for criterion 1.2)
Hydraulic lime – intermediate	1.1, 1.2, 1.6, 1.7, 5.2 and 5.3	Information about quarry from virgin raw material suppliers (for criterion 1.1) Information from suppliers of chemicals used (for criterion 1.2)
Alternative cement – intermediate product > 30% clinker content	1.1, 1.2, 1.6, 1.7 and 5.1 to 5.3	Information about quarry from virgin raw material suppliers (for criterion 1.1) Information from suppliers of chemicals used (for criterion 1.2)
Alternative cement – intermediate product < 30% clinker content	1.1, 1.2, 1.6, 1.7, 5.1 and 5.2	Information about quarry from virgin raw material suppliers (for criterion 1.1) Information from suppliers of chemicals used (for criterion 1.2)
Precast concrete OR compacted soil in EN 197-1 cement	1.1 to 1.7 and 5.1 to 5.6 to 2015	Information about quarry from virgin raw material suppliers (for criterion 1.1) Information from suppliers of chemicals used (for criterion 1.2) (Potentially) Information on testing VOC emissions (criterion 1.3) Information on clinker factor, CO2 emissions and other emissions to the air from cement clinker production (criterion 5.1 to 5.3)
Hydraulic lime-based precast concrete OR compressed soil	1.1 to 1.7 and 5.2 to 5.6	Information about quarrying from raw material suppliers (for criterion 1.1) 1.1) Information from suppliers of chemicals used (for criterion 1.2) 1.2)(Potentially) information on testing VOC emissions (criterion 1.3)

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Product type	Applicable criteria	External information required
Cement with >30% clinker content		(Potentially) Information on testing VOC emissions (criterion 1.3) Information on clinker factor, CO2 emissions and air emissions from cement clinker production (criterion 5.1 to 5.3)
Precast concrete or compressed soil based on alternative cement with a clinker content of <%	1.1 to 1.7, 5.1, 5.2, 5.4, 5.5 and 5.6, 2015, in	Information about quarrying from raw material suppliers (for criterion 1.1) Information from suppliers of chemicals used (for criterion 1.2)(Potentially) Information on testing VOC emissions (criterion 1.3) Information on clinker factor and CO2 emissions (criteria 5.1 and 5.2)

This common (i.e. 3.1 to 3.5) cement strangulation applies to agglomerate stone products that apply to the declaration of 'agglomera stone' by changing the chairman's resin scarce enlise agglomerate stone to thesecondproduct, 1990' In rare rare nails, the product is two-by-two, which handles the only thing in the precast bird concrete product until the caesarean section determines it in this way (i.e. 5.1 to 5.6).

To ensure that the acquisition statistics can be compiled correctly, the license must be applied to only one of the product types listed in the left column of the table above (this is the drop-down list that appears in cell E13 of the Excel file for Section C and D in the "Application" worksheet). In other words, even if it is done by the same company, it is not possible to combine agglomera stone data with natural stone data.

For the simplicity of data compilation and record keeping, the excel file should be applied only to a single site (potentially with a breakdown of more specific data for different products from the same site). Whether to send one excel per license or more than one excel per license must be decided by discussions between the applicant and the Competent Authority.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## 1.1 Quick check of criteria

If you are confident of obtaining relevant information from rum suppliers and the other parties, it is recommended that you start checking internally if the candidate product(s) are likely to meet the criteria:

-Make sure that the prospective product meets all applicable legal requirements of the country or countries where the product is intended to be released.

-Make sure that any intermediate product or virgin raw material meets the relevant mandatory requirements.

### 1.1 Section C & D excel file: "Application" worksheet

In an Excel file, you must fill in the green cells. Yellow cells are optional, red cells provide automatic outputs, and gray cells are inactive.

After you open the Excel file, the first worksheet presented to users is titled 'Application'. This is the basic information required to run the administrative part of the application process.

Mandatory information in cell E13 and optional input in cell E14 are important for this product group to understand exactly where Ecomark has the most interest – which will be important to know when it is time to revise the criteria in the future.

By providing information about the company type (size and location) on the same worksheet (cells E18, E19, E20 and E21), the potential applicant is informed about whether any discounts will be applied for potential application fees, site review fees and annual fees.

### 1.2 Section C & D excel file, "Summary" worksheet

From the beginning of the process, applicant should have a list of products that the application must refer to in mind. The full list of these products must be filled in Column B of the "Summary" worksheet.

The names used for the product must be defined by the applicant and do not have to correspond to any trade name for the products. However, if trade names are used and there is an associated EAN number, this second information is also included in Column C of the 'Summary' worksheet. It is understood that this list will be dynamic and may need to be updated periodically as product catalogs change.

In cases where many different individual Ecomark products are produced in the same area and their differences are insignificant in terms of data for ecomark application, they are grouped together in the same row. In these cases, the number of products grouped must be specified in Column D. If no number is added here, it is assumed to be 1.

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Authorized Organizations are required to report statistics on the number of products covered by Ecomark licenses twice a year. Therefore, applicants should be ready to update this list twice a year upon request. Please note that licensees are also responsible for registering their products and services in the online Ecomark product and service catalog to ensure license traceability 2.

## 2 Product Group Criteria Overview

The following table summarizes all the criteria (blue/intermediate product criteria) for hard coating products of the Commission Resolution No. 2021/476 dated March 16, 2021.

Materials and technology specific criteria			
2. Natural stone	3. Agglomerate stone based on resin binders	4. Ceramic and fired clay	5. Precast concrete or compressed earth blocks with hydraulic connectors or alternative çimentolar
2.1. Energy consumption in the quarry*	3.1. Energy consumption	4.1. Fuel consumption for drying and ignition	5.1. Clinker factor**
2.2. Material efficiency in the quarry*	3.2. Dust control and air quality	4.2. CO2 emissions	5.2. CO2 emissions**
2.3. Water/wastewater management in the quarry*	3.3. Recycled/secondary material content	4.3. Process water consumption	5.3. Dust, NOx and SOx emissions**
2.4. Dust control in the quarry*	3.4. Resin binder content	4.4. Dust, HF, NOx and SOx emissions into the air	5.4. Recovery and responsible supply of raw materials
2.5. Staff safety and working conditions in the quarry*	3.5. Reuse Of process waste	4.5. Wastewater management	5.5. Energy consumption
2.6. Quarry landscape impact rates* (optional)		4.6. Reuse Of process waste	5.6. Environmentally conscious product designs (optional)
2.7. Energy consumption in the trace . plant		4.7. Secrets and inks	
2.8. Water/wastewater management in the conversion plant			
2.9. Dust control at the conversion plant			

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00



# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

As mentioned earlier, only a fraction of the criteria for any product group will apply. Therefore, be sure to read the criteria for your own product interest group in detail and not waste time reading about unrelated criteria.

General conditions for evaluation and verification

On page 8 of the Commission Decision ( ) 2021/476, some general conditions related to evaluation and verification are mentioned. This text is to clearly state some additional conditions that will usually apply, which will not always be clear in the actual evaluation and verification text of individual criteria.

To prevent these conditions from being reinterpreted with the evaluation and verification text for each criterion, generally Specified before first criteria Visible in commission decision ( ) 2021/476. for facilitate in reference these Condition -1 in 1000 would Again -lanan below.

In plain English, these conditions basically mean:

While the applicant must provide all relevant information to the competent authority, it is also possible for suppliers or other upstream actors to inform the competent authority directly so that they pass the applicant. If this is relevant, for example, some information is used commercially sensitively.

The competent body has the right to use the results obtained from the test methods they consider equivalent in accordance with the Commission Decision ( ) 2021/476.

The competent body has the right to further investigate the validity of the data and information provided to ensure compliance with the criteria.

If the application is successful, the licensee has an obligation to check continuity compliance and report incompatibility issues to the competent authority.

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## Criterion 1.2. Restricted substances

Interpretation of Criteria:

To demonstrate compliance with each of the sub-criteria under criterion 1.2, the applicant must first compile a list of all relevant chemicals used with the appropriate documentation (e.g. a safety data sheet and/or a declaration from the chemical supplier).

Regarding the scope of chemicals to be addressed, it should be understood that the term "process chemicals" refers directly to chemicals used in the production process, which are likely to remain in the final products. It should not be considered, referring to chemicals used for periodic cleaning and maintenance of equipment.

Ingoing raw materials used in the production of hard coating products are dominated by inorganic mineral substances that do not have any dangerous classification, which is usually restricted by Article 6(6) of the Ecomark regulation, with a few exceptions.

A number of chemicals such as candles, resins, plasticizers, demoulding agents, accelerators, inks, secrets and pigments are used in the process. The type and function of the substance will vary significantly depending on which of the four main sub-products is produced (i.e. natural stone, agglomerate stone, ceramic or precast concrete).

Hard coating products are examples of simple articles that do not have any component parts. For reference, REACH Article 3(3) defines an article as "an object given a special shape, surface, or design that determines its function during production to a greater extent than its chemical composition".

### Criterion 1.2(a)

The addition of chemicals during the production of hard coating products typically represents only a very small fraction of the overall product weight. As a result, the limitation on SVHC (criterion 1.2 (a)) has been applied to the above chemicals, rather than the final product or component substances here, to ensure adequate screening for Substances of Very High Concern (SVHC) at the weight/weight threshold of 0.1%.

As a result, declarations of criterion 1.2(a) must be made by the chemical supplier (collected by the applicant or the Competent Authority). Articles 7(2) and 33 of the REACH Regulation are obliged to provide 0.1% weight/weight > information about SVHC's in their products or articles when requested by their suppliers, customers or customers. The REACH Regulation states a period of up to 45 days for responses from suppliers.

For statements from chemical suppliers, applicants must refer to the sample templates provided in Annex I to the User's Guide.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## Criteria 1.2(b)

Further restrictions on other non-SVHC hazardous substances and mixtures come into play in criterion 1.2(b), called CLP restrictions, as they restrict substances based on their total hazard classifications as defined in the CLP Regulation.

However, unlike SVHC restrictions, CLP restrictions apply to the final product, not for ingoing substances (that is, the threshold is 0.1% weight/weight on the final product).

Therefore, the evaluation process is more complicated, does not require a simple "yes /no" from the supplier, instead the security datasheet (or an appropriate declaration) containing quantitative information about the classification of the supplied chemical and its individual components.

*Policy, provide security 2 and 3 pieces (already undetermined in a security datasheet or in a notification) are typical information that is required. If there is any danger detected, this section must be entered according to the C & D exceln. Theoretically, the final product needs more quantitative information, from a few substances or breakfests to a puddle (i.e. dosing rate and retention factor). The worst case is to use the dosing rate, so that you can enter a single input for its chemical, etc. As a storage factor, ventilation as 100% and more than 100% less bird factor for the deed to any bird cause justification as the owner of the neck.*

*Benikes 0.10% of the way above or below his/our ight. If the result is below 0.10%, there is no further consideration and this item or the criterion configuration until the ignition .*

*However, if the result is higher than 0.10%, it should be considered that whether the chemical is chemically modified during the process, limited hazards no longer apply. It should be noted that physical immobilization should not be taken into account here, even if the danger is related to a certain way of exposure (e.g. inhalation).*

*If chemical modification cannot be justified, then the last option to comply is to check for a limited substance or an in-place humiliation for the mixture.*

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Documents required for meet and dessert

- 1.2 in the Notification form on the page with section C & D excel file name. This includes the full list of the tekir chemicals and ingoing materials whose name is mentioned in the owner's production, and other related columns on the Excel page.

Each chemical on the  List was supported by a safety datasheet and/or a declaration from a chemical. External back to this in the Day-to-Day Guide Add Me. Roof this.

If  is relevant, the reason for deviating from a 100% retention factor for chemical or lysine is the written right to Authoritative Year.

- related to the written right of the chemical Modyöy trace to the opposite authorized year of the chemical or substance to those who do so.

If  is relevant, it has provided proof of compliance with any of the Authorized IDs upon

All chemicals and chemical formulations used by the applicant in the production process and the supplied materials that form part of the final product shall be covered by the relevant declarations for compliance with the criteria 1.2 (a).

