Guidelines for the certification of thermal insulation products

General Guidelines

Revision index	Date of implementation
F	26/05/2025

ASSOCIATION POUR LA CERTIFICATION DES MATERIAUX ISOLANTS
84, Avenue Jean Jaurès, 77420 CHAMPS-SUR-MARNE
Tel. 33.(0)1.64.68.84.97 – secretariat.acermi@cstb.fr
ASSOCIATION loi du 1er juillet 1901

Table of contents

Structure of the guidelines

These certification guidelines consist of a common core called the General Guidelines, Technical Specifications specifying the technical rules for certification and Product Standards defining the procedures for application of the rules for each of the target products.

1 General points

1.1 Preamble

These guidelines describe:

- the field and conditions of application of ACERMI certification.
- the certified characteristics.
- the methods of assessment by the body certifying product conformity.
- the nature and mode of communication relating to the certified characteristics.

These guidelines do not apply to certificates of conformity for application of CE marking.

Products covered by the by regulation (EU) No.305/2011 (CPR) must at least satisfy the conditions relating to CE marking according to appendix ZA of the applicable European standard or the conditions stipulated in the CPR.

Given the state of the art, all certified products must satisfy the minimum general properties for suitability for use defined in the relevant product guideline.

1.2 Purpose and field of application

These guidelines specify the conditions of application of the General Regulations for ACERMI Certification to thermal insulation products manufactured in the form of slabs, panels, rolls or bulk, the list of which appears in Technical Specification A.

Only products deemed fit for use may be awarded an ACERMI certificate, whatever their nature may be. For products or construction procedures whose composition or use do not stem from traditional know-how and practices, fitness for use can be demonstrated by the existence and compliance of the product to:

- professional rules, which must be validated by the ACERMI certification committee;
- a valid Technical Assessment or a Technical Application Document within the meaning of the decree of 21 March 2012;
- a favourable type A Technical Experimental Assessment (ATEx);
- RAGE professional recommendations that must be validated by the ACERMI certification committee.

1.3 Terminology

- **Primary material**: layer of insulating material, component of a product, manufactured from a defined base material, according to a defined technology, and characterised by thermal conductivity and specific inherent characteristics.
- **Product**: product containing a defined primary material (or a combination of several primary materials), with or without a defined thin coating (or two thin coatings), sold in thicknesses which may differ.
- **Reflective product**: single or multi-layer product including:
    - one or more reflective films (aluminium foil or plastic sheets covered by metallisation) of a thickness generally less than 100 microns
    - one or more layers of materials of different types: cellular plastic, bubble wrap, plant, synthetic, animal or mineral wool.
- **Product variant**: product which is differentiated from the insulation product, of which it constitutes a variant, due to the presence or type of thin coatings which bestow on it specific characteristics tailored to different preferred uses.
- **Product grouping:** Several products can be grouped together for the determination of a property in accordance with standard NF EN 13172 chapter 4. The conditions for application of this standard are described in Technical Specification C of these guidelines.
- **Specific primary material:** Primary material for which the manufacturing specifications are given, used specifically for the production of bulk products.
- **Declassified products:** Products manufactured from one or more primary materials resulting from the declassification of manufactured products located in a defined density range.

  These factory-made products must be the subject of an ACERMI certificate. However, other certifications may be taken into account on a case-by-case basis.

  The primary materials which may be used have been declassified due to:
    - faulty packaging,
    - dimensional faults[1], squaring or flatness faults,
    - surfacing faults (gluing, alignment, etc.),

  They may also be from stocks of factory-made products, on condition that these were manufactured less than 3 months ago.

  In general, the inherent characteristics of the primary materials resulting from a declassification procedure must not differ from those of factory-made products. This particularly concerns the density, level of binder and fibre production.

  Products manufactured from declassified products which do not comply with all the above-mentioned specifications are excluded from the scope of these guidelines.

[1] Dimensional faults include thickness faults (due to a change in thickness during manufacture or incorrect distribution of the wadding), length or width faults.

The procedures for selection and declassification implemented during the manufacturing process are checked by the ACERMI lead member during examination of the application for certification, and then during follow-up.

1.4 Application for a certificate

According to the conditions defined in § 6.1 of the General Regulations, any manufacturer constantly producing a thermal insulation product either in France or abroad which meets the field of application defined above may apply for a certificate. Insulation products designated by a dedicated sales reference and linked to a known, controlled technical manufacturing specification may be the subject of a certificate. Any person presenting a dossier in agreement with a manufacturer may also apply for a certificate.

The rules for delivery of the Certificate are as follows:

In accordance with article 1.3 of the General Regulations, each product is designated by a separate sales reference and may give rise to a separate certificate.

This Certificate covers all productions of the product, if they are manufactured by several separate units.

If one product is sold under different commercial names corresponding to different distribution circuits, each brand may be the subject of a separate Certificate by request.

