

CRITERIA FOR THE ENVIRONMENTAL LABELING OF CERAMIC COVERING PRODUCTS

GENERAL FRAMEWORK

ARTICLE 1- These criteria have been established under the Environmental Label Regulation dated 19.10.2018 and numbered 30570.

ARTICLE 2- The “ceramic coverings” product group consists of ceramic tiles and fired clay floor coverings used in indoor/outdoor areas. If the production process of the ceramic coverings is identical and uses the same materials and production methods, the criteria can be applied to indoor and outdoor ceramic tile coverings for floors and walls that comply with the TS EN 14411 standard and fired clay floor coverings that comply with the TS EN 1344 standard.

ARTICLE 3- In order for the products in the ceramic coverings product group to be awarded the Environmental Label within the scope of the Environmental Label Regulation, the criteria specified in this document must be fulfilled.

ARTICLE 4- The Environmental Label criteria and assessment and verification requirements established for the product group “ceramic coverings” will be valid for 5 (five) years. The criteria may be updated within a five-year period when deemed necessary by the Environmental Labeling Board. The period of validity of the criteria may be extended based on the approval of the Environmental Labeling Board.

SCORING SYSTEM

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

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

For Criteria 4.1 and 4.2, two sets of limits are defined for ceramic tiles depending on whether the Environmental Label license applies to a limited number of products (where stable operational data during the production run for representative periods should be submitted) or where the license applies to large numbers of product of a given product family (where annual average data should be submitted).

Energy consumption calculations also take into account the energy consumed to maintain kiln temperatures when the production line is not running (e.g. when changing tile formats) or when it is not running at full capacity (e.g. during nightshifts or weekends).

*Three families of ceramic tile products are considered as Class I, II and III in TS EN 14411.

Criteria where points can be awarded	Ceramic and fired clay products
4. Fuel consumption for drying and firing	Up to 20 points
5. CO ₂ emissions	Up to 25 points
7. Emissions of dust, HF, NO _x and SO _x to air	Up to 40 points
9. Reuse of process waste	Up to 10 points
11. Environmental management system (optional)	0 or 5 points
Total maximum points available	100
Minimum points required for Environmental Label	50

Assessment and Verification Requirements

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

When a statement, document, analysis, test report or other evidence is requested from the applicant to prove its compliance with the criteria, these documents requested in accordance with the current situation can be issued by the applicant and/or its supplier/suppliers and/or their supplier/suppliers. In accordance with the current situation, a method different from the test methods determined for each criterion can be used, provided that the equivalence is accepted by the Ministry evaluating the application.

The Ministry recognizes the tests performed by laboratories accredited by an accreditation body that is a party to the International Laboratory Accreditation Association (ILAC) - Mutual Recognition Agreement (MRA) according to TS EN ISO/IEC 17025. TÜRKAK accredited organizations can be accessed at <https://secure.turkak.org.tr/kapsam/search> TS EN ISO/IEC 17025 accreditation condition is not required if it is documented that there is no accredited organization for the test method, which is mandatory within the scope of evaluation and verification requirements.

When generating data on the classification of substances or mixtures, the provisions of the "Regulation on the Test Methods to be Applied in the Determination of the Physico-Chemical, Toxicological and Ecotoxicological Properties of Substances and Mixtures" published in the second repeated Official Gazette dated 11.12.2013 and numbered 28848 or methods that have been validated in accordance with internationally recognized scientific principles or international procedures should be considered.

The applicant must have fulfilled the necessary obligations under the Environmental Law and the current legislation that came into force pursuant to this law. Accordingly, the applicant is obliged to submit other documents required by the Ministry, such as the EIA Decision, Environmental Permit and License Certificate, Zero Waste Certificate, etc.

Where appropriate, the Ministry may require supporting information/documentation and may carry out independent verification.

CRITERIA

CRITERION 1. INDUSTRIAL AND CONSTRUCTION MINERAL EXTRACTION

The requirements shown in Table 1 must be met for extraction activities related to raw materials used in the production of ceramic covering products.

Table 1. Documents Required for Raw Materials Extraction Activities

Requirements
1. "EIA Positive" Decision, "EIA Not Required" Decision or EIA Opinion
2. Topographic Map and Satellite Image Showing the Location of the Raw Material Field (Quarry)
3. Business License to Open and Operate
4. Operating License
5. Reinstatement Plan

Assessment and Verification: The applicant shall provide related data and documents, including a map of the area. If the extraction activity is not directly managed by the producer, the documentation shall be requested from the enterprise from which the raw material is procured by the extractor(s).