In the absence of a security datasheet, the external supplier must use section 2 and 3 of a security datasheet to allow the applicant to assess compliance with criteria 1.2(b).

more entries are required (a "Pass" output appears in Column P). In the screenshot example above, this was the case for "Chemical A – Ingredient X", but not for "Chemical A" as a whole.

If "Consider more " appears in Column M, the cell in Column N turns green. If a "No" entry appears in Column N, the cell in Column O turns green. If a "No" entry also appears in Column O, this triggers a "Failed" output in Column P. If a "Yes" entry appears in Column N or O, it triggers a "Pass" output in Column P. If a "Yes" appears in column N or O, it meets the chemical or chemical substance 1.2 criterion.

An Excel sheet is a way to systematically compile data for limited hazardous substances by following the following logic.

So in step 1, moving to the right side of the diagram means that the input should only go to the SVHC notification (Column F). In step 2, moving to the right in the diagram corresponds to the < value of 0.1% in Column L. 3 in the diagram.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## Criterion 1.3. VOC emissions

Interpretation of Criteria:

Due to the cost of VOC emission testing, if the worst case products are clearly defined within the product group covered by ecomark, test results can only be used for these worst-case products. Here are some arguments to use to justify a product in the worst case:

- dosed with the highest amount of VOC (in terms of gram VOC per m<sup>2</sup> of surface area)
- thinner formats with higher specific surface area (in terms of m<sup>2</sup>/kg)
- special surface treatments with chemicals containing VOC compared to other products.

In cases where a wide range of products are covered by the same license, more than one example of worst case will probably be required. For example, the worst case for blocks and a situation for tiles.

The EN 16516 standard is now well established and test reports should be based on this methodology instead of ISO 16000.

Since the concentration of VOC in the room air gradually decreases over time, if the concentration limits are observed after 3 days or at any time between 3 days and 28 days, the test is stopped before exactly 28 days. Shorter tests can translate into lower test costs.

Interpreting the limits for total VOCs and formaldehyde should be quite simple. However, R-value and Carcinogenic 1A and 1B VOCs are worth further explanation.

The R value is based on all detected VOCs assigned an LCI value. For each item with a detected LCI, a ratio is calculated by dividing the measured concentration by the LCI value ( $R_i = \frac{C_i}{LCI_i}$ ). All  $R_i$  values obtained from a test are then combined to create the R value. For reference, below is a table containing all items with LCI values. Although it may seem like a lot of substances that need to be analyzed, the normal situation is that a limited number of substances with LCI values from any product (if any) will actually be detected.

Carcinogenic 1A and 1B VOCs will be evaluated in accordance with the Building Products Regulation ( ) no. 305/2011 and therefore EN 16516 and CEN/TC 351 decisions. If there is any contradiction between carcinogenic VOCs to be measured by EN 16516 and the technical definition of a VOC, the EN 16516 standard should preferably be recognized. EN 16516 (especially in Appendix H) provides an indicative list of carcinogenic VOCs produced below after a list of substances with LCI value. For the purposes of ecomark criteria, concentrations of formaldehyde and

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

acetaldehyde exceed the limit of 1 µg/m<sup>3</sup> (a separate 10 µg/m<sup>3</sup>) for formaldehyde and, if detected, both substances are counted as contributors to the R value.

## Documents required for meet and dessert

- 1.3 for the section C & D of Excel file reconcile on the page notification head. At least if the bird is rightly required to enter the entrance and the neck represents the worst of the bird's neck why it enters.
- voc Node test in accordance with the humidity as envisaged in EN 16516.

## Reference information

### LCI values

Investigations into the identification of relevant substances and the appropriate LCI value have been ongoing for several years. As of December 2020, there are more than 150 items assigned 3, LCI values. Full list items with LCI values are currently as follows:

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

No.	CAS No	compound	LCI (µg/m3)	-Status of LCI value	Year Of adoption
1	Aromatic hydrocarbons				
1-1	108-88-3	Toluene	2900	Derived	2013
1-2	100-41-4	Ethylbenzene	850	Derived	2013
1-3	1330-20-7 106-42-3 108-38-3 95-47-6	Mix of Xylene (o-, m-, p-) and o-, m- and p-xylene isomers	500	Derived	2013
1-4	98-82-8	Isopropylbenzene (cumin)	1700	Derived	2017
1-5	103-65-1	n-Propylbenzene	950	Derived (read/	2013
1-6	108-67-8 95-63-6 526-73-8	Trimethylbenzene (1,2,3-, 1,2,4-, 1,3,5-)	450	Derived	2013
1-7	611-14-3	2-Ethyltoluene	550	Derived (read/	2014
1-8	527-84-4 535-77-3 99-87-6 25155-15-1	Cymene (o-, m-, p-) (1-isopropyl-2(3,4)-methylbenzene) and o-, m- and p-cymene mixture	1000	Attributed	2013
1-9	95-93-2	1,2,4,5-Tetramethylbenzene	250	Derived (read/	2016
1-10	104-51-8	n-Butylbenzene	1100	Derived (read/	2014
1-11	99-62-7 100-18-5	Diisopropylbenzene (1,3-, 1,4-)	750	Derived (read/	2013
1-12	2189-60-8	Phenyl octals and isomers	1100	Derived (read/	2013
1-16	100-42-5	Styrene	250	Derived	2013
1-17	98-83-9	2-Phenylpropene (α-methylstyrene)	1200	Derived	2018
1-18	637-50-3	1-Propenyl benzene (β-methyl styrene)	1200	Derived (read/	2019
1-20	611-15-4 100-80-1 622-97-9 25013-15-4	Blended toluene (o-, m-, p-) in o-, m- and p-blended toluene mixture	1200	Derived	2018
1-23	91-20-3	Naphthalene	10	Derived	2015
1-24	91-17-8	Decahydronaphthalene	200	Derived	2019
1-25	95-13-6	Indanthrene	450	Attributed	2013
2	Saturated aliphatic hydrocarbons (n-, iso and cyclo-)				
2-1	110-54-3	n-Hexane	4300	Derived	2016
2-2	110-82-7	Cyclohexane	6000	Attributed	2013
2-3	108-87-2	Methylcyclohexane	8100	Attributed	2013
2-4	142-82-5	n-Heptane	15000	Derived	2018
2-5		Other saturated aliphatic hydrocarbons C6-C8	14000	Derived (read/diagonal)	2018

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

No.	CAS No	compound	LCI (µg/m <sup>3</sup> )	-Status of LCI value	Year of adoption
2-6		Other saturated aliphatic hydrocarbons C9-C16	6000	Attributed	2013
3	Terpenes				
3-1	498-15-7	3-Hulls	1500	Attributed	2013
3-2	80-56-8	a-Pinene	2500	Derived	2013
3-3	127-91-3	β-Pinene	1400	Attributed	2013
3-4	138-86-3 5989-27-5 5989-54-8	Limonene	5000	Derived	2014
3-5		Other terpene hydrocarbons	1400	Attributed	2013
4	Aliphatic alcohols				
4-1	75-65-0	2-Metil-2-propanol (tert-butanol)	620	Attributed	2013
4-2	78-83-1	2-Methyl-1-propanol	11000	Derived	2016
4-3	71-36-3	1-Butanol	3000	Attributed	2013
4-4	71-41-0 30899-19-5 94624-12-1 6032-29-7 584-02-1 137-32-6 123-51-3 598-75-4 75-85-4 75-84-3	1-Pentanol(all isomers)	730	Attributed	2013
4-5	111-27-3	1-Hexanol	2100	Attributed	2013
4-6	108-93-0	Cyclohexanol	2000	Attributed	2013
4-7	104-76-7	2-Ethyl-1-hexanol	300	Derived	2014
4-8	111-87-5	1-Octanol	1700	Derived	2016
4-9	123-42-2	4-Hydroxy-4-methyl-pentan-2-on (diacetone alcohol)	960	Attributed	2013
5	Aromatic alcohols				
5-1	108-95-2	Phenol	70	Derived	2017
5-2	128-37-0	BHT (2,6-di-tert-butyl-4-metilfenol)	100	Attributed	2013
5-3	100-51-6	Benzyl alcohol	440	Attributed	2013
6	Glycoler, glycol eterler, glycol esterleri				
6-1	107-21-1	Etandiol (etilennglykol)	3400	Derived	2016
6-2*	96-49-1	Ethylene carbonate	4800	Derived (read/diagonal)	2020
6-3	7397-62-8	Grain gliced	900	Derived	2019
6-4	111-46-6	Diethylene glikol	5700	Derived (read/diagonal)	2016
6-5	57-55-6	Propilen glycol (1,2-dihidroxiopropan)	2100	Derived	2016
6-7	623-84-7	Propilen glycol diasetate	1600	Derived (read/diagonal)	2018
6-8	110-98-5 25265-71-8	Dipropylene glycol	670	Attributed	2013
6-9	110-63-4	1,4-Butanediol	2000	Attributed	2013
6-10	107-41-5	Hexylene glycol (2-methyl-2,4-pentanediol)	3500	Derived	2018
6-11	6846-50-0	2,2,4-Trimetilpentanediol diisobutyrate	1300	Derived	2018

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00



# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

No.	CAS No	compound	LCI (µg/m3)	-Status of LCI value	Year of adoption
		etan)			
6-16	25265-77-4	2,2,4-Trimetil-1,3-pentanediol monoisobutyrat	850	Derived	2018
6-17	109-59-1	Ethylene glycol izopropylene (2-metilentoxyethanol)	220	Attributed	2013
6-18	112-49-2	Triethylene glycol-dimethyl ether	150	Derived	2019
6-19	110-80-5	Ethylene glycol monoethyl ether (2-etoksiyethanol)	600	Derived	2016
6-20	111-15-9	2-Ethoxycetyl Acetate	900	Derived (read/diagonal)	2016
6-21*	629-14-1	1,2-Diethoxyethane	150	Derived	2020
6-22	111-90-0	Diethylene glycol monoetil ether (2-(2-etoksitoksi)ethanol)	350	Attributed	2013
6-23	2807-30-9	Ethylene glycol monoisopropyl ether (2-propoksiyethanol)	860	Attributed	2013
6-24	111-76-2	Ethylene glycol monobütilleri (2-butoxyethanol)	1600	Derived	2016
6-25	112-07-2	2-Butoxyethyl Acetate	2200	Derived (read/diagonal)	2016
6-26	112-34-5	Diethylene glikol monobütiller	350	Derived	2019
6-27	124-17-4	Diethylene glycol monomethyl ether acetate (butyldiglykolasetat, 2-(2-butoxyethoxy) ethyl acetate)	850	Attributed	2013
6-28	122-99-6	2-Fenoksiyethanol	60	Derived	2016
6-29	112-25-4	Ethylene glycol n-ether hexyl (2-heksoksiyethanol)	900	Derived	2019
6-30	112-59-4	Diethylene glycol n-hexsil ether (2-(2-heksoksitoksi)-ethanol)	400	Derived (read/diagonal)	2019
6-31	107-98-2	Propilen glycol monoometrik ether (1-metoksi-2-propanol)	7900	Derived	2018
6-32	1589-47-5	1-Propylene glycol 2-methyl ether (2-metoksi-1-propanol)	19	Attributed	2013
6-33	70657-70-4	1-Propylene glycol 2-methyl ether acetate (2-metoksi-1-propyl acetate)	28	Attributed	2013
6-34	7778-85-0	1.2-Propylene glycol dimethyl ether	500	Derived	2019
6-35	34590-94-8	Dipropylene glycol monoometrin ether	3100	Attributed	2013
6-36	88917-22-0	Dipropylene glycol monoometrin ether Acetate	950	Derived (read/diagonal)	2019
6-37	29911-27-1	Dipropylene glycol mono-n-propilenter	200	Derived (read/diagonal)	2019
6-38	29911-28-2 35884-42-5 132739-31-2	Dipropylene glycol mono-n(t)-butylether	250	Derived	2019
6-39	20324-33-8 25498-49-1	Tripropilen glycol mono-methylene	1200	Derived	2018
6-40	63019-84-1 89399-28-0 111109-77-4	Dipropylene glycol dimethyl ether	1300	Attributed	2013
6-43	5131-66-8 29387-86-8 15821-83-7 63716-40-5	1,2-Propilen glycol n-butylether	650	Derived	2018