Apart from the characteristics governed by national systems, all the information on the label of a product must comply with the information given on the certificate (sales references, factories, declared characteristics, thickness range, etc.).

If a stage of the manufacturing or processing procedure is sub-contracted to an industrialist other than the certificate holder, the applicant or certificate holder is responsible for the compliance of the ACERMI certified products according to the provisions in these guidelines. The identity of the sub-contractor must be mentioned in the initial technical file.

1.5 Obtaining the Key-mark and/or CE marking

The Association pour la certification des matériaux isolants (ACERMI) is authorised by the CEN to deliver the Key-mark and is notified for CE marking. As such, the Association may examine applications for Key-mark and/or CE certificates for the products in question, together with that for an ACERMI certificate.

1.6 Certified characteristics

Thermal resistance R and thermal conductivity are always certified.

In the case of a product with CE marking, the key characteristics declared for CE marking and which are the subject of the declaration of Performance of the product (DoP) must be certified, based on values declared in accordance with Regulation (EU) No.305/2011 (CPR).[2]

[2] Reaction to fire is certified when the level 1 of attestation of conformity is required, or when the key-mark applies

All certified characteristics are measured. They cannot be certified based on a default value.

In the case of reflective products, emissivity is also certified.

Optional:

- the ISOLE profile may be certified according to the conditions in Technical Specification F of these guidelines.
- service resistance R_{CS} and the corresponding deformations d_{Smin} and d_{Smax} and the modulus of service elasticity may be certified according to Technical Specification No.5 of these guidelines.
- class SC1 or SC2, according to their crushing under load according to standard NF DTU 52.10[3] with the letter a or b, the index 1 to 4 and any specific A (acoustic underlayer against noise generated by impacts) and/or Ch (underlayer for heated floors) characteristics.

  N.B.: all tests (mechanical and acoustic) must be performed on the same production batch of the underlayer to be tested. Characteristic A can only be certified if the results associated with the characteristics identified during type testing (or by random verification) cover the ranges of measurements in self-checks.
- Semi-rigidity may be certified according to the conditions stipulated in standard NF DTU 20.1 P1-2 (Appendix C).
- For products other than reflective products, emissivity may be certified for all products which are the subject of a Technical Assessment or a Technical Application Document specifying the emissivity of the product.
- The specific heat capacity may be certified according to the conditions in Technical Specification No.10 of these guidelines.

The certified characteristics and test methods are defined in the harmonised European standards, in the test method standards covered by these standards and if applicable in the European Assessment Documents.

1.7 Bodies engaged in the certification process

1.7.1 Head office of the association

ACERMI
84 Avenue Jean Jaurès
77420 CHAMPS SUR MARNE

In accordance with §5 of the General Regulations, operations are organised by the Association which delegates the mission to perform certification jointly to:

[3] This standard stipulates in chapter 8.1 "Insulating underlayers in panels", that "any rigid insulating panel having a deflection greater than 4 mm/m is rejected or cut up" and that "for underlayers of class SC1, the largest dimension of panel is limited to 1500 mm".

LNE (Laboratoire National de Métrologie et d'Essais)	and the	CSTB (Centre Scientifique et Technique du Bâtiment)
LNE 1 Rue Gaston Boissier 75724 PARIS Cedex 15		CSTB 84 Avenue Jean Jaurès CHAMPS SUR MARNE 77447 MARNE LA VALLÉE Cedex 2

These bodies are referred to as lead members in the remainder of the text.

The Association grants, suspends or withdraws certificates after consulting the Certification Committee, the composition and attributions of which are defined in § 5.2 and 5.3 of the General Regulations.

1.7.2 Audits

The Association entrusts audits and periodical factory verifications to auditors who are members of one of the two lead members and qualified according to their procedures.

All sub-contracting outside LNE or CSTB is subject to the approval of the Certification Committee.

1.7.3 Tests

The Association entrusts the performance of tests to the independent laboratories -

- Laboratoire National de métrologie et d'Essais (LNE)
- Centre Scientifique et Technique du Bâtiment (CSTB)

1.8 Procedure to obtain the entitlement to use the ACERMI certificate

Applications for certificates are processed in accordance with § 6 of the General Regulations for ACERMI Certification. Before submitting an application, applicants must ensure they satisfy the acceptance examination conditions and the specific rules concerning their product or products and their production unit(s) when the application is submitted and defined in the corresponding standards and technical specifications.

1.8.1 Submission of the application

In accordance with article 6 of the General Rules of the Certificate, applications for Certificates are addressed to the designated lead member after the first contact with the Association.

A separate application shall be made for each "product" in the sense of article 1.3 of the General Regulations.

If several applications are submitted at the same time, they shall be accompanied by a summary listing the products presented for certification, with opposite each of these:

- the address of the factories concerned,

- the characteristics for which certification is requested
- the groupings planned according to the characteristics

The application is addressed by the applicant to the address of the lead member designated by Acermi.