A "Reinstatement Plan" shall be provided within the scope of the " Reinstatement of Land Degraded by Mining Activities", which was published in the Official Gazette dated 23.01.2010 and numbered 27471.

CRITERION 2. RESTRICTED SUBSTANCES

Criterion 2.1. Substances of Very High Concern

All ingoing chemicals used in the production of ceramic covering products and any supplied materials that form part of the final product shall not contain substances of very high concern defined in Article 49 of the "Regulation on the Registration, Evaluation, Authorization and Restriction of Chemicals", which entered into force after being published in the Official Gazette dated 23.06.2017 and numbered 30105, in concentrations greater than 0.10 % by weight.

Assessment and Verification: The applicant must declare that all supplied chemicals and materials used in the manufacture of ceramic covering products do not contain more than 0.1% by weight of substances of very high concern. The declaration in this direction shall be supported by the safety data sheets (SDS) of chemicals and materials or appropriate documents obtained from their suppliers.

Criterion 2.2. Restrictions on Classified Substances under the Regulation on Classification, Labeling and Packaging of Substances and Mixtures (SEA Regulation)

Unless derogated in Table 2, the ceramic covering products shall not contain substances or mixtures in concentrations greater than 0.10 % by weight that are assigned any of the following hazard classes:

H300 (Lethal if swallowed.)

H301 (Toxic if swallowed.)

H311 (Toxic in contact with skin.)

H331 (Toxic by inhalation.)

H304 (May be fatal if swallowed and enters the respiratory tract.)

H310 (Lethal in contact with skin.)

H330 (Lethal if inhaled.)

H340 (May cause genetic damage.)

H341 (Suspected of causing genetic defects.)

H350 (Can cause cancer.)

H351 (Suspected of causing cancer.)

H350i (May cause cancer by inhalation.)

H360 (May damage fertility or the unborn child.)

H360F (May damage fertility)

H360D (May cause damage to the unborn child.)

H360FD (May damage fertility. May damage the unborn child.)

H360Fd (May damage fertility. Suspected of damaging the unborn child.)

H360Df (May cause damage to the unborn child. Suspected of damaging fertility.)

H361 (Suspected of damaging fertility or the unborn child.)

H361f (Suspected of damaging fertility.)

H361d (Suspected of damaging the unborn child)

H361fd (Suspected of damaging fertility. Suspected of damaging the unborn child.)

H362 (May cause harm to a breastfed child.)

H370 (Causes damage to organs.)

H371 (May cause damage to organs.)

H372 (Causes damage to organs through prolonged or repeated exposure.)

H373 (May cause damage to organs through prolonged or repeated exposure.)

H400 (Very toxic to aquatic life)

H410 (Very toxic to aquatic life with long lasting effects)

H411 (Toxic to aquatic life with long lasting effects)

H412 (Harmful to aquatic life with long lasting effects)

H413 (May cause long lasting harmful effects in the aquatic environment)

The use of substances or mixtures that are chemically modified during the production process, so that the above-mentioned hazard statements are no longer valid, shall be exempted from the above requirement.

Table 2. Derogations to Restrictions on Substances Classified Under the SEA Regulation and Applicable Conditions

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

Assessment and Verification: The applicant shall provide a list of all relevant chemicals used in the production processes together with the relevant SDS or chemical supplier declaration. Any chemicals containing substances or mixtures with the hazard statements specified in the criterion shall be highlighted. The approximate dosage rate of the chemical, together with the concentration of the restricted substance or mixture in that chemical (as provided in the SDS or supplier declaration) and an assumed retention factor of 100 %, shall be used to estimate the quantity of the restricted substance or mixture remaining in the final product.

Since multiple products or potential products using the same process chemicals may be covered by a single license, the calculation for each chemical only needs to be presented for the worst-case product (e.g., the most heavily surface-treated or pigmented or printed) covered by the Turkish Environmental Label. Justifications for any deviation from a 100% retention factor or for chemical modification of a restricted hazardous substance or mixture must be provided in writing.

For any restricted substance or mixture that exceeds 0.1% by weight of the final natural stone product, a relevant derogation must be in place and proof of compliance with any relevant derogation conditions must be provided.

CRITERION 3. Volatile Organic Compound (VOC) Emissions

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

Any ceramic covering products that have been surface treated with VOC-containing compounds shall be tested for VOC emissions and shall comply with the limits defined below.