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey

[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

No.	CAS No	compound	LCI (µg/m <sup>3</sup> )	-Status of LCI value	Year of adoption
7-2*	75-07-0	Asetaldehit	300	Derived	2020
7-3	123-38-6	Propanal	650	Derived	2018
7-4	123-72-8	Butanal	650	Derived	2013
7-5	110-62-3	Pentanal	800	Derived (read/diagonal)	2013
7-6	66-25-1	Hexagon	900	Derived (read/diagonal)	2013
7-7	111-71-7	Heptanal	900	Derived (read/diagonal)	2013
7-8	123-05-7	2-Ethyl-hexagon	900	Derived (read/diagonal)	2013
7-9	124-13-0	Octagon	900	Derived (read/diagonal)	2013
7-10	124-19-6	Nonanal	900	Derived (read/diagonal)	2013
7-11	112-31-2	Dekanal	900	Derived (read/diagonal)	2013
7-12	4170-30-3 123-73-9 15798-64-8	2-Butenal (crotonaldehid)	5	Derived	2015
7-13	1576-87-0 764-39-6 31424-04-1	2-Pentenal	7	Derived (read/diagonal)	2015
7-14	6728-26-3 505-57-7 16635-54-4 1335-39-3 73543-95-0	Hexagon	7	Derived (read/diagonal)	2015
7-15	2463-63-0 18829-55-5 57266-86-1 29381-66-6	2-Heptenal	7	Derived (read/diagonal)	2015
7-16	2363-89-5 2548-87-0 25447-69-2 20664-46-4	2-Eight	7	Derived (read/diagonal)	2015
7-17	2463-53-8 18829-56-6 60784-31-8	2-None	7	Derived (read/diagonal)	2015
7-18	3913-71-1 2497-25-8 3913-81-3	2-Decennial	7	Derived (read/diagonal)	2015
7-19	2463-77-6 53448-07-0 1337-83-3	2-Immoral	7	Derived (read/diagonal)	2015
7-20	98-01-1	Furfural	10	Derived	2017
7-21	111-30-8	Glutaraldehit	1	Derived	2018
8	Ketonlar				
8-1	78-93-3	2-Butanone (etilmetilketon)	20000	Derived	2016
8-2	563-80-4	3-Metil-2-butanone	7000	Attributed	2013
8-3	108-10-1	4-Methyl-2-pentanon (metilisobutylketone)	1000	Derived	2016
8-4*	120-92-3	Siklopntanon	1200	Derived	2020
8-5	108-94-1	Siklolikanon	410	Attributed	2013
8-6*	1120-72-5	2-Metilsiklopedon	1400	Derived(read-wide)	2020
8-7	583-60-8	2-Metilsiklopedikohexanone	2300	Attributed	2013

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

No.	CAS No	compound	LCI (µg/m <sup>3</sup> )	-Status of LCI value	Year of adoption
9-2	79-09-4	Propionic acid	1500	Derived	2016
9-3	79-31-2	Isobutic acid (isobutyric acid)	1800	Derived (read/diagonal)	2018
9-4	107-92-6	Butanoic acid (butyric acid)	1800	Derived (read/diagonal)	2018
9-5	75-98-9	2,2-Dimethylpropanoic acid (pivalic acid)	2100	Derived (read/diagonal)	2018
9-6	109-52-4	n-Pentanoic acid (catalytical acid)	2100	Derived (read/diagonal)	2018
9-7	142-62-1	n-Hexonic acid (caproic acid)	2100	Derived (read/diagonal)	2018
9-8	111-14-8	n-Heptanoic acid	2100	Derived (read/diagonal)	2018
9-9	124-07-2	n-Octaic acid	2100	Derived (read/diagonal)	2018
9-10	149-57-5	2-Ethylhexanoic acid	150	Derived	2014
10	Ester				
10-1	108-21-4	Propyl acetate (n-, iso-)	4200	Attributed	2013
10-2	108-65-6	2-Methoxy-1-methylate acetate	650	Derived	2019
10-5	80-62-6	Methyl methakrilat	750	Derived	2016
10-7	110-19-0	İzobutil acetate	4800	Attributed	2013
10-8	123-86-4	n-Butyl acetate	4800	Attributed	2013
10-9	103-09-3	2-Ethylecyl Acetate	350	Derived (read/diagonal)	2018
10-10	96-33-3	Methyl akrilat	180	Attributed	2013
10-11	140-88-5	Ethyl acrylate	200	Attributed	2013
10-12	141-32-2	n-Grain Alien	110	Attributed	2013
10-13	103-11-7	2-Etilheksil akrilat	380	Attributed	2013
10-14		Other acrylacts (acrylic acid esters)	110	Atfedilen -LCI	2013
10-15	627-93-0	Dimethyl adipate	50	Attributed	2013
10-16*	106-65-0	Dimethyl süksinit	20	Derived	2020
10-17*	1119-40-0	Dimethyl glutat	25	Derived	2020
10-18*	71195-64-7	Diisobutil glutat	35	Derived (read/diagonal)	2020
10-19*	925-06-4	Diisobutil succinate	35	Derived (read/diagonal)	2020
10-20	105-75-9	Dibutil fumarate	50	Attributed	2013
10-21	105-76-0	Maleic acid dibutylester	50	Attributed	2013
10-22	13048-33-4	Heksametililen diakrilit	10	Attributed	2013
10-23	96-48-0	Butyrolactone	2800	Derived	2018
11	Chlorinated hydrocarbons				
11-1	127-18-4	Tetrakloroethene	80	Derived	2018
11-3	106-46-7	1,4-Diklorobenzen	150	Derived	2013
12	Other				
12-1	123-91-1	1,4-Dioksam	400	Derived	2015
12-2	105-60-2	Caprolactame	300	Derived	2013
12-3	872-50-4	N-Methyl-2-Pyrrolidone	1800	Derived	2016
12-4	556-67-2	Sekizilikleskletoklasiloksamin (D4)	1200	Attributed	2013
12-7	100-97-0	Heksametililentetramin	30	Attributed	2013
12-8	96-29-7	2-Butanonoxime	15	Derived	2015
12-9	126-73-8	Tributyl phosphate	300	Derived	2016
12-11	26172-55-4	5-Chloro-2-methyl-2H-isothiazole-3-one (CIT)	1	Attributed	2013
12-12	2682-20-4	2-Methyl-4-isotiazolin-3-one (MIT)	100	Attributed	2013

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

No.	CAS No	Chemical name	No.	CAS No	Chemical name
1.	79-06-1	Akrilamid	21.	120-71-8	6-Metoksi-m-toluidin
2.	107-13-1	Akilonitril	22.	592-62-1	Methyl azoksi methyl acetate
3.	71-43-2	benzene	23.	838-88-0	4,4-Methylene di-o-toluidin
4.	1464-53-5	2,2'-Biyoksirane	24.	79-46-9	2-Nitropropane
5.	542-88-1	Bis (klorometil) eter	25.	621-64-7	Nitrosodipropilaminin
6.	106-47-8	4-Kloroanilin	26.	1116-54-7	2,2'-(Nitrosoimino)bisethanol
7.	106-89-8	Epiklorhidrin	27.	88-72-2	2-Nitrotoluen
8.	51594-55-9	(R)-(-)-Epiklorohydrine	28.	122-60-1	Phenyl glyyl ether
9.	95-69-2	4-Kloro-2-metililen	29.	1120-71-4	3-Propanesultone
10.	100-44-7	Benzyl chloride	30.	91-22-5	Quinoline
11.	96-12-8	1,2-Dibromo-3-kloropropane	31.	94-59-7	5-Allyl-1,3-benzodioxole
12.	106-93-4	1,2-Dibromoethane	32.	96-09-3	Styrene oxide
13.	764-41-0	1,4-Diklorobut-2-one	33.	95-06-7	Sulfallate
14.	107-06-2	Ethylene dichloride	34.	5216-25-1	4-Klorobenzotrighloride
15.	78-87-5	1,2-dikloropropane; propilen diklorür	35.	95-53-4	o-Toluidin
16.	96-23-1	1,3-Dikloro-2-propanol	36.	79-01-6	Trikloroetilen
17.	79-44-7	Dimethylcarbamoil chloride	37.	96-18-4	1,2,3-Trikloropropane
18.	540-73-8	N,N'-Dimetilhidrazin; 1,2-Dimetilhidrazin	38.	98-07-7	Benzotrighloride
19.	680-31-9	Heksametil phosphorus triamid	39.	137-17-7	2,4,5-Trimetilaniiline
20.	90-04-0	2-Metoksiyanilin	40.	51-79-6	Üretan

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## Criterion 1.4 Suitability for use

Interpretation of Criteria:

Quality management systems are defined in EN ISO 9000 and ISO 9001. Definitions are set to apply to any organization.

The criteria for compliance with use for hard coating products comply with these principles by requesting proof of quality control and quality evaluation procedure. The simplest way to do this would be to show the ISO 9001 certificate for the applicant's production sites.

However, it is important to note that ISO 9001 certification is not required. If similar on-premises systems have been installed, they are disclosed to the Authorized Authority.

Regarding quality management of the production process, the description can include many different aspects in which the following are most expected:

- define the production process and the objectives of each part or unit of the production system
- define roles, responsibilities and responsibilities for the manufacturing process as a whole and as distinctive parts
- to define the capacity of the process and the capacity of the organization in terms of production
- explain how different processes are related and interconnected
- explain how processes are monitored and controlled
- explain how the quality of products is evaluated

The procedure for handling customer complaints should be easy to explain clearly (especially in small and medium-sized enterprises operating at the regional or national level).

Any use requirement should be well understood by the applicants, since almost all products will have to bear a CE mark, due to the presence of the building products regulation and the fact that the scope mainly refers to construction products. Non-construction products, i.e. kitchen countertops, tile-tops and makeup tops, which are covered, do not need CE marking as they will be defined as furniture products.

With or without CE marking, applicants must determine their compliance with the relevant usage

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## Documents required for meet and dessert

- 1.4 for the section C &D head of notification on the Reconcile Excel file page.
- Right 9001 document in bird way or in-house Quality Management System in some way.
- customer is concerned with processing the ticks in this and/or way.

## Criterion 1.5. User information

### Criterion Reviews:

*Salespeople are allowed to go through what went on until the last pass on how to make the time information exactly what it is for customers and customers. Single pieces are available in an electronic format that is accessible over the internet, with no access to the enesten. This is mainly due to the fact that the cauldators and their sons are the first interested to buy the neck.*

*The information is ideally purchased physically in paper format, and to the market, to the market, to the official. Although, it has been globally related, replicating a daily multilingual paper that will be more practical with a QR code on packaging and/or invoices, stating this according to the time information for the product.*

*Need information based on Everything, including at least one thing:*

- related technical performance
- in the right area and setup
- proper cleaning and maintenance
- information about accurate disposal (both product and packaging grass)

*In a very single way covered by the application, it is necessary to have a knowledge of the reconciled - but it will be up to the Authorized Year to decide whether the sample is adequately represented.*

## Documents required for meet and dessert

- 1.5 for the head of notification on the Reconcile C &D Sections Excel file page.
- representative examples of all-by-all information.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## Criterion 1.6. Information about Ecomark

### Criterion Reviews:

The relevant information specified by Criteria 1.6 is acted upon in the packaging for the product(s), whether it is the business-to-business (B2B) or the business-to-consumer (B2C) back-to-back.

The applicant follows the ecomark logo specified in the Ecomark Logo Cancellation to the correctness of the application:

If the text box labels that contain the relationship, it contains the three when specified in the criteria document. No other expressions in the box are days, but they are free to provide additional information about other parts of the package that owns it.

### Documents required for meet and dessert

- 1.6 for section C & D of Excel file reconcile on the notification head on the page.
- Product packaging  Visuals representing products with application concieration.

## 1.7. Environment management system (optional)

### Criterion Reviews:

Depending on this criterion, there is no information or declaration. However, if any indicator cannot be calculated, by default 0 points are given for the criterion. If the ventilation site(s) is the head of GOLD 5 points are given. The EMAS eden of the site but according to ISO 14001, 3 points are given in the form of the document. 0 points are given in all other ways.