1.8.2 Examination of the application

The examination procedure described in detail in the following chapter is launched by the lead member and includes among other things:

- examination of the dossier,
- an audit of the production unit and taking of samples,
- verification by testing of the characteristics and performances announced.

1.8.3 Award of the certificate

After examination, the lead member presents an anonymous summary of the verifications performed to the Certification Committee.

After consulting the Certification Committee, the Association decides:

- to award the certificate or
- postpones award with a request for additional examination of the application or
- refuses the certificate.

All certificates have a common expiry date, set by cycles of 3 years. Whenever a cycle has ended, certificates which are not under a suspension, or a withdrawal decision are reissued. The revision number is incremented with each of these reissues.

The rules governing the decision relating to the certified characteristics are defined in article 7.3 of the General Regulations for ACERMI Certification.

If the application or certificate holder challenges a decision concerning them, they may lodge an appeal according to the conditions described in § 10 of the General Regulations for ACERMI Certification.

1.9 Marking procedures - Reference to the ACERMI certificate

Each package of certified products must carry the ACERMI logo according to the conditions defined in Technical Specification D relating to the Certificate marking rules.

Holders of ACERMI certificates are required to communicate all media referring to the ACERMI logo or certificate, upon request of the Association or lead member.

1.10 Checks performed by the manufacturer

The measures described in the standard for each family specify the minimum requirements with regard to the checks and tests which must be satisfied and the records of these checks and tests which must be kept permanently available at the factory for consultation by officers in charge of audits for a period of one year.

The manufacturer must set up a production control system in accordance with paragraph 5 of standard NF EN 13172 ensuring compliance with the manufacturing specifications and thus the certified characteristics.

In accordance with standard ISO/CEI 17065, manufacturers must keep an up-to-date register of complaints processing.

1.11 Checks performed by the lead member

The lead member starts to monitor products as soon as the ACERMI certificate is awarded.

This includes in particular auditing the production unit and testing the products in question.

Chapter 4 of these General Guidelines supplemented by the specific provisions for each family defines the conditions for this monitoring according to the number of factories manufacturing the certified product(s).

Verification that the characteristics are maintained by the holder is based on examination of the quality control system, checks and tests performed by the manufacturer and tests performed by the lead member, the results of which are used according to the rules defined in chapter 3 of these General Guidelines.

If any shortcomings or deviations are observed following the audits or tests, additional audits or tests may be decided under the conditions defined in § 9 of the General Regulations for ACERMI Certification.

1.12 Decisions

Controls and verifications of the certified products may give rise to the following decisions:

- renewal of the entitlement to use the certificate. This renewal may be accompanied by observations or requests for corrective action.
- renewal of entitlement to use the certificate with notice to cease any anomalies or shortcomings observed within a given period,
- renewal of entitlement to use the certificate with an additional audit or verification tests at the holder's expense,
- suspension of the entitlement to use the certificate,
- withdrawal of the certificate.

§ 9 of the General Regulations for ACERMI certification specify the conditions under which the above sanctions are decided.

1.13 Checks in stores or on worksites

Checks may be made and samples taken by the association under the conditions stipulated in § 8.22 of the General Regulations for ACERMI certification.

1.14 Unauthorised reference to ACERMI certification by a certificate holder

If the association is informed of unauthorised reference to ACERMI certification, an intervention process is rapidly launched according to the following steps:

1.14.1 Verification of the infringement

If the infringement of which the Association is informed relates to the holder of an ACERMI certificate, the lead member concerned is informed of this and proceeds to check the truth of this infringement.

The case is examined by the body presiding over the Association, in accordance with § 12 of the General Regulations for ACERMI certification.

1.14.2 Action with regard to the company responsible for the infringement

If checking reveals that the infringement has indeed taken place, the lead member immediately sends the company responsible notice to cease the deviations observed within a period of 5 days and to inform it of the actions undertaken within 8 days of receipt of the notice. Checks are then made to ensure the deviations have been corrected.

1.14.3 Notification of the Certification Committee

If the lead member does not receive a satisfactory response within the allotted time, or if after verification, it observes that the deviations have not been corrected:

- it immediately informs the members of the Certification Committee of the observations made and the action taken concerning this case, and
- immediately sends the company notice to cease the deviations observed within a period fixed by the lead member, informing the company that if no appropriate corrective action is taken within the allotted time, this may lead to the suspension of entitlement to use the ACERMI certificate(s) after consultation with the members of the Certification Committee and prosecution.

If the deviations are corrected, the lead member informs the Certification Committee.

1.14.4 Proposal to suspend the entitlement to use the certificate

If the infringements persist, the Association or the lead member informs the members of the Certification Committee and proposes to suspend the holder's entitlement to use the certificate(s).

After approval of the Certification Committee, the Association announces suspension of the holder's entitlement.

