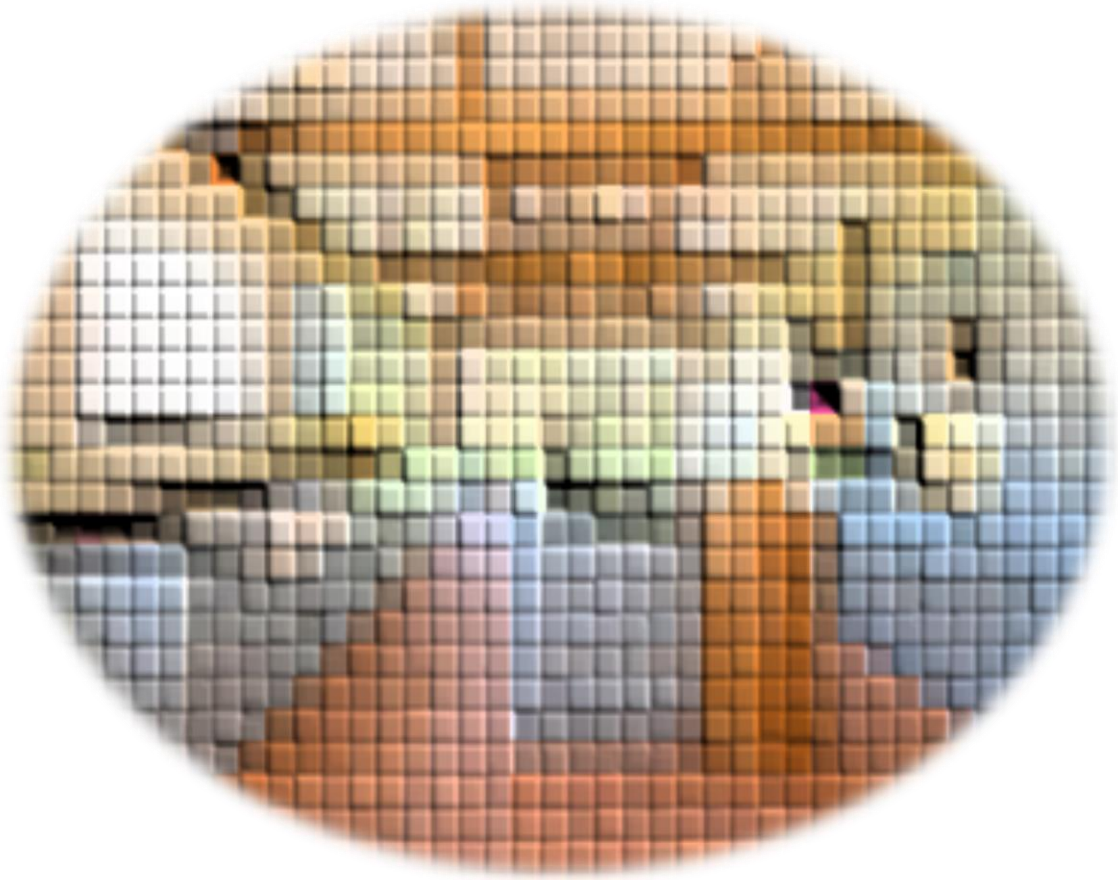
# Ethiopian Conformity Assessment Enterprise (ECAE)



# Product Certification Scheme for Ceramic Tiles

**March 2024**
**Addis Ababa - Ethiopia**

# Certification Scheme for Ceramic Tiles

## Contents

## Certification Scheme for Ceramic Tiles

## 1. Scope

This conformity evaluation document specifies the specific requirements for the evaluation of conformity of Ceramic Tiles to its corresponding product standards (ES ISO 13006). This document gives technical rules for factory production control by the manufacturer, which includes testing, process control, management system and surveillances.