Let's say for sites that cover the neck with the Environmental Management System. This is a potential impact for rectangular natural stone products and precast Specific with the latest grains of the intermediate Ecomark and the 1.7 criterion of the total score of the intermediate product.

This is two to the sum of points and any relevant criteria of 1.7 in the intermediate form or in the authorized year that licenses the intermediate product.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

## Natural stone product criteria

### 2.1 – Energy consumption in the quarry

Interpretation of Criteria:

Mandatory part

The mandatory element of this criterion is to implement a plan to systematically monitor, reduce, and reduce certain energy consumption and specific CO<sub>2</sub> emissions. The monitoring and recording system should correspond to fuel and electricity consumption and production output inventory. Proof of electricity consumption should come from meter readings and invoices. Monitoring fuel consumption will depend on how the fuel is handled on site, but delivery notes, receipts and invoices will normally be the most convenient way. Production output should be self-explanatory, referring to actual sold products.

The quarry's energy inventory must cover at least 12 months before Ecomark's award date. Since it is not possible to determine the concrete criteria of energy consumption per unit of production output during background research, no transition/failure limit has been determined in the criterion. So the main challenge is to destroy the data in the first place. In cases where data collection is something new for the applicant, it is recommended to start the application before the inventory with 12 months of data (for example, if the Ecomark application and reward take another 6 months to process - assuming that the inventory is kept up to date during the application process).

The CO<sub>2</sub> footprint must be specified for the electricity consumed so that CO<sub>2</sub> can be converted into footprints. If more than one electricity source is used and each has a different CO<sub>2</sub> footprint, a weighted average CO<sub>2</sub> footprint should be used. The type or types of fuel used must also be specified for the same purpose.

If the fuel is converted into electricity on site (e.g. diesel generators), this should only be counted once as the primary energy source (i.e. fuel). If a combination of on-site renewable electricity and grid electricity is used, the measurement must be adjusted to count all on-site consumption, regardless of where it comes from and whether it is associated with an invoice.

In particular, it should be noted whether fuel consumption of off-site vehicles is included. The simplest option would be to exclude vehicles used off-site, as they may be affected by factors that are not related to the manufacturing process (for example, employees traveling to homes and other places). However, the bukriter leaves the applicant to define the full scope and then apply it consistently.



# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## Renewable energy (15 points in total)

For clarity, the first 10 points available refer to the share of renewable energy (i.e. electricity plus fuel). The next 5 points refer to how renewable electricity originates, regardless of how much of the total electricity comes from renewable energy. Where renewable electricity comes from multiple types of contracting (for example, the share of renewable energy on site generated through PV panels and in the green tariff from the electricity supplier), the source that constitutes the largest share of renewable electrification will be selected.

## Carbon footprint analysis (5 points in total)

Information required in criteria 2.1 (including information about other criteria)

*the basis of carbon footprint analysis. If such an analysis is carried out in line with Iso 14067, 3 points are given. 5 points are awarded if done in accordance with PEF methodology. Other methods used will not result in points awarding unless appropriate equivalence is justified by the Competent Authority.*

How does Section C &D look like in an Excel worksheet?

Because there are a number of cells that require input for indicator 2.1, it is worth presenting how the cells look in the Sections C &D excel worksheet.

Cells of green color must be filled, and cells of red color must automatically produce results. The first green cell (C4) refers to the name to be associated with the data entry (only the name of the quarry and the reference year). In cells C5 and C6, the applicant must confirm that he or she meets the mandatory elements of the ion2.1 criterion. It should be noted that the competent body may ask for more details about what is behind the "Yes" entries to C 5 and C6.

The next 6 lines that define the period and the quantities of materials extracted and the output of production (i.e. products to be sold). The approximate density of the stone is important for the conversion of units from m<sup>3</sup> to tons. Where multiple stone density is valid, the applicant must estimate a weighted average stone density for products covered by the same energy data.

In cell C14, the first input on energy consumption occurs (electricity, in kWh). An input is also required for the carbon factor of the electricity used (gCO<sub>2</sub> eq per kWh). This will automatically produce total electrical CO<sub>2</sub> in cell C15. It is necessary to define the amount of fuel consumed by fuel consumption (in volume or mass) and then define both the calorific value of the fuel and the carbon factor of the fuel. This will define 2 outputs for total fuel energy and total fuel CO<sub>2</sub> (in cells C17 and C18 respectively). Since each fuel has its own calorific value and carbon factor, it is complicated to make a weighted average estimate. Therefore, scope is made in the excel file to define 3 separate fuel inputs.

If more than one source of electricity and fuel is used, these numbers should be detailed separately (meter readings, invoices, etc.) and submitted to the Competent

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Authority upon request. CO2 factors for fuel and electricity should be based on information from suppliers. If there is doubt about fuel factors, the values in Annex VI of the Commission Implementation Regulation No. 2018/2066 are used.

The next lines are only the sums calculated automatically for energy (kWh and MJ) and CO2 (in kg) and for specific energy and CO2 (kWh per tonne, MJ and kgCO2 and m3). Automatic calculations for total energy (i.e. fuel plus electricity) already take into account the conversion factor for kWh and MJ (i.e. 1kWh =

3.6 MJ). The values in cells C33 and C35 are automatically shown on the "Summary worksheet".

It should be noted that certain energy consumption is based on the total sold material extracted and not the total material extracted. Therefore, one way to improve certain energy consumption and specific CO2 emissions is to increase the efficiency of material extraction (see criterion 2.2 for more details on exactly what should be considered as products and by-products to sell).

The last three places are where the points are awarded. The first relates to the share of renewable energy (i.e. fuel plus electricity). The next line is about the main mechanism for renewable electricity and the last row, whether a carbon footprint is carried out for the products and how it is carried out.

By obtaining the data needed to fill the excel sheet for the 2.1 criterion, most of the basic information required to perform carbon footprint analysis has already been made. Therefore, applicants are encouraged (but not mandatory) to go one step further to earn an extra 3 or 5 points.

## Documents required for meet and extract: documents

- (OnRequest) the data progresses to the relevant Zr. the fuel and electricity of the belonging are many birds, which explains the inventory reconciliation with the generation and the trace.
- (ondemand) stagnant bird name reducing production output by 600 and CO2 by 600 and CO2.
- Head of Section C & D Excel file reconcile day for the 2.1** criterion, specifying the material of the moment, the largest sold material of the name and 600 total fuel and electricity in the same period.
- (depending on the trace) for justification as much as entered, contrast readings for electricity and fuel, copies of the text and the technique.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## 2.2 – Material efficiency in the quarry

Interpretation of Criteria:

To create material extraction efficiency in the quarry for a certain period of time, it is necessary to know three things:

- total amount of material extracted (A)
- total quantity of manufactured blocks (or sheets) (B)
- total quantity of manufactured by-products (C)

Although it is easy to estimate the value of A, the other two (B and C) are more difficult because they are linked for sale, since it depends in part on operating permits and can be visually evaluated by examining the quarry fronts. The sale of materials refers to material extracted from an already removed stock of materials stored during the data collection period or in the quarry for several years.

Conversely, the material is removed during the period of low sales, which leads to the accumulation of stock in place and the seemingly low efficiency of material extraction.

For these reasons, it is best that quantities B and C refer to "sold" blocks (and plates) and "sold" by-products, respectively. "Sold" means that these products/by-products have sufficient quality and characteristics to be sold (not given free of charge). This decision should be justified based on the previous commercial experience of the quarry operator.

Material flows in the quarry should be determined as follows:

The exact volumes of C, D and E are only predictable, since they will consist of a series of irregular blocks of stone, parts and dust. However, as a control, C+D+E cannot be greater than A-B for the data collection period. Estimates of C, D and E should be based on the density of the stone material and the bulk packaging density of the material in BDPA and EWDA. For clarity, quarry operators should never ship by-products to be sold to EWDA. The data must be collected for at least 12 consecutive months. Longer data collection times will also be allowed.

How does Section C & D look like in an Excel worksheet?

Because there are a number of cells that require input for indicator 2.2, it is worth presenting how the cells look in the Section C & D excel worksheet.

Two 2.2 and optional entries require a total of 5 entries for the Excel worksheet. Each input must be connected to the quarry's material flow inventory. Such an inventory should track the movements of the extracted materials to the following objectives: products to be sold; sold by-products; internally used by-products and storage or disposal of extractive waste.

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

The monitoring period should be at least 12 months, but longer periods are also allowed. Regardless of the trace time, it must be specified in cell C44. During this period, inventory should be compiled with material flows so that it is easy to calculate the values A,B, C, D and E. A copy of the inventory must be submitted to the Competent Authority upon request.

It is important to note that A-B should be equal to C+D+E, but the applicant actually reports for the optional D and E. In reality, these numbers will never match perfectly, despite inaccuracies in material flow forecasts, inaccuracies in bulk density estimates, and accurate data loss due to material losses such as windy dust and precipitation. Therefore, whether the numbers match or not is relied on knowledge and to highlight obvious problems with predictions.

If applicants report flows "D" and "E" and want to approximately revise their numbers towards zero balance control, then D and/or E, not estimates for A, B or C, should be observed again.

## criteria 2.3 – Water/wastewater management Of of

### Criterion Reviews:

An explanation of how the water is in the quarry will be an ID to the Authorized ID. This explanation is the only thing that is minimal:

- how rainwater flows and drains on the field
- which trace of water it actually consumes in the quarry
- how to provide water like quarry stirred
- what happens to process wastewater (how to treat and recirculation)
- what happens to wastewater sludge (how they store it and where it is stored)

The site has a visual one and an appendix. For example, any water and wastewater grains of indications about the moon's locations and grains will be a useful basis for a description. On request, the grains and technical grains of any process wastewater treatment are also right.

## 2.4 – dust control Of of

### Criterion Reviews:

How can we not use the scallops of the district site for the control of the main tree and dust of the dust suction to their right. The description took him to the 2.4 criteria. This is not the only exception, the ground cookers need such a bird plan, potentially in the second world.

The description is based on training on good practice for dust control - including a medical control program for those like F, which in some way continues to be authorized to Osmana on request.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## 2.5 – Personnel safety and working conditions in the quarry

### Criterion Reviews:

The applicant must provide a copy of the occupational health and safety policy. This policy should cover each of the points listed in criteria 2.5. If some points are missing in the policy, an updated policy or a supplemental notification that provides the necessary information should be provided.

Photos and/or technical drawings of the equipment and on-site safety features must also be provided. A map of the site's toilets, changing rooms and dining room facilities should be provided. It is possible that these facilities are not physically at the quarry site, but are central facilities for multiple mines working in the same area.

### Documents required for meet and extract: documents

- One against business imkra and everything, mother with any additional information of birds
- 2.5 for section C & D excel file reconcile day president.
- (ifin the U.S.) national sam abo

ut health and safety claims and workers' rights and configure it. in accordance with the requirements.

- (except ysa) third-party approved bird IDs that comply with national sam compliance and imposition basic ILO contracts on health and safety claims and workers' rights.

**Copies of employment** contracts for  workers.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## Criterion 2.6 – Quarry landscape impact rates (optional)

Interpretation of Criteria:

Quarries have a wide range of appearances depending on the topography of the site, the topography of the surrounding areas and the location of the material to be extracted. This criterion is an optional criterion type because it may prefer some site types over others. However, it can encourage the continuous correction of inactive areas and the establishment of renewable energy infrastructure on all sites.

This criterion looks at different surface areas of a quarry from the air or satellite view. Ideally, the entire quarry area (TAA) is divided into QF (active Quarry Front), EWDA (Extractive Waste Accumulation Area, BPDA (By-Product Accumulation Area, BA (Biodiversity Area) and REA (Renewable Energy Area). More information about how fields should be counted is given below.

QF can be used as an active workspace. Although in reality the workspace can change from one day to another, it should be considered as all areas that need to be freed up for extraction activity. So QF includes not only the steps in which the material is currently removed, but also any access ramp and path for vehicles and machines to carry the quarry façade and materials to EWDA, BPDA and the quarry gate.