	Limits (28 days later)	Method
Total VOC	300 µg/m ³	TS EN 16516+A1
Formaldehyde	10 µg/m ³	
R-Value	<1	
Carcinogenic 1A and 1B VOCs listed in TS EN 16516+A1 Annex H (Excluding Formaldehyde and Acetaldehyde)	For each single item 1 µg/m ³	

Assessment and Verification: The applicant shall declare if the surface of the final product has been treated with any waxes, adhesives, coatings, resins or similar surface treatment chemicals and shall provide the relevant SDS or supplier declarations about the VOC content of the surface treatment chemicals used.

In cases where VOC emission testing is required, the applicant shall provide a declaration of compliance, supported by a test report carried out according to TS EN 16516+A1. If compliance with the chamber concentration limits specified at 28 days can be met at any other time between 3 and 28 days, the chamber test may be stopped prematurely.

CRITERION 4. FUEL CONSUMPTION FOR DRYING AND FIRING

Coal, petroleum coke, light fuel oil and heavy fuel oil shall not be used as fuels in dryers or kilns. The specific fuel energy consumption for drying and firing processes shall not exceed the relevant mandatory limits defined below.

	Spray Dryer (MJ/kg powder)		Ware Dryer and Kiln (MJ/kg product)	
	Mandatory Limit	Threshold of Environmental Excellence	Mandatory Limit	Threshold of Environmental Excellence
Ceramic tile: individual product (**)	1.8 (*)	1.3 (**)	4.1	3.2
Ceramic tile: family of products (***)			5.5	4.3
Fired clay floor coverings	n.a.	n.a.	3.5	2.1

n.a.: not applicable

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

(**) Data measured under stable operating conditions that are representative of the product during the production run

(***) Data measured over a period of one year, including baseline fuel consumption between production runs

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

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

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

Assessment and Verification: The applicant shall declare the specific fuel consumption value(s) for the relevant product(s) together with calculations to convert value(s) into a specific score. The specific fuel consumption shall be calculated by dividing the fuel consumption (in MJ) for relevant process equipment by production volume (in kg) during the relevant production period. In cases where production data is only available in m^2 but needs to be reported in kg, the value should be converted using a fixed bulk density factor (in kg/m^2) for the product or family of products.

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

According to the “Technical Annexes for Ceramic Coating Products – E1” volumetric or mass inputs of fuel to the kiln and dryer systems shall be taken from site readings and be converted into MJ by multiplying the volume/mass of fuel consumed over the defined production period (e.g. in kg, t, L or Nm^3) by a specific or generic calorific value for the same fuel (e.g. in MJ/kg, MJ/t, MJ/L or MJ/ Nm^3).

In cases where fuel used to generate heat for drying operations is fed to a cogeneration system, the electricity generated by the system during the defined production period (measured in kWh and converted into MJ) should be subtracted from the total dryer fuel consumption reading (1kWh=3.6 MJ, E1).

CRITERION 5. CO₂ EMISSIONS

The specific CO₂ emissions associated with fuel combustion and process emissions from raw material decarbonation during drying and firing processes shall not exceed the relevant mandatory limits defined below.

	Spray Dryer (kg CO₂/t powder)	Ware Dryer and Kiln** (kg CO₂/t product)
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	Mandatory Limit	Threshold of Environmental Excellence	Mandatory Limit	Threshold of Environmental Excellence
Ceramic tile: individual product (***)	84 (*)	54 (*)	280	230
Ceramic tile: family of products (****)			360	290
Fired clay floor coverings	n.a.	n.a.	192	129

n.a.: not applicable

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

(**) Limit applies only to fuel consumed in the ware dryer and kiln and estimated process emissions in the kiln

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

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

In addition, up to 25 points shall be awarded in proportion to how much the specific CO₂ emissions are reduced towards the relevant threshold of environmental excellence indicated in the table above (e.g. for fired clay coverings: from 0 points for 192 kgCO₂/t, up to 25 points for 129 kgCO₂/t).

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

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

Assessment and Verification: The applicant shall provide a declaration of compliance with the mandatory requirement of this criterion, supported by a statement of the calculated specific CO₂ emission in accordance with the following relevant methodology described below.

The calculation of specific emissions per tonne of product shall be based and declared in accordance with the "Regulation on the Monitoring of Greenhouse Gas Emissions" published in the Official Gazette numbered 29003 dated 17.05.2014.

For ceramic products that use spray dried powder produced in a separate installation as a raw material, the applicant shall provide a declaration from the spray dried powder producer stating the value of the annual average specific CO₂ emission value calculated in accordance with the above-mentioned regulation for the latest reporting year.

The relevant fuel consumption values calculated for Criterion 4, the carbon intensities of the fuel(s) used and the average carbonate content of the raw material shall be used as the basis for calculating CO₂ emissions.