Restoring entitlement to use the certificate is also subject to prior consultation with the members of the Certification Committee.

1.15 Modifications which may have consequences for the ACERMI certificate

The holder must give the lead member prior written notice of any modification to the conditions under which the entitlement to use the ACERMI certificate was obtained. The holder must provide the necessary proof to allow the consequences of these changes for the certificate to be judged.

1.15.1 Modifications concerning the holder

The holder of the ACERMI certificate is designated by the company name. The company appoints a representative. This representative is the ACERMI contact.

The holder must indicate any changes concerning the company name or the representative. In the case of a modification to the company name, this must be changed on the certificates.

In the specific case of products marketed under a private label, independently of compliance with the measures established by the EU Regulation 305/2011, a change in a certified characteristic on the certificate of one of the two holders (the manufacturer or the distributor) is notified to the other holder by ACERMI. The manufacturer informs the Association of the certificates of distributors concerned.

1.15.2 Modifications concerning the production site

The production site is defined in the technical file and on the certificate.

The certificate is established for the designated sites and these sites are the subject of periodical monitoring. The lead member must be informed of any modification of the site, movement of the site or addition of a site and it will then take the necessary measures to examine the dossier concerning this new site.

In the specific case of products marketed under a private label, the reference of the production site is mentioned in the form of a code, in connection with the technical file.

1.15.3 Modification concerning the production control system

The production control system used at the production site is described in the technical file. The holder must inform the lead member in charge of the file as soon as possible if any modification to the production control system causes changes to the characteristics of the product in relation to the certified characteristics, in order to allow the lead member to check the effect of these modifications on the product.

The lead member studies the impact of these changes on the certified characteristics and decides if an additional follow-up audit is necessary with or without sampling.

1.15.4 Modification concerning the manufacturing procedure used to produce a certified product

The holder must inform the lead member in charge of the file as soon as possible of any modification to the manufacturing procedure used to produce the product (modification of density, formulation, raw materials, etc.), whether or not this causes changes to the characteristics of the product in relation to the certified characteristics, in order to allow the lead member to check the effect of these modifications on the product. The holder must provide the lead member with all of the proof (comparative tests for the declared characteristics, taking into account ageing, etc.) allowing the lead member to check that these modifications do not cause any change in the declared characteristics. If this is not the case, modification of the certificate is considered.

The lead member studies the impact of these changes on the certified characteristics and decides if an additional follow-up audit is necessary with or without sampling.

1.16 Funding

The costs incurred for management and verification for the purposes of ACERMI certification are listed in the scale fixed annually by the Association.

2 Examination procedure in view of acceptance

2.1 Conditions for award of the certificate

The ACERMI certificate is awarded on the basis of:

- an application for a certificate,
- examination of the technical file relating to this application, including the manufacturer's controls and tests,
- the audit(s), samples and tests for the purpose of delivery of the certificate, in application of article 7 of the ACERMI General Regulations.

2.2 Examination of the file

The technical file, defined in the following paragraphs and supplemented by the elements in the standards for each product family, is examined to check that all the necessary elements are present.

After consulting the technical file, the lead member defines the number of production batches and the quantity of product required for examination of the file, in accordance with the sampling rules stipulated in the product standards.

The technical file is established for each product and contains at least the following elements.

2.2.1 Description of the product

- full commercial name;
- precise address of the production unit or units;
- production capacity and average monthly production of each of these units for the relevant product;
- insulation family to which the product belongs (base material);
- form in which the product is sold (slabs, panels, felt, wadding, etc.) and any details concerning any treatment or coatings
    - standard dimensions: length, width, thickness,
    - nominal apparent density,
    - colour,
    - presence of a surface coating and the nature of this coating,
    - surface treatment,
    - etc.
- packaging and method of marking or labelling already used (include a label);
- draft of the label showing the ACERMI logo;
- recommended uses for the product, any restrictions or possible incompatibilities (include the main sales documents and recommendations for use distributed to customers).

2.2.2 Description of manufacturing and internal controls

- Description of the manufacturing process used for the product;
- Indication of the number of production lines installed in each production centre. If applicable, specify the differences which may exist between different lines or between different centres;
- Treatment applied at the end of the production line, if applicable (stabilisation, surfacing, etc.);
- Conditions and average storage time in the factory;
- Definition of the company's general quality organisation plan in place at central level and on each of the production sites;
- Description of the internal controls made, indicating for each control, the nature of the parameter checked, the methods and frequency of the control and the tolerance ranges, particularly with regard to the thicknesses
    - for the raw materials,
    - for the manufacturing itself,
    - for the finished products.

2.2.3 Information specific to the factories for the purpose of organising audits

For each factory or production centre, state:

- the factory opening hours;
- the usual working hours if applicable according to the functions (production, quality, controls, etc.).
- the language(s) spoken by the representatives of the applicant present during the audit
- any other specific information to be taken into account for the purpose of organising audits (conditions of access to the factory, etc.)