EWDA should be clearly defined in the satellite image of the quarry. The more efficient the extraction process, the less EW is produced, and the smaller the EWDA. Likewise, EW will be packaged more efficiently, reducing the EWDA that needs to be found in reuse applications for EW. For example, EW is used to build ramps, create wind breaks, or limit access routes in and around the site. In addition, EW can be sent to a common landfill or EWDA shared by a large number of small quarries in the same place. This endpoint can reduce the required EWDA to almost zero, depending on how often EW is moved off-site. If the EW is actually sent off site for disposal, it must be logged and identified as common EWDA or landfills.

The BPDA area must also be clearly defined, and the same points apply to EDWA, but there is a difference in selling BP's rather than being sent to common landfills or EWDA's.

BA is the main driver for promoting gradual rehydration (i.e. rehydration while the quarry is still active) of unused areas in the quarry. Water bodies that do not involve intentional treatment of process wastewater can be used biodiversity if they are filled with aquatic species and/or vegetation is established around their boundaries. Creative solutions to planting dense shrubs or trees can serve as a wind break and serve a double purpose to promote biodiversity. The use of land to grow crops, feed farm animals or grow aquaculture can also be used as biodiversity,

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

as long as the agricultural process meets all requirements for organic farming practices. This certainly does not mean that the land or water must be certified organically for beer to be used as part of BA, but only a description of agricultural activity and a declaration of conformity to a number of requirements related to organic applications on quarry land. Competent Bodies are also recommended to consider the recognition of biodiversity in important vertical areas, if they are covered with naturally established climbing vegetation, deliberately planted green walls and/or natural or built nesting areas. Such areas do not look very well in satellite view and therefore need to be highlighted in photos - along with an explanation of where they occur in satellite view.

REA offers significant potential use for different topography hobs. In flat sites, the establishment of photovoltaic farms has obvious potential and creates an indirect incentive to reduce dust emissions (because the dust reduces the efficiency of the panels). On more vertical sites, the wind

## 2.7 – energy consumption Of conversion plant

### Criterion Reviews:

And so is the same for the same interpretation criterion 2.1, the only difference is that the criterion is reconciled

While journalism applies to energy in the quarry, there is No 2.7 criterion for energy to conversion values in the capital, The CapitalCity.

### Documents required for meet and accuratefication: documents

- (OnRequest) the data progresses to the relevant Zr. the fuel and electricity of the belonging are many birds, which explains the inventory reconciliation with the generation and the trace.
- C &D section to the C &D excel file of the page page, citing the calculated material, specify the largest sold material and 600 total fuel and electricity over the same period.
- (depending on the trace) for justification as much as entered, contrast readings for electricity and fuel, copies of the text and the technique.
- How** you calculated the single fuel and electricity used (if relevant) and carbon factors, and how to estimate renewable energy by 10% written bird breakdown.
- place** or facility is justifying its demand for all kinds of renewable energy in some way from Georgian or other written in electricity supply.
- (Scoreclaims) The carbon footprint that makes it compatible with ISO 14067 or PEF of the method is either the neck or the bird shape of the EPD.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00



# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## 2.8 – Water and wastewater management in the conversion plant

### Criterion Reviews:

An explanation of how water is transformed is the waterto the Authority. This explanation is the only thing that is minimal:

- transformational elongation which processes really consume water
- how to provide conversion contaminating water
- what happens to prose wastewater (how to treat and recirculation)
- what happens to wastewater sludge (how they store it and where it is stored)

A visual description of the site should also be added. For example, a satellite photo with indications about the locations and orientation of any rainwater, process water and wastewater flows will be a useful basis for an explanation. Photos and technical drawings of any process wastewater treatment equipment must also be provided.

If the visual description also shows how the landing of rainwater in impermeable areas is harvested or directed to prevent it from working in work areas, and prevents the transport of work areas to natural waterways, 5 points will be awarded.

### Documents required for meet and extract: documents

- Prose sm.' How did I get the food and wastewater, collect it, purify it and dispose of it somehow.
- 2.8 for section C & D excel file reconcile day president.
- (To the degree of demand), rain sm.' How did you collect and store this before you surfaced the natural waterways or the impermeable fingernails for perseverance, bird, in some way.

## 2.9 – dust control Of conversion plant

### Criterion Reviews:

The interpretations of the 2.9 criterion are essentially the same as the 2.4 criterion, the main difference is that the transformation of the 2.9 criterion expresses powder, and the 2.4 criterion is expressed in the quarry.



# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Documents required for meet and extract: documents

- to be about the field zlemin that produces dust ethes and the dust that makes the transformational, it's about backwards danering somehow.
- (uponrequest) the program of the medical control program for copies of educational material and others such as
- 2.9 for section C &D excel file reconcile day president.

## 2.10 – Reuse of process waste from the conversion plant

Interpretation of Criteria:

The mandatory element of this criterion is to implement a plan to achieve systematic monitoring, recording and minimum reuse of process waste. Therefore, the monitoring and recording system should correspond to the process waste inventory. There are two main types of process waste consisting of natural stone conversion plants that must be recorded separately:

- Process scrap (i.e. pieces of stone of different sizes)
- Process sludge (i.e. fine dust from the clarification of process wastewater or dust collection).

The target of process scrap and process sludge must also be recorded. The main destinations will be used on site (e.g. in road tan, geotechnical filling or construction of walls, etc.) off-site use (bulk sale for various purposes, cement production or sale as raw material for other purposes) or disposal (on-site or off-site landfill). The applicant must keep records of process scrap and sludgeshipments off site if the Competent Authority holds the withdrawn to see them.

Criterion 2.10 suffers from a problem similar to criterion 2.2, which refers to potential discrepancies in process waste generation and reuse (for example, reuse of historically stocked waste will lead to reuse of over-estimated waste and continued reuse rates of process waste). The solution to these problems is to sufficiently extend inventory time so that a representative dataset can be obtained. For example, if process waste reuse applications are extremely intermittent (for example, every 15 months), inventory should be extended for these 15 months. Alternatively, applicants should show cha to have a more regular flow of process waste for reuse applications.

Find reuse applicationsfor process scr ap, process sludge. Therefore, the data should be kept separate and a minimum requirement should be placed for the reuse of the transaction scrap (80%). Any reuse of process scrap over 80% is rewarded with points, and reuse of process sludge is rewarded with points.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Inventory must be kept in consistent mass units. However, due to inaccuracies that will lead to estimation of waste volumes (bulk packaging density must also be assumed), a scale or other recording tool will be needed to record the amounts of waste produced.

With process sludge, data should ideally be reported in terms of dry solids (i.e. produced dry solids, discarded dry solids and dry solids reused). This requires both the weighing of the mud and a part of the water content. Wet sludge masses are used (i.e. produced wet sludge, wet sludge disposal and wet sludge are reused), but potential inaccuracies in the mass balance of wet process sludge are much larger due to differences in moisture content (e.g. sun exposure, humidity and precipitation).

(Optional) Shipping notes of any scrap or mud separation site.

## **2.11 – Regional integrated production in the conversion plant (optional)**

Interpretation of Criteria:

This criterion is optional, but encourages the use of natural stone from quarries in the same area (260 km travel distance).

For clarity, it should be understood that the travel distance means that the route is traveling, not a straight line drawn on a map between the quarry gate and the conversion plant gate. The transport route must follow all valid road or rail lines. If shipping routes are valid, they are less clear - but they should still be estimated based on actual routes.

It is normal to take natural stone blocks and sheets from a number of different quarries. This is for offering customers a wider range of products. Since each quarry will have a different transport distance to the conversion, this will create a distinction at the points where it will apply to different products that can be entered into the same Ecomark license.

Converted natural stone products from the same conversion plant, but using intermediate blocks/sheets from different quarries will require different entries (sequences) in the 2.11 excel input criterion if they are covered by the Ecomark license application. This translates into separate entries (rows) on the "Summary" worksheet, not only because of possible differences in points below 2.11, but because of all other quarry-specific criteria (2.1 to 2.6).

If the blocks or sheets are not purchased directly from the quarry, but come through some intermediary, the travel distance from the quarry to the intermediary and then from the vehicle to the conversion facility should be counted. But if it is clear that the agent does not physically handle natural stone blocks and sheets, this extra transport can be ignored.

### **ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION**

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Applicants must keep copies of delivery invoices that explicitly specify the welding quarry or quarries if this information is requested by the Competent Authority.

Agglomerate stone product criteria

## 3.1 – Energy consumption

Interpretation of Criteria:

Specific energy consumption (10 points in total)

Applicants can record the consumption of process electricity, ideally, from other uses due to the process (e.g. offices, etc.) with special counters to be allocated. At the same time, records of the quantities of the products produced must be kept. These records must be made available to the Competent Authority upon request.

The agglomerate stone production process is based on electrical-only batch processes that normally use BretonStone technology. Since each batch produces a very well-defined product volume (determined by mold dimensions) and this volume can be multiplied by the specific density of the material and converted into mass, the amount of production should be defined in terms of volume and mass.

Depending on the location of the electricity meters, the specific energy consumption of each batch work can potentially be recorded and certain energy consumption (in kWh/kg) can be determined. This can be converted to MJ/kg by multiplying by just 3.6. If electricity consumption is measured only at the frica level, applicants should be aware that non-invasive meters can be placed around the toilet power equipment, which will allow recording very specific consumption rates.

It's up to cant to decide what level of detail to provide in the data. However, the average received data over a longer period of time can be used more representatively. If there are significantly different specific energy consumption (e.g. >15%) among products covered by the Ecomark license, these must be reported separately. Up to 5 separate entries are possible in sections C & D excel electronics and more entries can be added manually.

The consumption of electricity for grinding the raw material should also be luded, even if it is to receive this information from suppliers. Although this consumption does not count for the total reported under the 3.1 criterion, its potential importance for overall energy consumption is significant.

Renewable energy (20 points in total)

For clarity, the first 10 points available are referred to the share of renewable electricity. The next 10 points refer to how renewable electricity originates, regardless of how much of the total electricity comes from renewable energy. In cases where renewable electricity comes from multiple types of contracting (e.g. the share of renewable energy on site generated through PV panels and in the green tariff from the electricity supplier), the source that constitutes the largest share of renewable electricity will be selected.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

How does Section C &D look like in an Excel worksheet?

Because indicator 3.1 requires input and affects how many points are awarded, it's worth presenting how the cells look in the Sections C &D excel worksheet.

It should not be emphasized that the following entry will be a single set of numbers for all products covered by the application, or separate entries will be made for products with different specific electricity consumption. Excel provides 3 separate entries for 3.1 and more and is copied and pasted if necessary.

The data collection period should be supported by records of electricity consumption and production of products sold if the Competent Authority requests these records. The next green cell in the column (C6) is to describe the main types of products or products covered by the data (the main two options will be granite or quartz, but probably other varieties are applied). It is then necessary to define the curing process (cell C7) and the specific density of the stone (cell C8). Density is used to automatically convert the volume (m<sup>3</sup>) in the following 2 cells (C9 and C10) to mass (tons). Depending on the unit the applicant first received, it would make more sense to have C9 as an automatic output or C10 cell. Alternatively, the applicant can enter both values manually.

The applicant then enters the total process electricity consumption (in kWh) and adds additional electricity consumption due to grinding. The old value is used to calculate certain electricity consumption. In the example above, the number is out at 0.21 kWh / kg. Multiplying this by 3.6 MJ/kg, the value is 0.77 MJ/kg.

If the value must be >1.10 MJ/kg, the output is highlighted in red and bold because it indicates that the criteria has failed some mandatory elements. If value is somewhere between 0.70 and 1.10, this causes the entry to remain black and some points are awarded in the first of the three score cells shown above. If the specific electricity consumption is less than 0.70 MJ/kg, the input is "<0.70" and a full score

(10) is allocated. Specific energy consumption values between 0.70 and 1.10 MJ/kg will increase proportionally as the value drops towards 0.70, producing total points output between 0 and 10.

The last two Column C cells in green require the applicant to define the percentage of electricity. Renewable and the main contracting for renewable electricity mekansimi. To determine the entries here Dots in cells G16 and G17. The applicant must renewable energy Claim and Commitment Mechanism -1 in 1000.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## 3.2 — dust control and air quality

### Criterion Reviews:

It's the sleaosis and exposure of your mother, who's sleas and dust-billed - all the way to the field for what's in the end. This description is closed dosage for resins and the top five important in the opposite of the 3.2 criteria by dayding it out.