## 2. Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies

ES 13006:20018, Ceramic Tiles —Definitions, Classification, Characteristics and Marking

ES ISO 9001:2015, Quality management system

ES ISO 10545-1:2005, Ceramic Tiles- Part 1: Sampling and Basis for Acceptance

ES ISO 10545-2:2005 Ceramic Tiles - Part 2: Determination of Dimensions and Surface Quality

ES ISO 10545-3:2005 Ceramic Tiles - Part 3: Determination of Water Absorption, Apparent Porosity, Apparent Relative Density and Bulk Density

ES ISO 10545-4:2005, Ceramic Tiles - Part 4: Determination of Modulus of Rupture and Breaking Strength

ES ISO 10545-5: 2005, Ceramic Tiles - Part 5: Determination of Impact Resistance by Measurement of Coefficient or Restitution

ES ISO 10545-6: 2005, Ceramic Tiles - Part 6: Determination of Resistance to Deep Abrasion for Unglazed Tiles

ES ISO 10545-7:2005, Ceramic Tiles -Part 7: Determination of Resistance to Surface Abrasion for Glazed Tiles

ES ISO 10545-8:2005, Ceramic Tiles - Part 8: Determination of Linear Thermal Expansion

ES ISO 10545-9:2005, Ceramic Tiles - Part 9: Determination of Resistance to Thermal Shock

ES ISO 10545-10:2005, Ceramic Tiles - Part 10: Determination of Moisture Expansion

ES ISO 10545-11:2005, Ceramic Tiles - Part 11 Determination of Crazing Resistance for

Glazed Tiles

ES ISO 10545-12:2005, Ceramic Tiles - Part 12: Determination of Frost Resistance

ES ISO 10545-13:2005, Ceramic Tiles - Part 13: Determination of Chemical Resistance

ES ISO 10545-14:2005, Ceramic Tiles - Part 14: Determination of Resistance to Stains

ES ISO 10545-15:2005, Ceramic Tiles - Part 15: Determination of Lead and Cadmium Given Off By Glazed Tiles

ES ISO 10545-16:2005, Ceramic Tiles - Part 16: Determination of Small Color Difference

## 3. Terms, Definitions and Abbreviations

### 3.1 Abbreviations

CB: Certification Body

ES: Ethiopian Standard

IEC: International Electro technical Commission

ISO: International Organization for Standardization

### 3.2 Terms and Definition

For the purposes of this document, the terms and definitions given in the ES ISO 13006 requirement and the following shall apply.

3.1.

**Declaration of Conformity**

Document issued by the manufacturer under the rules of this document for the evaluation of conformity indicating that adequate confidence is provided that the product is in conformity with ES ISO 13006 .

3.2.

**Standards Mark**

Mark given for the Substantiation that a product meets the requirements of the relevant Ethiopian Standards

3.3.

**Declared Ceramic Tiles**

They are Ceramic Tiles that are declared by the relevant legal body for conformity with relevant respective quality standards (ES ISO 13006).

# 4. Requirements

## 4.1. Requirements for the product

All the requirements of Ceramic Tiles shall comply with the specifications listed under ES ISO 13006 and other its test method families listed out under section 2.

## 4.2. Requirements for the factory production control by the manufacturer

The manufacturer shall have a permanent internal control of Ceramic Tiles production that consists of internal quality control, sampling plan, and testing from input to output.

## 4.3. Management System

### 4.3.1. Documented information related to the quality production of Ceramic Tiles

The manufacturer's documentation system and documents of procedures for production control shall be clearly described in detail. The documented information related to the quality production of Ceramic Tiles shall contain at least:

a) Quality policy

b) The quality objectives;

c) Organizational structure;

d) Operational procedures

e) Responsibilities and powers of the management about product quality;

f) The means to monitor the achievement of the required product quality;

g) Effective operational production control

h) The manufacturing and quality control techniques, processes, and systematic actions that will be used and

i) The examinations and tests that will be carried out before, during, and after manufacture and the frequency in which the company will carry out.