2.2.4 General proof

- Summary of the performances required
    - Claimed thermal resistances and conductivity (calculation of fractile 90/90) and thicknesses including the corresponding tolerances,
    - Characteristics and performance levels declared for CE marking if applicable,
    - Other characteristics to be certified and the levels requested,
    - ISOLE profile if applicable;
- Date of start of controls;
- Results of the manufacturer's internal controls and tests performed on the finished products and in the case of control by correlation, the internal control performed on the corresponding production parameters: attach an extract of the control registers (individual results and statistical evaluations) corresponding to the last three months of production;
- Declaration for CE marking purposes if applicable;

- Results of tests already performed on the product by independent accredited laboratories concerning the various characteristics claimed: communication of the test reports and identification of the product subjected to the tests justifying that these have not been changed since the date of the tests;
- Technical Assessment or Technical Application Document, or justification of an application currently under examination, if applicable.

2.3 Audit of the production unit and taking of samples

Examination of the application includes an audit of the factory where the products submitted for admission are manufactured. The duration of this audit is at least one day.

After examining the file, the lead member carries out the audit of the production unit(s) including those of sub-contractors if applicable. During this audit, the lead member checks that all the requirements described in chapter 3 are complied with and carries out the following operations in particular.

2.3.1 Inspection of the production means and inventory of the factory's control measures

The officer in charge of the audit examines the production conditions and production process. He/she carries out the operations listed below.

2.3.1.1 Inspection from the raw materials through to the finished product for each production line

- the manufacturer's tests and controls,
- the supplier sheets,
- the manufacturing sheets,
- the condition of the measuring devices, their operation and calibration,
- the methods of use of these devices.

2.3.1.2 Examination of the controls and tests on the finished product

- Verification that the manufacturer's final controls and tests have been operational and functional to a satisfactory level for at least three months.
- Verification of the storage and marking conditions.
- Examination of the condition of the laboratory equipment (operating condition, calibration, maintenance, etc.).
- Examination of the test methods and execution.
- Examination of the procedures for processing non-compliant products.
- Consultation of the complaints register for the production concerned by the application.

2.3.2 Tests performed in the factory and on samples

- The auditor has the requested tests performed in the factory laboratory,
- he/she sends the identified samples for verification or follow-up tests to the laboratory appointed by the lead member together with the sample sheet established by the auditor.

2.3.3 Samples

The auditor takes copies of the records for the product(s) currently subject to the application for certification concerning the controls and tests performed by the manufacturer on the finished product (individual results and statistical evaluation) required for the subsequent detailed examination of the performances requested.

The samples for admission testing are taken by the auditor in presence of the manufacturer's representative. The auditor takes the number of samples randomly either at the end of the production line or from stock in the required quantities for examination of the file.

The methods used for taking samples (number of manufacturing dates, range of thicknesses, etc.) are specified in the corresponding product standards, according to the selected criteria for assessment of compliance. The manufacturing dates of the samples are spread over a sufficiently long period to cover several production batches.

The minimum sample for a manufacturing date is 5 m² for products in slabs, panels and rolls and 3 bags for bulk products.

The number of samples taken for a product or group of products for which a fractile 90/90 value is declared by the manufacturer depends on the number of lines in which the product or group of products is manufactured:

- From 1 to 4 lines, 4 samples are taken covering all of the factories
- Beyond 4 lines, the number of samples is at least equal to the number of lines.

The auditor establishes a sheet of observations showing any non-compliances and a sample sheet signed by both parties. A copy of each of these is left on-site. The sample sheet contains at least the following elements:

- the name and address of the manufacturer;
- the description of the product;
- the manner in which the product is identified;
- the marking of the product by the manufacturer;
- the size of the batch subject to the control;
- the size of the sample;
- the place and date of sampling;
- any necessary information relating to the product used for the test.

The samples taken are marked by the auditor with a distinctive sign allowing them to be authenticated subsequently and sent under the producer's responsibility to the laboratory in charge of performing the test.

2.3.4 Audit report

An audit report taking into account the information concerning the factory and the manufacturing procedure, the evaluation of the results of the factory tests, the results of examination of the extracts from the control registers, any non-compliance sheets completed by the applicant and the results of cross-checking carried out at the factory, is drafted and sent with the auditor's comments to the applicant.

2.3.5 Corrective action

Following the comments made by the officer in charge of the audit and those of the lead member, the applicant must undertake corrective action in order to come into line with the ACERMI standards. If necessary an additional audit may be required to check that the corrective action has been implemented.

2.4 Verification tests for admission

The lead member addresses the sample sheet and test programme to be conducted on the product samples to the selected external laboratory.

2.4.1 Nature of the tests

For a given certification application, the tests are performed on the samples taken during the audit(s) in the factory(ies).