Whilethe description provides training on good practice for dustcontrol, the bird of this material is somehow right to The Authorized Year on request. (paged) 5. period).

As a son, health control for the likes of race is also explained in the way .

### **Documents required for meet and extract: documents**

- Styrene nails and powder nails for the principle field zlemin and the dust that sews the bird to pererle bird this way.
- 3.2 for section C &D excel file reconcile day president.

## 3.3 —Recycled / secondary material content

How does Section C&D look like in an Excel worksheet?

Because there are a number of cells that require input for indicator 3.3, it is worth presenting how the cells look in the Sections C &D excel worksheet.

The first input cell (D34) is confirmation of the inclusion of resources and approximate transport distances for the main raw materials, secondary materials and recycled materials. Lines between 36 and 41 refer to the inputs of materials. If more than 6 mates are related, extra rows must be added.

Lines 43 through 48 provide special recycled/secondary material content for different products covered by the Ecomark application. Again, if more than 6 different product entries are applied, extra lines must be added. In these lines, the nearest 0.5% recycled content from the drop-down lists must be selected % .

The last group of cells refers to an inventory of recycled/secondary material content. In these cases, the frica is treated like a black box, recycled and/or containing the ins and outs of secondary materials. Entries are related to deliveries, and outputs relate to products or waste from the frieze. It is up to the applicant to accurately allocate the flows of recycled/secondary material content to the different products and wastes that come out of the frica. Inlets and outlets must be balanced for a certain period of time and the balance (the amount of recycled/secondary material in thefrica) should not fall below zero for any month.

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Practically speaking, the only way for the applicant to track the flows of recycled/secondary material a credit/debit system that is registered on gelişirmeyki delivery material invoices (credits), product packing slip invoices (payables) and waste shipment notes (payables). Because agglomeration stone production process you in collective job type, o Ship be Relatively straight forward Goal True separate Want in rekyclcd/secondary Material into real Products.

## 3.4 — Resin binder content

### Criterion Reviews:

Resin binding is an important bird technical parameter for optimizing resin binding, double and curing. As a result, this is very well known. The resin policy license is very similar to all products or can vary significantly between single products.

The skin content is ultimately self-declared by the applicant, who can be evaluated in real products by selective sampling and testing.

### Documents required for meet and extract: documents

3.4 for section C & D excel file reconcile day president.

## 3.5 — Reuse of process waste

### Interpretation of Criteria:

The mandatory element of this criterion is to systematically monitor, record and implement a plan to achieve a process waste reuse rate of at least 70%.

Due to potentially misleading reuse rates issues arising from irregular or sporadic reuse practices of process waste (for example, waste accumulation over a long period of time and subsequent reuse on a large scale very quickly), data must be monitored for at least 12 months. If longer periods are needed to show the full picture, the data is collected for a longer period of time.

The monitoring and recording system should correspond to the inventory of process waste and production of sold products. Although the criterion actually indicates production in m<sup>2</sup> units, it is more convenient to report production in terms of mass and volume rather than surface area, due to the different plate and cutting thicknesses possible. The excel worksheet for criteria 3.5 scores based on data in the mass.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00



# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

The target of process waste should also be recorded. The main destinations will be used on site (e.g. in road tan, geotechnical filling or construction of walls, etc.) use off-site (bulk sale for various purposes, production of cement or sale as raw material for other purposes) or disposal (on-site or off-site landfill). The applicant must keep records of process waste shipments outside the facility if the Competent Authority wishes to see them.

Inventory must be kept in consistent mass units due to inaccuracies that will lead to estimation of waste volumes (where bulk packaging density should also be undertaken). This requires a scale or similar tool to record the amounts of waste produced.

How does Section C & D look like in an Excel worksheet?

Because there are a number of cells that require input for the 3.5 criterion, it is worth presenting how the cells look in the Section C & D excel worksheet.

The first two green cells (C76 and C77) require some details about the product reference and data collection time. The second should be at least 12 months before the issuance of Ecomark. In fricas producing both quartz and marble products, quartz and marble wastes are significantly different and the applicant does not want to report these differences at separate entrances. In such cases, the same cells reappear in the columns on the right (beyond Column H).

Green cells close to the tana (C83 to C86) are for the weight of materials entering the process, the mass of sold products coming out of the process, process waste and reuse of process waste. Each of these masses can also be converted into a volume using the optionally defined stone density in cell C78.

To check if quantities are appropriate, there is a check cell that indicates any discrepancies between:

materials = products to be sold out + waste out.

If waste is underestimated, the waste value should be increased, since this is due to illegal dust emissions, false assumptions about moisture content and/or failure to properly record waste.

The amount of waste transported to on-site storage areas, disposal sites or applications for reuse must be recorded. These quantities should be recorded at the plant, ideally through a scale, and any waste leaving the site (for disposal or reuse) should be logged. If the Competent Authority requests this information, the shipping notes for the landfill must be stored by the applicant.

If the reuse rate of process waste is <70%, it is marked with red, bold text indicating that a basic demand rement for the criterion is not met.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Ceramic and fired clay product criteria

## 4.1 – Fuel consumption for drying and ignition

Interpretation of Criteria:

Fuel consumption for drying and ignition (20 points in total)

The mandatory elements of this criterion relate to the non-use of certain fuels (coal, oil coke, light fuel and heavy fuel) and place an upper limit of certain fuel consumption (in MJ/kg units) for other fuels.

Separate limits are defined for:

- spray dryer
- gere gere dryers and oven

The separate limit for spray dryers is that in most cases the spray drying process is completely independent of the appliance drying and ceramic oven. Even on sites where spray drying also occurs, the spray drying scale tends to be large enough to produce excess spray-dried powder for sale to other sites. As a result, in most cases a specific energy consumption for spray drying will need to come from a third party. Basic information needed to support a specific fuel consumption notification during a given period:

- the amount of spray dried powder produced (in kg, including 5-7% default moisture content)
- amount of fuel or fuel consumed (kg, m<sup>3</sup> or other related unit)
- specific calorific value of fuels or fuels consumed (in MJ/kg, MJ/m<sup>3</sup> or MJ/other related unit)

Unlike spray drying, the applicant will always produce this data for dryers and ovens on their site. Energy consumption for the Ware dryer and oven is grouped together, since these units operate in turn in the same place, and the waste heat from the oven will be partially reused in the ware dryer. To add to the hesa the different configurations possible and to recognize the environmental benefits of installations that ensure optimal reuse of waste heat from the furnace. If separate, special burners should also count any fuel consumption in ware dryers burners, even if they are much smaller than burners used in the oven.

Fuel consumption data is reported in different production meters that are pending at the level of detail where the data is used. If fuel consumption rates are collected at the level of individual burners, it is possible to report data at a very high level of detail for individual products. This will be relevant, especially in cases where certain fuel consumption varies significantly between different products produced in the field - for example, due to different combinations of raw materials, different ignition temperature profiles and different product characteristics needed.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00



# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

If the products covered by the license have very similar special fuel consumption rates, it is possible to send the data at a lower level of detail, perhaps including a few furnaces to the collected data. Regardless of the reported level of data, the same basic information is required for spray-dried powder as mentioned above:

- the amount of tiles or pavers produced (optionally defined in m<sup>2</sup> in kg)
- amount of fuel or fuel consumed (kg, m<sup>3</sup> or other related unit)

How does Section C & D look like in an Excel worksheet?

Because there are a number of cells that require input for the 4.1 criterion, it is worth presenting how the cells appear in the Sections C & D excel worksheet.

Entries required for Excel begin with a reference name (cell C3) for data entry and confirmation that prohibited fuels are not used (cell C5). The next entry (cell C6) relates to how many products the data covers and whether there is continuous data (product family) or more specific data (individual products). Input in cell C6 affects the boundaries that automatically appear in cells F14 and F15, which affects the output of the given scores.

Next inputs in cells C7 and C8 determine whether the score enters account data for the production of spray-dried powder. A declaration of value (in MJ/kg) is required, and if the applicant is also a spray-dried powder manufacturer or if the values are unusually low, the competent authority may request the underlying data behind the calculation for the value in cell C9.

Regarding the Ware dryer and oven, the applicant must define the time during which the data is collected (this should be 12 months for continuous production data on the families of products, but much less for individual products). The total quantity of related products produced during the same period (products associated only with reported fuel consumption) must be placed in kg in the C13 system and is optionally defined in m<sup>2</sup> in cell C12. The applicant must define the fuel energy consumed during this period for the relevant products (the amount of fuel consumed is multiplied by the calorific value of the fuel).

The points are automatically calculated in cell G10 for spray dried powder and in cell G16 for appliance dryer and oven. The overall score on the G17 should be the same as the G16 when spray dried powder is not used, and in cases where used it will be a combination of both the G10 and G16.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

## 4.2 – CO2 emissions

Interpretation of Criteria:

Mandatory requirements and scope

The mandatory elements of this criterion relate to the upper limits on certain CO<sub>2</sub> emissions associated with the production process. The scope of CO<sub>2</sub> emissions is the same as the fuel consumption defined in criterion 4.1 (that is, for fuels burned in any spray dryer and ware dryers and furnaces). It does not contain any CO<sub>2</sub> emissions related to electricity consumption, but it does include process emissions from decarbonization of carbonates in raw materials.

Where the installation is located in a Member State and has a production capacity >75tonnes/d), reporting must be carried out within the scope of the Emissions Trading Program. Emissions under the 4.2 criterion match well with for ETS reporting requirements. The biggest difference is that ETS reporting applies to the level of the entire factory, while Ecomark data applies to individual products or an entire family of products. A factory can potentially produce multiple "products families", and production shift over time from one product type to another and to more customized products or more standard products, depending on market demands. Therefore, in cases where production is variable, the applicant must clearly explain which parts of their production are associated with Ecomark and which are not.

Process emissions

Carbonate content is the main determining factor for possible process CO<sub>2</sub> emissions. Ignition temperatures in ceramic furnaces are high enough to result in thermal decomposition of mineral carbonates from CaCO<sub>3</sub> or MgCO<sub>3</sub> to CaO or MgO + CO<sub>2</sub> (>800 °C). However, the size of decarbonization is unlikely to be up to about 100%. On the other hand, any organic carbon contained in the raw material will also cause process CO<sub>2</sub> emissions, which are much more likely to be close to 100% as intentionally added or impurities.

To avoid unnecessary confusion, the rules for estimating process emissions for Ecomark should only comply with the rules of the Emissions Trading Program and refer to the relevant calculation methods for the decarbonation of applicants when applying for Ecomark. Criterion 4.2, Regulation No. 2019/331 and Regulation No. 601/2012 ( ) make special references. It should be noted that the second one was repealed by regulation ( ) no. 2018 /2066.

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

How does Section C &D look like in an Excel worksheet?

Because there are a number of cells that require input for the 4.2 criterion, it is worth presenting how the cells appear in the Sections C &D excel worksheet.

A total of 9 entries are required (green cells). The first is only one reference name for data entry in cell C21. The next entry in cell C23 relates to the fragmentation of the reported data - this is indirectly linked to the data collection period later defined in cell C28 - where data on individual products should be taken in a shorter, representative periods, and data for product families over a period of 12 months. The input in cell C23 also has a direct effect on the applicable limits in cells F32 and F33, similar to the 4.1 criterion (that is, the upper and lower limits vary depending on the type of product selected, and the scores given depend on where the results are based on this range).

A specific input is required for CO<sub>2</sub> emissions associated with spray dried powder - whether this should come from a supplier or if the spray drying process is carried out in-premises. For no doubt, when talking about kgCO<sub>2</sub>/t in cell C26, "t" refers to the spray dried powder tone. Process emissions during spray drying are expected to be insignificant in mineral decarbonization, but can potentially affect the burning of organic matter.

When switching to Ware dryer and oven data, the amount of production must be defined as kg in C30 (and optionally at m<sup>2</sup> in cell C29). Estimated process CO<sub>2</sub> emissions (based on carbonate and organic content in raw material) should be entered into cell C31 in kgCO<sub>2</sub>/t units and fuel CO<sub>2</sub> emissions should be entered into cell C32 (kg in CO<sub>2</sub>). If the process emissions are zero, "0" should be entered in cell C31. If the data collection time and CO<sub>2</sub> reporting coverage in criteria 4.2 are matches used in the 4.1 criterion, the values C26 and C32 are calculated directly from the equivalent data for the 4.1 measure, multiplied by a carbon emission factor for the fuel used.