### 4.3.2. Organizational Roles, Responsibilities and Authorities

The manufacturer shall ensure that the responsibility and authority for relevant roles are assigned, communicated, and understood within the organization to ensure that:

a) The processes are delivering their intended output

b) The organizational management system conforms to the requirements of this document

c) Reporting on the performance of the management system and opportunities for

improvement in particular to top management

### 4.3.3. Internal Audit

The organization shall conduct an internal audit at planned intervals to provide information on whether the management system is effectively implemented and maintained. In order to ensure the continuing suitability and effectiveness of the requirements of this certification scheme, the manufacturer shall perform internal audit at least once a year.

### 4.3.4. Management Review

The manufacturer shall review the effectiveness of the management system at planned intervals to ensure its continuing suitability, adequacy, effectiveness, and alignment with the strategic direction of the organization and to meet the requirements of this document for the evaluation of conformity. A management review shall take into account the records of the internal audits and shall be performed at least once a year.

### 4.3.5. Personnel

The manufacturer shall ensure that all the personnel involved in operations that can affect the management system, internal quality control, and product quality have appropriate relevant educational qualifications, experience, and training. Moreover, relevant records for the competency of the experts shall be retained.

## 4.4. Documentation System

### 4.4.1. Document Control

The manufacturer shall have a system for the control of all documents (documented information) and data related to production control and this document for the evaluation of conformity. In addition, the manufacturer shall ensure that all appropriate documents are available at essential locations. All outdated documents shall be withdrawn and changes or modifications to any document shall be made effectively and timely. A master list that comprises the current version of all necessary documents shall be prepared to prevent misuse of the documents.

### 4.4.2. Quality Records

The manufacturer shall retain test results, appropriate records, and quality records for the period required to comply with the disposition requirement of the organization.

### 4.4.3. Documents of Quality Control

The manufacturer shall establish documented procedures and appropriate test methods to ensure that the produced Ceramic Tiles meet the requirements of product specifications (ES ISO 13006) and establish mechanisms to ensure effective and sustainable process control measures.

## 4.5. Internal Quality Control

### 4.5.1. Process Control

The manufacturer shall have:

a) Parameters for production process control;

b) Validated procedures for testing other than test methods specified in ES ISO 13006 (if any);

c) Verification methods;

d) Inspection schedule;

e) The methods to ensure that the Ceramic Tiles conform to ES ISO 13006.

f) Mechanism to ensure that non-conformance is adequately managed,

g) Records of release criteria.

## 4.6. Measuring and Testing

### 4.6.1. Measuring and Testing Equipment

The equipment used for measuring and testing shall be regularly checked and calibrated by the procedures and frequencies laid down in the operation manual/calibration plan. These procedures may include a comparison of test results with other laboratories. (External quality assurance).

### 4.6.2. Labeling, Storage and Distribution

Labeling of the Ceramic Tiles shall be done by applicable means. Storage and distribution of Ceramic Tiles shall be done in a way that can prevent against deterioration of the product.

## 4.7. Sampling and Testing

4.7.1. The manufacturer shall have a mechanism for sampling and testing each certified product.

4.7.2. This mechanism shall be used to demonstrate conformity to the requirements in the relevant product specification standard.

4.7.3. The parameters to be tested, the testing methods, and the minimum frequency of testing

during routine and initial period testing shall be indicated in the sampling plan.

4.7.4. The conformity criteria shall be by the basic requirements given in the relevant product certification standard.

4.7.5. All test result data shall be documented properly.

## 4.8. Evaluation of Test Results

The manufacturer shall check that each test results meet the requirements of relevant standards ES ISO 13006.

## 4.9. Non-conformities, Correction, and Corrective actions

4.9.1. The manufacturer shall have a mechanism for the management of non-conformances. The manufacturer shall:-

a) Determine the non-conformities;

b) Take appropriate action to the non-conformance

c) Determine the cause (s) of such non-conformity;

d) Take corrective action

e) Verify if the corrective actions are effective. All such actions and findings shall be recorded.