The tests cover the characteristics required to satisfy the decision criteria defined in the product standards. These standards specify the procedures for the measurements to be made:

- identification (thickness and density),
- thermal resistance and thermal conductivity,
- other characteristics (water absorption, settling, reaction to fire, etc.)

If one product is manufactured in several factories, the lead member selects the source of the samples on which the tests will be made.

2.4.2 Test Report

The results of these tests are sent by the lead member to the applicant in the form of a test report accompanied by the results of the compliance tests.

2.4.3 Assessment of compliance

Assessment of compliance during admission of a product is defined in the certificate maintenance rules, specified in each product guideline.

The maximum duration between an initial audit and the corresponding 1st surveillance audit (ex: audit of a new line), must be less than 12 months. If it is not possible:

- An audit must be performed before delivering the certificate. The scope of this audit is to verify that the requirements of the ACERMI rules are still met. In the case of a laboratory located in a different address from the production site, it must also be audited, and;

- If this audit takes place during the 1st semester of the year, a sampling of 2 production dates should be performed for thermal properties test. The results on these 2 production dates must be individually compliant with the application. This results will be included in the yearly conformity test of the current year.
- If this audit takes place during the 2nd semester of the year, a sampling of 2 production dates should be performed for thermal properties test. The results on these 2 production dates must be individually compliant with the application.

The certificate is issued on the basis of the initial assessment, and the conclusions of the complimentary audit as soon as available, providing they are positive (any non-conformity must be solved). The certificate is then renewed or suspended at each results provided, positive or negative respectively.

2.5 Consultation of the Certification Committee

During acceptance of a new product, the Certification Committee is consulted according to the procedures stipulated in article 7 of the ACERMI General Regulations.

The following table specifies and supplements the Certification Committee consultation procedures for the other possible cases.

	Examination by Coordination Committee	Examination by Certification Committee
New products: all the results are known before examination by the Certification Committee	for opinion	for opinion
New products: not all the results are known before examination by the Certification Committee After the Certification Committee the case is not re-examined by the Certification Committee	for opinion	for opinion
Extension of a certified product to a new factory	for opinion	for opinion
Improvement of thermal conductivity on a certified product	for information	for information
Extension of a certified product to a factory already audited by ACERMI	for information	for information
Modification or creation of the ISOLE profile on a product already certified	for information	for information
Modification or creation of floor classification on a product already certified	for information	for information
Extension to a new production line for a product already certified to a factory already audited by ACERMI	for information	for information
Declassification of the thermal conductivity on a certified product	for information	for information

For information: the certificate has already been issued when the case is examined by the Coordination/Certification Committee
For opinion: the certificate has not been issued before examination by the committees

A file may only be presented to the Certification Committee on the following conditions:

- The initial audit has been completed, the critical deviations have been corrected and the solutions to the non-critical deviations have been validated
- At least half the thermal measurements have been performed (one test specimen per manufacturing date)

3 Controls and tests performed by the manufacturer

3.1 General points

Controls, the purpose of which is to check quality and ensure production is uniform, are conducted on an ongoing basis under the responsibility of the manufacturer.

They include the technical operations and all the measures necessary for maintenance and regulation of product compliance with the requirements of the appropriate product standard.

Products which only differ with regard to issues of appearance which do not affect the characteristics required in the product standard in question may be assembled into groups of products. Products which only differ with regard to certain characteristics may be grouped according to their shared characteristics. If one of the products in the group thus defined satisfies the requirements of the product standard, all the products in the group are deemed to satisfy the requirements of the product standard in question for the characteristics concerned. Characteristics which are not part of a group must be tested product by product.

If one of the products in a group does not satisfy the requirements of the product standard, the entire group is deemed not to satisfy the requirements of the product standard.

These controls are conducted according to the procedures specified in § 3.3 below.

Supported by specific proof, the manufacturer may be authorised to have part of the tests for which it is responsible performed by an external laboratory. This laboratory must be audited as part of the checks for the ACERMI certificate.

After possible consultation with the Certification Committee, the certifying body may ask the manufacturer to increase the frequency of certain controls or authorise it to reduce this frequency, based on the results obtained.

In this chapter, where two frequencies are given for a control for a given product family and a given characteristic, the strictest frequency shall apply.

Factory production control must satisfy at least the requirements described in §5 of standard NF EN 13172 (Thermal insulation – Evaluation of conformity).

3.2 Organisation

3.2.1 General points

Factory production control must be conducted in accordance with a system based on written documents included in a quality manual.

3.2.2 Responsibility and authority

Responsibility, authority and the relations between all the staff in charge of directing, performing or checking work affecting quality must be defined. This particularly applies to staff who needs freedom of action with regard to organisation, and authority to:

- undertake actions to prevent the production of non-compliant products;
- identify and record any problem linked to product quality.