CRITERION 6. PROCESS WATER CONSUMPTION

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

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

Product Type	Is spray drying carried out onsite?	Water consumption limit (L/kg)
Ceramic tiles and fired clay coverings	Yes	1.0
	No	0.5

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

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

In cases where such a system is not in place, total process water consumption data (in L or m³) and the total ceramic or fired clay production data (in kg or m²) shall be provided for the most recent calendar year or rolling 12 month period prior to the date of award of the Environmental Label.

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

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

CRITERION 7. EMISSIONS OF DUST, HF, NO_x AND SO_x TO AIR

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

The specific dust, HF, NO_x and SO_x emissions to air associated with the production of ceramic or fired clay products shall not exceed the relevant mandatory limits defined in the table below.

In addition, up to 40 points shall be awarded in proportion to how much the actual specific emissions of dust, HF, NO_x and SO_x are reduced towards the relevant thresholds of

environmental excellence indicated in the table above (e.g. for HF emissions: from 0 points for 20 mg/kg, up to 10 points for ≤ 6 mg/kg).

Emission parameter	Mandatory Limit (mg/kg)	Threshold of Environmental Excellence (mg/kg)	Test Method	Points Available
Dust (Spray Dryer)*	90	n.a.	TS EN 13284	n.a.
Dust (Kiln)	50	10	TS EN 13284	Up to 10
HF (Kiln)	20	6	ISO 15713	Up to 10
NO _x as NO ₂ (Kiln)	250	170	TS EN 14792	Up to 10
SO _x as SO ₂ (Kiln)	1300	750	TS EN 14791	Up to 10

n.a.: not applicable

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

Assessment and Verification: The applicant shall provide a declaration of compliance with the mandatory requirements of this criterion, supported by (i) a description of the measures in place to reduce dust emissions from “cold” dusty operations and, (ii) site data in mg/Nm³ and expressed as an annual average value calculated from daily average values.

The data shall have been generated via continuous or periodic monitoring according to relevant EN or ISO standards. In cases of periodic monitoring, at least three samples shall be taken during stable running of the spray dryer or kiln for production runs of the Turkish Environmental Label product(s).

In cases where production data is only available in m² but needs to be reported in kg, the value should be converted using a fixed bulk density factor (in kg/m²) for the product or family of products.

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

To convert exhaust gas monitoring results from mg/Nm³ (at 18 % O₂ content) into mg/kg of ceramic/fired clay product, it is necessary to multiply by the specific gas flow volume (Nm³/kg product). One Nm³ refers to one m³ of dry gas under standard conditions of 273K and 101,3 kPa.

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

CRITERION 8. WASTEWATER MANAGEMENT

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

Option 1: Be treated onsite to remove suspended solids, with treated wastewater being returned to the production process as part of a zero liquid discharge system; or

Option 2: Be treated onsite to remove suspended solids (or not treated at all) prior to wastewater being sent to a third-party operated treatment works; or

Option 3: Be treated onsite to remove suspended solids prior to wastewater being discharged to local watercourses.

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

Parameter	Limit Value (mg/L)	Test Methods
Suspended Solids	40	SM 2540/TS EN 872
Cadmium	0.015	TS EN ISO 11885
Lead	0.15	TS EN ISO 11885

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

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

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

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

CRITERION 9. REUSE OF PROCESS WASTE

The applicant shall complete an inventory of process waste production for the ceramic or fired clay production process. The inventory shall detail the type and quantity of process waste (*)

produced. The amount and rate of secondary raw material usage in ceramic or fired clay production will be given.

The process waste inventory shall cover at least a 12 month period prior to the date of award of the Environmental Label and, during that same period, the total product output shall be estimated both in terms of mass (kg or tonne) and surface area (m²).

At least 85 % by mass of the process waste generated by ceramic or fired clay product manufacturing shall be reincorporated into the production process onsite, be reincorporated into ceramic or fired clay production processes offsite or be reused in other production processes.

In addition, up to 10 points shall be awarded in proportion to how much the reuse rates of process waste are increased towards the environmental excellence threshold of 100 % reuse (from 0 points for 85% process waste reuse, up to 10 points for 100 % process waste reuse).

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

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

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

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

CRITERION 10. GLAZES AND INKS

In cases where ceramic tiles or fired clay products are glazed or decorated, the glaze formulation or ink shall contain less than 0.1% lead and cadmium by weight.

Assessment and Verification: The applicant shall provide a declaration of compliance with the mandatory requirement of this criterion, supported by a relevant declaration or SDS from the glaze or ink supplier.