## 4.10. Audit

### 4.10.1 Initial Audits

The initial audit shall be carried out as specified in CB's criteria document /product certification procedure/. In the case of a new factory (a newly constructed facility or a facility previously not audited), CB's audit team shall make a relevant audit of the factory and the factory's production control by its product certification procedure.

### 4.10.2. Application Criteria for Acceptance

The application is made as specified in the relevant CB's application form.

### 4.10.3. Application Reviewing time Frame

Application review time shall be as defined in CB's criteria document /product certification procedure.

### 4.10.4. Sampling

a) Sampling shall be carried out in accordance with the method specified in CB's sampling procedure. Samples shall be taken from the production line, warehouse, and the market. The manufacturer shall permit the drawl and collection of samples from their facility for independent

evaluation of the product quality by the CB. No fee shall be levied for the same.

b) 30 pieces of sample per product type shall be subjected to testing.

c) Test sample(s) taken for independent test (CB's laboratory) shall be sealed and signed in the presence of both parties and shall be submitted to the CB's Testing Laboratory by the CB's representative.

d) The auditor/audit team checks the availability of testing facilities and or established outsourcing systems in the manufacturing Quality Control for adequacy.

e) The auditor/audit team verifies the competence of testing personnel and the testing facility.

### 4.10.5. Testing by CB

a) The tests shall be carried out by the test method specified in ES ISO 13006 or any other validated test method.

b) The results of both in-plant and in CB's Testing Laboratory shall comply with the requirements of relevant standards ES ISO 13006.

c) If the result of the test conducted by the CB's Testing Laboratory shows nonconformance concerning the specified requirements, the provision for rejection as per CB's procedures. Retest shall be carried out on the reference sample kept by the CB or new samples collected by the CB's representative, on which full testing shall be carried out, if necessary.

d) If the retests comply, the initial product certification audit is considered conforming to product specification. If not, the manufacturer will be advised to take corrective action.

e) CB shall maintain records of all certification activities: application registration, documents provided by the applicant, and on-site evaluation report, including factory test results and test reports of samples.

Note: When CB chooses to use test, data produced by others (including supplier laboratory under certain conditions), CB shall ensure that the requirements for the suitability and competence of the party conducting the testing as specified in ISO/IEC 17025.

## 4.11. Sample Testing Frequency

The manufacturer shall have a sampling plan which shall include frequency of sampling and sampling points and conduct testing as per the plan.

## 4.12. Reports

Following each evaluation of audit test results, a confidential report shall be prepared and sent a copy to the manufacturer without delay.

## 4.13. Declaration of Conformity

The declaration of conformity of the product can be made by the client following the certification of the factory production control by CB by the directive for ES Mark licensing.

## 4.14. Standard Mark

The Standard mark shall be used only for the declared products.

4.14. Action to be taken by the manufacturer in the event of nonconformity

4.14.1. The control of non-conforming products and the corrective action to be taken by the client shall be dealt with in clause 4.9.1 of this document.

4.14.2. These are the full responsibility of the client

4.14.3. The client shall stop production and declare and report to CB if the product no longer complies with the requirements for the declaration of conformity statements that the product conforms to the requirement of ES ISO 13006 and the evaluation of conformity described in this document.

## 4.15. Surveillance

CB shall conduct factory and market surveillance audits by its surveillance audit procedure every six months (one time per year) and renew the certificate every year.

### 4.15.1 Conclusions from Surveillance Assessment

On completion of each Surveillance Assessment, the Assessment Team shall report findings, including but not limited to Area for Improvements, Minor and Major Non-conformities, to the Clients for acknowledgement and follow up action(s). The surveillance assessment team will indicate with a written recommendation for continuing the Certification or otherwise.