3.2.3 Management representative for factory production control

The manufacturer must appoint a representative in each production unit, who must be knowledgeable and experienced in the manufacture of the product, to be responsible for conducting and monitoring the factory production control procedures and ensuring that the requirements stipulated in this standard are constantly implemented.

3.2.4 Management review

The factory production control system must be reviewed at suitable intervals by the management to ensure it is valid and effective at all times. Records of this review must be kept.

3.2.5 Quality manual

The documentation and the manufacturer's procedures must be adapted to the production and the process management used to manufacture the product. They must also supply the following details in a quality manual:

a) quality targets, the organisation structure, responsibilities and authority of the management with regard to product compliance;

b) the procedures specifying the raw materials and other components and allowing them to be checked;

c) production control by the manufacturer and the other techniques, procedures and systematic actions to be used;

d) the controls and tests which must be conducted before, during and after production, and the frequency at which these must be performed (see 3.3) and any procedures for repeated tests;

e) product handling, storage, packaging, marking and labelling procedures;

f) the measures relating to training of all the staff whose activities affect quality (see 3.2.8).

3.2.6 Handling, storage, packaging and marking of products

The manufacturer must, in accordance with the quality manual:

a) provide handling procedures to avoid any damage;

b) provide suitable storage areas or storage rooms of a type which will prevent any damage to the product;

c) check the packaging, storage and marking procedures.

3.2.7 Product traceability

Individual products or batches of products must be identifiable and traceable according to their place of production.

3.2.8 Staff training

The manufacturer must establish and maintain the procedures required to identify training needs, and must provide training for all the staff whose activities affect quality.

The staff assigned to perform specific tasks must be qualified by suitable teaching, training and/or experience, as appropriate.

Training records must be kept up to date.

3.2.9 Management of sub-contracting and third-party processing

The applicant or certificate holder shall establish and implement sub-contracting and/or processing management procedures covering the entire process from the input specifications right through to control of the product or sub-contracted service.

If the process for forming the primary material for production of bulk products is performed by a third party, these procedures must include selection and declassification conditions leading to the primary materials for the manufacture of bulk products.

Sub-contracting operations must be clearly recorded at the manufacturer's and the sub-contracting requestor.

A specific contract specifies in particular the specifications applicable to sub-contracting operations, in accordance with the measures of this standard.

The quality records must allow traceability of the products and internal controls conducted (in particular the batch No. and identification of the holder requesting sub-contacting, controls conducted).

If several certificate holders use the same sub-contractor, it must be possible to prove that implementation of the applicable quality procedures ensures complete separation of the processing procedures for each product.

A processor which prepares one or more bulk products from one or more primary materials from different manufacturers must manage all the traceability procedures and the corresponding controls.

3.3 Controls and tests

3.3.1 General points

All devices, equipment and staff must be available for conducting controls and tests. The manufacturer or its representative can contract the services of a sub-contractor having the means, equipment and staff to conduct the controls and tests on behalf of the manufacturer. The manufacturer must be responsible for the control, calibration and maintenance of the

testing measurement and control equipment whether it is the manufacturer's property or is rented by the manufacturer or a sub-contractor.

The controls and tests must be conducted by staff qualified for such tasks by suitable training and/or experience.

The equipment must be used in such a way that the measurement uncertainty does not exceed the required measuring capacity.

3.3.2 Test equipment

Tests, the purpose of which is to prove compliance of the finished product with the appropriate product standard, must be performed using equipment in accordance with the test methods referred to in the product standard.

The test equipment must be calibrated and/or controlled in reference to a device or test specimens connected to nationally or internationally-recognised reference test specimens (standards). In the absence of such reference test specimens, the basis used for the internal controls and calibration must be given. The procedures for calibration and control regarding certain test equipment are given for products coming under harmonised European standards NF EN 13162 to 13171, in standard NF EN 13172 (Table 1 in § 5.3.2). For test equipment which is not listed in this table and for products which do not come under these standards, the test equipment must be controlled and/or calibrated in accordance with the manufacturer's written procedures. Calibration records must be kept for a period of 10 years.

The manufacturer must ensure that the handling, conservation and storage of the test equipment do not affect its accuracy or its suitability for use.

If production is intermittent, the manufacturer must ensure that all test equipment likely to have been affected by the interruption is suitably controlled and/or calibrated prior to use.

Calibration of all test equipment must be renewed if any repairs are done or if any faults likely to have affected calibration occur.

3.3.3 Controls and tests of raw materials, primary materials and other constituents

The manufacturer must ensure that the raw materials, primary materials and other constituents comply with its specific requirements. When defining the controls, the controls conducted by the supplier and the written proof of compliance must be taken into consideration.

The manufacturer must ensure that incoming raw materials and other constituents are only used and processed after having been checked to ensure they are compliant with the requirements. If materials from elsewhere are used immediately for production without having been checked beforehand, they must be identified and recorded so as to ensure they can be recalled immediately in the event of non-compliance.