CRITERION 11. ENVIRONMENTAL MANAGEMENT SYSTEM (OPTIONAL)

This criterion applies to the production site of the applicant where the licensed Turkish Environmental Label product is produced.

5 points shall be awarded for applicants that have a documented environmental management system in place according to the ISO 14001 and registered by an accredited organization.

Assessment and Verification: The applicant shall provide a copy of the valid TS EN ISO 14001 certificate issued by an accredited organization.

CRITERION 12. FITNESS FOR USE

The fitness for use of ceramic covering product must comply with the relevant TSE, ISO, CEN or equivalent standard (TS EN 1344, ISO 13006 or TS EN 14411) depending on the way of use, and the performance values declared for the intended use must meet national requirements. An indication of the type of use for which the product is suitable should be clearly stated: wall, floor, or wall/floor if suitable for both purposes.

Assessment and Verification: The details of the test procedures and results shall be provided together with a declaration that the product is fit for use based on all the other information about the best application by the end-user. According to the Construction Materials Regulation (305/2011/AB) published Official Gazette dated 10.07.2013 and numbered 28703, a product is presumed to be fit for use if it conforms to the relevant harmonized standard or a European Technical Assessment, the declared performance values for its intended use also meet national requirements and do not contradict the legislation. The conformity mark 'CE' for construction materials provides producers with an attestation of conformity easily recognizable and may be considered sufficient in this context.

CRITERION 13. USER INFORMATION

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

a) Information for the use and maintenance of the product

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

b) Recycling or disposal information

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

CRITERION 14. INFORMATION APPEARING ON THE ENVIRONMENTAL LABEL

The following information shall be included with the Environmental Label on the product:

The Environmental Label with dimensions of 5x5 cm shall be placed on the product packaging. The environmental label shall contain the document number in the 10-point font and the statement of "The use of Environmental Label in this product has been approved by the Ministry of Environment, Urbanization and Climate Change in accordance with the Environmental Label Regulation published in the Official Gazette dated 19.10.2018 and numbered 30570 due to its environmental performance." at the bottom of the label.

If approved in the application process for the product, the following statements may also be included:

- a) Material efficient production process;
- b) Energy efficient and low CO₂ production process;
- c) Reduced emissions of dust and acidifying compounds to air.

Assessment and Verification: The applicant shall provide a copy of the product label of the packaging on which the Environmental Label is placed, together with a signed declaration of compliance. The Environmental Label shall be placed on the packaging of products of different sizes, in the dimensions determined by T.C. Ministry of Environment, Urbanization and Climate Change. For the use of labels in different sizes, the approval of the Ministry is required.

TECHNICAL ANNEXES FOR CERAMIC COVERING PRODUCTS

E1- Energy Consumption Calculation

While calculating the energy consumption per 1 kg of product for the "ceramic coverings" product group for which an Environmental Label application is made, the energy resources used in all production processes for the relevant product are taken into account. To convert energy units into MJ, the lower calorific values of the fuels given in Annex 2 of the "Regulation on Increasing Efficiency in the Use of Energy Resources and Energy¹" are used (Table E1). If other fuels are used, the calorific value used for the calculation shall be stated. Electricity refers to internal electricity production measured as net electricity and electrical energy imported from the grid. The energy consumption calculation takes into account all energy flows entering all process components for the production of the product.

Table E1. Table for Energy Consumption Calculation

Production Period	Starting Date			End Date	
Production of Ceramic Covering (kg)					
Type of Fuel	Density	Consumption Amount	Unit	Conversion factor	Energy (MJ)
Natural Gas	0,670 kg/m ³		Nm ³	34,5	
LPG			kg	45,6	
LPG	2,477 kg/m ³		Nm ³	113,0	
Gasoline			kg	43,5	
Diesel	0,830 kg/L		kg	42,7	
Gas Oil	0,780 kg/L		kg	34,7	
Fuel Oil No:4			kg	40,2	
Fuel Oil No:5	0,920 kg/L		kg	41,9	
Fuel Oil No:6	0,940 kg/L		kg	41,3	
Coke Coal			kg	30,1	
Hard Coal			kg	25,5	
Coke			kg	25,1	
Lignite (for heating and industrial purposes)			kg	12,6	
Elbistan lignite			kg	4,6	
Petcoke			kg	31,8	
Naphtha			kg	43,5	
Electricity			kWh	3,6	
Total energy (MJ)					
Specific energy consumption (MJ/kg product)					

¹ Official Gazette dated 27 October 2011 and numbered 28097 (Revision: 25.1.2020- 31019)