Entries in C31 and C32 automatically generate outputs in cells C33 and C34, and Valid points in cell G34. As in Criterion 4.1, dried powder is used if sprayed, the overall score in the cell G35 you a Composite in Points in Cell G27 and G34, if not only same like cell G34.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## 4.3 – Process water consumption

### Criterion Reviews:

This criterion will normally be applied at the factory level, since in cases where the above materials will be dry ground, wet ground or spray dried, it will be complicated to allocate different specific water consumptions to different products, and it is complicated to combine and recirculate process wastewater from different production lines.

Therefore, the criterion has removed the re-escrow environment of the wastewater, the need for certain water consumption and the level at which the neck-owner calculation is entrusted, in a way that is the defining aspect of certain water consumption.

Sections C & D excel files is a relatively simple set of input fields that output "Passed" or "None" for the 4.3 criteria that also depend on the "Summary" viewer.

### Documents required for meet and extract: documents

- 4.3 for section C & D excel file reconcile day president.
- (depending on the trace and ) do not have liquid discharges or calculate specific freshwater consumption when. in the case of the side, until the estimate is made in relation to (for example, single product in the tick, production line in the tick or fear yourself).

## 4.4 – Dust, HF, NOx and SOx emissions

### Interpretation of Criteria:

#### Mandatory items

A mandatory limit is set for certain dust emissions from spray dryers (90 mg/kg) and upper limits are set for certain powder, HF, NOx and SOx emissions from the furnace.

#### Scope of data

As with criteria 4.1 and 4.2, if the spray dried powder is produced by a third party, a declaration from the supplier will be required. Depending on the complexity of the production installation at the site where Ecomark products are produced and the share of total products from this site, which will form part of the Ecomark application, the representation of emission data may vary if allocated per production mass for all output. The main factors that will affect the representation of centralized data are:

- Share of total production in the field covered by Ecomark application
- variability of raw material compositions in different products (especially fluorine and roar)

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

- variability of different ignition programs for different products (time and temperature profiles)

As the share covered by Ecomark decreases and the variability increases, the representation of centralized data for Ecomark decreases. The applicant should explain these issues to the competent authority and discuss whether more specific data should be collected or whether different assumptions should be applied to the allocation method rather than allocating them only by the production mass.

## Data tracking frequency

Any installation of the 75ton/d capacity > shall comply with the reporting requirements of the Industrial Emission Directive (IED) 2010/75/, regarding emissions from furnaces that will always be under the applicant's control. While compliant emissions reporting for ceramics production has not yet been finalised, this will come in the next few years, while the Ekolel Hard Coating Products criteria still apply. As of 2021, different requirements for reporting on emissions are applicable in different Member States.

The most obvious difference is the need to continuously monitor SO<sub>x</sub> emissions in some installations, in others it needs me not to monitor them at all. For Ecomark, where continuous data is already collected, it should be used for these calculations. In cases where no data is collected, at least 3 sets of periodic monitoring data are required for each 12-month period. Periodic data should be collected during stable operating conditions of the plant and results should be normalized according to the standard conditions required for continuous monitoring (e.g. 18% O<sub>2</sub> content, 273K and 101.3 kPa).

## Data reporting units

Another important difference is that the IED sets limits in terms of exhaust gas concentration (mg/Nm<sup>3</sup>), while Ecomark sets limits based on production (mg/kg product). The key bridge between these two approaches is the specific airflow rate, which should be estimated at Nm<sup>3</sup> / kg of the product.

How does Section C & D look like in an Excel worksheet?

Because there are a number of cells that require input for the 4.4 criterion, it is worth presenting how the cells look in the Section C & D excel worksheet.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

The first entries refer to spray dryer data (lines 49 to 56). Spray dryer inlets (C51 to C55 cells) must be provided by the supplier in cases where spray dried powder comes from a third party. It is up to the applicant to define a meaningful referencename for the entry in line 49. The main output in cell C56 is a simple calculation of the data in cells C53, C54, and C55. To check whether the data is normal, the specific airflow rate is automatically generated in cell E55, and the embedded commentary in cell E55 refers to a typical range for certain airflow speeds. Since the requirement for dust emissions from spray drying is not associated with any point, a simple "Pass/Fail" output is produced in cell G55 and moved to the "Summary" worksheet.

A very similar approach applies to the additional definition of production in terms of m<sup>2</sup> and the additional output of the points and furnace emissions (as proportion to where the results are in cells C65, C74, C83 and

C92 lie in relation Goal December defined in criteria 4.4). entire Exit With related Goal dot would Carried on Goal "Summary" Work.

## 4.5 – Wastewater management

### Criterion Reviews:

Wastewater treatment is a common system program for all installation, this criterion is good for a single Fear Fear.

The discharge is available from the shade that uses full peer mpliance (option 1). The other 2 options cause wastewater to be purified and discharged into local waterways (options 2 and 3). In the case of this son two, the treated wastes need to be declared to be solids, cadmium and bullets.

Wastewater treatment ypn. In a way that allows this to be allowed, analyze different test methods in the way that clay considers it in the way that it is allowed.

While the data is required to be enclosed (or more frequently), less frequent grinding of cadmium and lead testing, and zatea, if it can be used according to this work permit, is allowed to taste less. Whatever the AN Y-defined test thing into cadmium and lead is, at least bird times a year, in a composite bird sample representing at least 6 single samples, the only thing that can be used in the test thing that takes up to 6 months of bird time (ideally once a month) is clay waters.

As an alternative to cadmium and lead testing in wastewater of a third-party wastewater plant, and to avoid the potentially perverse state of noncompliance due to cadmium inputs and to enter the facility operated by a third party from other sources, the applicant may test their own wastewater when leaving their site for suspended solids, lead and cadmium, and no declaration from the wastewater treatment plant is required if they already meet the limits.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

## 4.6 — Reuse of process waste

How does Section C&D look like in an Excel worksheet?

Because there are a number of cells that require input for the 4.6 criterion, it is worth presenting how the cells appear in the Sections C & D excel worksheet.

The first two green cells (C107 and C108) require some details about the data collection time and the approximate density of waste. The first must be at least 12 months before the issuance of Ecomark.

The approximate density of waste is used to allow tons of waste data to be converted to m<sup>3</sup>. However, if data is constantly reported in tons thanks to the use of scales, reporting as m<sup>3</sup> should be completely optional.

Green cells close to the tana (C114 to C117) are for material masses entering the process, the sold product mass that comes out of the process, process waste and disposed process waste. It is assumed that the difference between the total process waste produced and the total process waste disposed of is the reused process. While this is arguably not an ideal approach, applicants may prefer to overwrite the automatic prediction reuse in cell C118, if they directly monitor and measure it.

To check if quantities are appropriate, there is a check cell that indicates any discrepancies between:

materials = products to be sold out + waste out.

If the waste is underestimated, the value of the waste should be increased, due to since dust emissions, false assumptions about moisture content and/or failure to properly record waste.

The amount of waste transported to on-site storage areas, disposal sites or applications for reuse must be recorded. These quantities should be recorded at the plant, ideally through a scale, and any waste leaving the site (for disposal or reuse) should be logged. If the Competent Authority requests this information, the shipping notes for the landfill must be stored by the applicant.

If the reuse rate of process waste is <90%, it is marked in red, bold text indicating that a basic requirement for the criterion has not been met.



## 4.7 — Glasses and inks

### Criterion Reviews:

Compliance with Criterion 4.7 is first and foremost, about the grains of secrets and zigzag (if any) about the seller's salon, and then the declarations of related secrets or zigzag, if the metal is required to commse any lead emitters of consenstricts exceeding a single 0.10 percent.

Now, according to the coating of SVHC (i.e. < 0.10% according to REACH communication requirements) from the final product to ingoing chemicals, the added addition of the 4.7 criterion is very liable, because all of them are condemned with the criteria of 1.2, as much as all the associated lead or cadmium wrists.

Precast concrete products or compressed soil blocks based on hydraulic connectors or alternative cements

## 5.1 – Clinker factor

### Criterion Reviews:

This criterion applies to hydraulic lime bonds. Here they do not "lose points", a single total points are not counted as possible, and the threshold for this claim is hydraulic lime lime is not aculed accordingly. Although the 5.1 criterion applies to alternative cements. whether the clinker collapses are greater than 30% or less, the arm will effectively score no bird for criterion 5.1, so it will be much more difficult to make Ecomark great for alternative cements with higher clinker Continuents if necessary.

### Incoming information

2. As the cement passes through, the full clinker factor is transmitted to the authorized whole. Before a concrete and cement drying to convey the full clinker factor to the customer, atleast in 197-1 Portland cements are in question, cli estimate according to the estimates specified in the NKER factor criterion 5.1.

Secondly, the precast manufacturer must pack the cement either EN 197-1 notation for delivery. Q. the example of a bird, and this



## 5.2 – CO2 emissions

Interpretation of Criteria:

Mandatory requirements and scope

The mandatory elements of this criterion relate to the upper limits on specific CO2 emissions associated with EN 197-1 cement production, hydraulic lime production or embodied carbon in materials used in alternative cements.

For EN 197-1 cements and hydraulic lime, the scope of CO2 emission calculation is the same as that required for the Emissions Trading Scheme. This counted emissions from burning fuels in the process and burning organics and decarbonizing carbonates from raw materials.

To avoid unnecessary confusion, the rule for Ecomark to estimate process emissions should follow the emissions of the Emissions Trading Program and refer to the relevant calculation methods for decarbonization when applicants apply for Ecomark. Criterion 5.2 refers specifically to Regulation No. 2019/331 () and Regulation No. 601/2012 (). It should be noted that the second one was repealed by regulation () no. 2018 /2066.

For Ecomark's purposes, EN 197-1 associated carbon emissions should be counted per clinker ton produced (as in the ETS approach). This is clearly stated in section C & D excel electronic file.

The manufacturer of the connector must provide further explanation in writing to add a number for certain CO2 emissions (in kgCO2 per tonne) but only about the calculation method used and the production and timeframe scale to which the data refers.

Concrete carbon for alternative cements

This separate approach for alternative cements is taken especially with the consideration of very low cement clinker or cement clinker free cements. However, EN 197-1 also applied to other cements that do not comply with the classification system. The main point is that all embodied carbon obtained from cement components is captured in the production of alternative cement formulation (that is, in the stages of the life cycle A1 to A3).

Applicants are presented with evidence of carbon footprints or LCA's for alternative cement, which includes effects beyond the A1 to A3 lifecycle stages - but only A1 to A3 data will be considered when assessing compliance with Ecomark requirements.

## 5.3 – Dust, NOx and SOx emissions into the air

Interpretation of Criteria:

uygulanirlik

This criterion does not apply to alternative cements in cases where the clinker content is less than 30%. However, if the clinker content in alternative cement is greater than 30%, information about powder, NOx and SOx emissions for clinker production is valid.

Mandatory items

Upper limits have been set for certain powder, NOx and SOx emissions from cement or lime furnace.

Scope of data

Similar to the 4.4 criterion for ceramics, depending on the complexity of the production installation at the site where cement or lime is produced and the share of total products on that site that will form part of the Ecomark application, the representation of emission data may vary only if allocated on the basis of the production mass or the entire installation output. The main factors that will affect the representation of centralized data for the entire setup are:

- Share of total production in the field covered by Ecomark application
- variability of raw material compositions in different products (especially sulfur)
- variability of different ignition programs and air flow rates for different products (time and temperature profiles).

As Ecomark reduces the increase in share change covered by Ecomark, the representation of centralized data for Ecomark decreases. If the applicant is also a cement or lime producer, they should disclose these issues to the competent authority if they want to provide more detailed data allocated only to the part of their production related to Ecomark. If the applicant is a precast concrete manufacturer, it will be up to the cement or lime producer to decide whether the exact level of installation or more specific product level data is optimal.