### 4.15.2 Classification of non-conformities and recommendations

### 4.15.2.1 Major non-conformities

A Major non-conformity exists when the auditor observes regulatory violation requirements of ES ISO 13006 failure which requires that the manufacturer:

a) Immediately interrupts production.

b) Holds products in quarantine.

c) Discontinues distribution to customers.

d) Recall the product.

### 4.15.2.2 Minor non-conformities

A minor non-conformity exists when requirements of these evaluation criteria document requirements rather than relevant standards requirements have been addressed but there is insufficient evidence to demonstrate that it has been properly controlled or implemented.

### 4.15.2.3. Opportunity for improvements

In addition to non-conformities, the auditors may consider the observations as opportunities for improvement.

The basic requirement to identify and record improvement opportunities is that the requirements of ES ISO 13006 and this conformity evaluation document have been fulfilled but there are still areas for potential improvement of system effectiveness and efficiency.

Minor non-conformity and opportunity for Improvement will be checked during the following regular audit. If an opportunity for improvement is not resolved and closed by then, the opportunities for improvement will be considered nonconforming.

## 4.16. Certification Decision and Certificate

4.16.1. The information provided by the auditor/audit team to the CB for the product certification decision shall include as a minimum:

a) The audit report,

b) Comments on the non-conformities and, where applicable, the corrective actions taken by the client,

c) Recommendation from the auditor on whether or not to grant the certification, together with any conditions or observations.

4.16.2. If there is sufficient evidence to demonstrate compliance with the conformity evaluation criteria of the document and other related requirements (such as signing of product certification agreement and service fee settlement), a certificate shall be granted.

**4.16.3 Certificate**

The decision to issue a certificate remains the CB's responsibility.

4.16.3.1 A certificate is valid for a year.

4.16.3.2 The Certification Body shall issue a Conformity Certificate of to the successful Applicant with the following content:

(a) Certificate number

(b) Name and address of the Certification Body

(c) Name and address of the Company

(d) Standard classification and designation of Ceramic Tiles types in accordance with this Scheme and the reference year of ES ISO 13006.

(e) Certification Scope (Name or brand and size of the certified Ceramic Tiles)

4.16.4 Where an application for participation in this Scheme is rejected or Certification is refused, the Applicant shall have the right of representation to an appeal committee in accordance with the Certification Body regulations.

## 4.17. Re-certification audits

CB shall conduct a re-certification audit per every year. A re-certification audit takes place before the end of a certification period. The audit shall be planned in due time, to avoid the expiration of the certificate.

Note: 1 A failure to perform the re-certification audit before the expiration of the certificate results in the interruption of the certification cycle. In this case, the wording “certified since” cannot be included on the certificate.

Note: 2 If a re-certification is conducted after the expiry of a certificate, the initial audit shall be carried out.

## 4.18. Suspension, change of scope and withdrawal of certification

4.18.1 If the client fails to comply with the client’s obligations under this Scheme, the Certification Body will suspend the Certification of the client. If the failing of complying with the client’s obligation under this Scheme continues for more than three months, the Certification Body may decide to withdrawn the Certification of the Client and re-application for a new Certification shall be required.

4.18.2 Upon a suspension of the Certification of a client, the Certification Body shall serve a written notice to the Client for such suspension with detail reason of the suspension.

4.18.3 Upon the decision to withdraw the Certification, the Client shall serve a written notice to the Certification Body at least one calendar month before the production of the certified Ceramic Tiles to the Purchasers is ceased.

4.18.4 If the Certification for a Client is suspended or withdrawn, the Client shall immediately cease to use the Certification Mark and shall within two weeks’ time inform the Purchaser(s) for such suspension or withdrawal of the Certification. All kinds of advertisement regarding the Certification shall be ceased and all certification documents shall be returned to the Certification Body by the clients. Other actions required if the certification is suspended, withdrawn or terminated shall be subject to the rules of the Certification Body and shall be

stated in the contract with the client.

## 4.19. Information on Certified Ceramic Tiles Manufacturers

4.19.1 Upon the request of any Purchaser, end users or any stakeholder of the certified Ceramic Tiles, the Certification Body is obliged to provide verbal or written confirmation, whichever is requested, of the status of any certified Ceramic Tiles Manufacturer under his registry.

4.19.2 Reasons for any suspension or withdrawal of Certification shall be stated in the Register as mentioned in Clause 4.18.2.

## 4.20. Changes to Requirements

### 4.20.1 The Certification Body

4.20.1.1 In the event of a change in the Requirements of this Scheme or the regulation of the CB, a grace period of six months, or any other length of the grace period to be announced by the CB, shall be given to all clients for clarification of the new requirements and preparation works for conforming to the changed requirements.

4.20.1.2 In the event of a change in this Scheme, the grace period given to the Clients shall be subject to the announcement of the relevant committee(s) of the ECAE/CD. The Certification Bodies and Clients shall make all necessary amendments in their auditing and operation systems and product quality to comply with the new requirements in the Scheme accordingly within the grace period given.

### 4.20.2. The Client

4.20.2.1 The Clients shall keep the CB informed in writing of changes in his circumstances which may affect Certification. Such changes include:

(a) Changes in ownership or name of the company for Certification.

(b) Change of processes which may affect the certification scope.

(c) Change of the location of the Plant and/or Quality System Management Office.

(d) Closure of manufacturing Plant.

## 4.21. Appeals against Decisions

4.21.1 The Applicant or Client shall have the right to appeal against any decisions of the Assessment Team or the Certification Body. An appeal committee shall be set up under the Certification Body. Details of the appeal procedure shall be provided in the Certification Body regulations and make known to all Applicant and clients.

## 4.22. Complaints

4.22.1 Certified Ceramic Tiles Manufacturers shall keep records of all written complaints received from any concerned parties and corresponding responses. These records shall be made available to the Assessment Team at the time of any Assessment. The Assessment Team shall investigate in detail on such complaints to see if any Area for Improvement or non-conformity has to be raised.

4.22.2 The Certification Body shall keep a record of all written complaints, in relation to a Certified Ceramic Tiles Manufacturer received from any concerned parties. Such complaints shall be investigated at the discretion of Certification Body and reported to the ECAE Board or equivalent.

4.22.3 The Certification Body shall respond to complainants with a report which is confined to a statement upon the Certification status of the Certified Ceramic Tiles Manufacturer.

## 4.23. Confidentiality

4.23.1 All Applicants and Clients shall disclose to the Assessment Team for the purposes of Assessments all information or records obtained from or pertaining to Purchasers and connected with the Scheme.

4.23.2 The Assessment Team and any other staff in the Certification Body shall not disclose information or records obtained from the Applicants and Clients unless otherwise permitted by the Applicant or Client concerned.

## 4.24. Publication of Directory of Certified Products

4.24.1 The Certification Body shall be responsible to publish and maintain a list of certified products under its certification to this Scheme with the updated certification status and all the contents in the Certificate of Conformity for each certified product.

## Annex

### About Ethiopian Conformity Assessment Enterprise (ECAE)

The Ethiopian Conformity Assessment Enterprise (ECAE) is a public enterprise under the Ministry of Trade and Regional Integration in Ethiopia. Its primary mission is to promote quality and safety in Ethiopian industries by implementing national and international standards.

The ECAE provides conformity assessment services to industries, manufacturers, and businesses across various sectors, including agriculture, food, textiles, electronics, construction Materials and management systems. These services involve testing, inspection, and certification, ensuring that products and systems meet the required national and international standards and are safe for use by consumers.

The Enterprise operates with a team of highly skilled technical experts, analysts, inspectors and laboratories, which are equipped with state-of-the-art technologies to provide reliable and accurate testing and assessment services. The ECAE aims to help industries improve the quality of their products, enhance their competitiveness in the global market, and protect the health and safety of consumers.