Data tracking frequency

Any installation with cement clinker rotary furnaces with a capacity of 50 tons/d or other cement or lime kilns exceeding their production capacity of 50 tons/d will comply with the reporting requirements of the Industrial Emission Directive (IED) 2010/75/. Harmonized emission reporting requirements were determined in commission implementation decision no. 2013/163/. These requirements should

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

form the basis of all data submitted within the scope of evaluation and verification of the 5.3 criterion.

Data reporting units

An important difference is that the Commission implementing Resolution 2013/163/ sets limits in terms of exhaust gas concentration (mg/Nm<sup>3</sup>), while Ecomark sets limits based on production (mg/kg product). The key bridge between these two approaches is the specific airflow rate, which should be estimated at Nm<sup>3</sup> / kg of the product. To justify the final data submitted under the 5.3 criterion, it is necessary to ensure both average annual exhaust gas concentrations and average certain air flow rates.

How does Section C & D look like in an Excel worksheet?

Because there are a number of cells that require input for the 5.3 criterion, it is worth presenting how the cells look in the Section C & D excel worksheet.

Cells with the necessary inputs (green cells) begin in C23, where the skin type is defined (also in C34 and C44). The applicant is then identified as their reference name for this data entry (cells C24, C35, and C45). Cell C26 refers to the basic explanations of the calculation method from the cement clinker or hydraulic lime producer.

The three basic data are in cells C27, C28 and C29, in the case of dust emissions. These three numbers are basically numbers for specific airflow rate (calculated automatically in cell E29) and specific dust emissions (calculated automatically in cell C30). Excel outputs should be easy to detect input errors in the apparent order of magnitude. Depending on the value in cell C30, the total score given in relation to baking powder emissions appears in cell G31. For convenience of reference, valid Ecomark limits are specified in the cells F23 and F24.

The same powder approach applies to NO<sub>x</sub> and SO<sub>x</sub>.

Documents required for evaluation and verification:

## 5.4 – Recovery and responsible supply of raw materials

Interpretation of Criteria:

Mandatory items

Applicants are required to follow procedures for on-site or ex-situ recycling of returned or rejected concrete products.

The applicant must also determine the approximate carrying distances of all the main virgin, recycled and secondary raw materials used in their production. This should be minimally applicable to aggregates (medium and fine) and could potentially be extended to fillers.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

Before considering the potential environmental benefits of recycled or secondary materials, it is necessary to make sure that they are sourced from farther away than the virgin raw materials used. As a very general rule, if the carrying distance is more than 2.5 times that of the virgin raw material, the environmental benefits of recycled or secondary material can be largely canceled due to extra effects due to longer transportation.

As a result, the first information that the applicant must provide is a list of all the raw materials used and recycled or secondary ones, and how far away these resources are from the frika. Information about the locations of virgin totals should already be available due to criterion 1.1 requirements.

Where materials are supplied by an intermediary, any transportation from source to agent in addition to transportation from the vehicle to the agglomerate stone manufacturer shall be counted. Suppliers' contact information must be provided to the Competent Authority upon request.

## Accounting for recycled and secondary content

In terms of counting recycled materials, the reuse of process waste in the frieze will not be credited as recycled material if it goes back to the same production process that created it.

Since the precast production process is essentially a batch job, it is possible to define, distinguish and specify the recycled/secondary material content in a highly granular structure. As a result, a number of different points are generated here for different products under the same Ecomark license application.

To ensure that inputs of recycled and secondary materials are sufficient to meet the demands for such content in outbound products, the applicant must keep an inventory of outgoing and outgoing recycled/secondary materials (see the excel file screenshot below for more details).

## Create accounting for responsible source content

A similar approach applies to responsible welded aggregates, and a simpler "Yes/No" approach applies to responsible welded cement.

How does Section C & D look like in an Excel worksheet?

Because there are a number of cells that require input for the 5.4 criterion, it is worth presenting how the cells appear in the Sections C & D excel worksheet.

The first input cells (C55 and C56) are related to responsible welded cement and whether it is used. If so, 5 points awarded in cell G56.

Subsequent entries (line 58 through 63) refer to definitions for the different collection sources and associated transport distances used (these should be distances calculated from actual transport paths, not simple straight lines drawn on a map between source and destination). The main purpose here is to qualify or disqualify

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

secondary or recycled material sources as valid for accounting (that is, with more than 2.5 times or less of the virgin materials used? If more material needs to be defined, users must add more rows.

Subsequent entries (rows 65 through 70) refer to the contents of self-reported recycled or secondary material for specific products (Column C) and self-reported responsible sourced aggregate fractions (Column H). Recycled content must be selected from the drop-down list (options are rounded to the nearest %0.5). If more products need to be identified, more lines can be added.

Subsequent entries relate to inventory of qualified recycled/secondary materials (lines 72 to 83) and responsible welded materials (lines 86 to 97). In order for any demand on recycled/secondary material to be valid, it is essential that the balance of recycled/secondary materials never falls below zero. The same policy applies to responsible content claims.

Practically speaking, the only way for the applicant to track the flows of recycled/secondary material a credit/debit system that is registered on geliřtirmey delivery material invoices (credits), product packing slip invoices (payables) and waste shipment notes (payables). Applicant registers on-premises these flows and ideally indicate the recycled/secondary material content requested in the outgoing products and Collective.

## 5.5 – Energy consumption

Interpretation of Criteria:

Mandatory part

The mandatory element of this criterion is to implement a plan to systematically monitor, record and reduce certain energy consumption and specific CO<sub>2</sub> emissions. The monitoring and recording system should correspond to fuel and electricity consumption and production output inventory. The house of electricity consumption should come from meter readings and bills. Monitoring fuel consumption will depend on how the fuel is handled on site, but delivery notes, receipts and invoices will normally be the most convenient way. Production output should be self-explanatory (and it does not have to be production sold in this way), referring to actual sold products.

The energy inventory of the precast plant must cover a period of at least 12 months prior to Ecomark's award date. Since it is not possible to determine the concrete criteria of energy consumption per unit of production output during background research, no transition/failure limit has been determined in the criterion. So the main challenge is to collect the data in the first place. In cases where data collection is something new for the applicant, it is recommended to start the application pri

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

or inventory with 12 months of data (for example, if the Ecomark application and reward take another 6 months to process, a 6-month inventory will be studied at the beginning of the application process - obviously assuming that the inventory is kept up to date during the application process).

The CO<sub>2</sub> footprint must be specified for the electricity consumed so that CO<sub>2</sub> can be converted into footprints. If more than one electricity source is used and each has a different CO<sub>2</sub> footprint, a weighted average CO<sub>2</sub> footprint should be used. The type or types of fuel used must also be specified for the same purpose.

If the fuel is converted to on-site electrified (e.g. diesel generators), this should only be counted once, as the primary source of energy (i.e. fuel). If a combination of on-site renewable electricity and mains electricity is used, the measurement must be adjusted to count all on-site consumables, regardless of where they come from and whether they are associated with an invoice.

In particular, it should be noted whether fuel consumption of off-site vehicles is included. The simplest option would be to exclude vehicles used off-site, as they may be affected by factors that are not related to the manufacturing process (for example, employees traveling to homes and other places). However, the bukrriter leaves the applicant to define the full scope and then apply it consistently.

## Renewable energy (15 points in total)

For clarity, the first 10 points available refer to the share of renewable energy (i.e. electricity plus fuel). The next 5 points refer to how renewable electricity originates, regardless of how much of the total electricity comes from renewable energy. In cases where renewable electricity comes from multiple types of contracting (e.g. the share of renewable energy on site generated through PV panels and in the green tariff from the electricity supplier), the source that constitutes the largest share of renewable electricity will be selected.

## Carbon footprint analysis (5 points in total)

The information required by criterion 5.5 (together with information about other criteria) is used as the basis for carbon footprint analysis. If an analysis is performed in line with ISO 14067, 3 points are given. 5 points are awarded if done in accordance with PEF methodology. Any other

How does Section C & D look like in an Excel worksheet?

Because there are a number of cells that require input for indicator 5.5, it is worth presenting how the cells look in the Section C & D excel worksheet.

Cells of green color must be filled, and cells of red color must automatically produce results. The first green cell (C101) refers to the name to be associated with the data entry (only the name of the product and the reference to an internal recipe mix). In cells C102 and C103, the applicant must confirm that they meet the mandatory

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00



# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

elements of the 5.5 criteria. It should be noted that the authority may ask for more details about what is behind the "Yes" entries to C102 and C103.

The next 6 lines that define the period and the quantities of materials extracted and the production output (i.e. products to be sold). The approximate density of the stone is important for the conversion of units from m<sup>3</sup> to tons. In cases where multiple density is applied, the applicant must estimate a weighted average density for the products covered by the same energy data.

The first input on energy consumption occurs in cell C109 (electric, kWh). An input is also required for the carbon factor (F109 cell) of electricity used. This will automatically produce total electrical CO<sub>2</sub> in cell C110. It is necessary to define the amount of fuel consumed by fuel consumption (in volume or mass) and then define both the calorific value of the fuel and the carbon factor of the fuel. This is the next the choice of units is not very important, but the units must be consistent between the corresponding entries (for example, C111, F111 and F112 cells for fuel-1).

Since each fuel has its own calorific value and carbon factor, it is complicated to make a weighted average estimate for multiple fuels in a single input. Therefore, scope is made in the excel file to define 3 separate fuel input types.

CO<sub>2</sub> factors for fuel and electricity should be based on information from suppliers. If there is doubt about fuel factors, the values in Annex VI of the Commission Implementation Regulation No. 2018/2066 are used.

Subsequent sequences (120 to 124) are automatically calculated totals for energy and CO<sub>2</sub> and specific energy and CO<sub>2</sub> (lines 125 to 130). Automatic calculations for total energy (i.e. fuel plus electricity) already take into account the conversion factor for kWh and MJ (i.e. 1kWh = 3.6 MJ). The values in cells C33 and C35 are automatically shown on the "Summary worksheet".

It should be noted that the special energy consumption is based on the total sold material produced and not based on the total material processed. Therefore, one way to improve certain energy consumption and specific CO<sub>2</sub> emissions is to reduce wastage rates.

The last three places are where the points are awarded. The first relates to the share of renewable energy (i.e. fuel plus electricity). The next line is the main mechanism for renewable electricity, and the last row is about whether and how a carbon footprint is carried out for products.

By obtaining the data necessary to fill the excel sheet for the 5.5 criterion and combining it with the relevant information in criteria 5.1 through 5.4, most of the basic information required to perform carbon footprint analysis should already be available. Therefore, applicants are encouraged (but not mandatory) to go one step further to get an extra 3 or 5 points.

## ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00

# ECOMARK\_STD\_03 HARD COVERING PRODUCTS STANDARD

## 5.6 – Environmentally conscious product designs (optional)

### Criterion Reviews:

Until this is a completely fully committed criterion, there is no mandatory mandatory. However, if those who claim points against this criterion want the slate, the following product(s) are self-declared about some of the products in question, and in some way if necessary, if necessary, with the relevant tests.

- high leaks are required by holding the corresponding tab until a test report. If this is the source of porous locking anemia, the principle in individual units of the test is that it does this in docked units.
- The notices regarding the space related to the space, which is the main effect of the gap in the visible gaps and visually sounded in a way that is geometrically simple in decoration, simply demanded that you cover the inner space, open and dependent porosity or material 2010 e-stimulations justify further measurements.
- Confusion is the bleary of test reports for any thermal conductivity image.
- For hydraulic LEAGUE or alternative cement, the main basis will be its own calculated, but in cases of doubt, the competent body does not do so in the relevant way and the parties can request bird thesis that occurs for the denis of the only visual thing.
- For grass pavers, their declaration is visually accurate by the authorized division.

### Documents required for meet and extract: documents

- nothing in the same period. By adding the product to it and specifying a total fuel and electricity of 600, the head of section C & D Excel file for the 5.5 criterion.
- (STI score claims) copies of related test reports, technical intuitions and self-statements.

### ECOMARK – ECOLOGICAL PRODUCTS CERTIFICATION

Merkez Mahallesi Dr Sadık Ahmet Cd, No 38/44 A Bağcılar/İstanbul – Turkey  
[info@ecomark.com.tr](mailto:info@ecomark.com.tr) / [www.ecomark.com.tr](http://www.ecomark.com.tr) / +90 212 702 50 00