This check is left to the initiative of the manufacturer, who must prove the existence and validity of the quality management system.

3.3.4 Controls and tests during manufacturing

The manufacturer must check its procedure and conduct the controls and tests described in its quality manual.

3.3.5 Control of finished products

3.3.5.1 Direct testing

The manufacturer must regularly test the finished products, in particular for the certified characteristics.

For products coming under harmonised European standards (NF EN 13162 to 13171), these tests must be performed for the characteristics in question, in accordance with the appropriate product standard (appendix B). In the particular case where, for a given characteristic, it can be proved, in particular according to the measures in point 5.3.5.1 of the 2012 version of standard NF EN 13172, that production is frequently checked, the test frequency can be reduced to one test per day, after agreement from the ACERMI lead member.

For all products:

- A test is defined as being the measurement(s) conducted on a sample of the product constituted of one or more test specimens as specified in the appropriate test or product standard.
- The samples must be taken regularly at each production unit (line) according to the manufacturer's test plan. The minimum test frequency relating to the characteristics in question, under conditions of continuous production are specified in the standard for the relevant product.
- For the characteristics which are automatically recorded during the manufacturing procedure with a higher frequency than that specified in this appendix, the test frequency may be reduced.
- The frequency and minimum content of the control are specified according to the family to which the product belongs in the relevant standard, it being understood that other controls may be necessary depending on the provisions of the manufacturer's quality organisation plan.

3.3.5.2 Indirect testing

Indirect testing is a means by which a given characteristic may be estimated based on tests conducted for one or more other characteristics with which a correlation has been established. Indirect testing may also be used to reduce the frequency of direct testing.

The correlation must be established by suitable statistical methods, e.g. by regressive analysis based on adequate preliminary tests conducted for each production unit (line). This relationship must have been checked at defined intervals and after any changes or modifications likely to affect the correlation.

For each indirect test procedure used on a production site, the sampling plan and the compliance criteria for the indirect characteristic must be specified, taking into account the existing correlation between the corresponding characteristics.

The use of indirect tests must lead to at least the same level of confidence concerning the target characteristic as that resulting from the use of a direct test and is subject to the agreement of the ACERMI supervisor.

3.3.6 Recording of tests and the control register

The results of tests and controls performed on the finished products must be recorded in one of the manufacturer's registers. The register, having numbered or electronic sheets, must contain the product identification, the date and time of manufacture and for each characteristic, the test methods, the test results, the level required, the results of the control and the name of the person who carried out the control.

If the products do not satisfy the requirements, a note must be made in the register indicating the measures taken to correct this.

The register must be kept permanently available at the factory for consultation by the officer in charge of verification for a period of one year, then kept by the manufacturer for at least 10 years.

The reports giving the results of controls performed in a laboratory exterior to the factory, if applicable, must be grouped in a file in the same place as the register. A cross-reference in the registers must allow the corresponding report to be consulted.

3.4 Measures to be taken in case of non-compliant products

If the result of a test or control of a product is not satisfactory, the manufacturer is required to take the necessary measures immediately to rectify the shortcomings. Products which do not comply with the requirements of the product standard or guidelines must be marked as such. When the short-comings have been identified and corrected, the test or control in question must be repeated without delay as described in the quality manual to show that the faults have been eliminated.

In the event that the products are delivered before the result of the control is known, notice must be rapidly sent to the customer to prevent any adverse consequences and a record of this notice must be kept.

3.5 Complaints register

In accordance with standard ISO/CEI 17065 which governs accreditation of certification bodies, manufacturers must:

a) keep a record of all complaints brought to their knowledge regarding the compliance of a product with the requirements of the relevant standard and make all the files in question available to the certifying body, upon request,

b) take appropriate measures following such complaints or concerning any defect observed in a product which may have an effect on its compliance with the certification requirements,

c) document the measures which have been taken.

d) These records shall be verified at least once a year by the officer in charge of the audits. Process for follow-up of certified products

4 Process for follow-up of certified products

4.1 Principle

After certification, the characteristics of the products are monitored in each of the production units listed on the corresponding certificate. To maintain the certified performances, the conclusions of the annual verification audits and the results of the compliance tests for the certified characteristics must be satisfactory.

Two annual audits are performed in the different production units. During these verification audits, samples and tests are performed on-site in accordance with these Technical Guidelines. After each audit, an audit report is drafted and sent to the appointed correspondent at the company.

The samples are sent to the laboratory in charge of testing. The tests necessary for maintenance of the certificate are performed on these samples in order to check compliance of the certified characteristics. An annual summary is made of the tests performed and the results of the compliance tests are verified.

Additional audits may be performed at the initiative of the lead member.

4.2 Follow-up audit

The ACERMI representative must be authorised to enter the factory and warehouse to perform the tasks relating to his/her mission. In this context, the representative must have access to all the information regarding the product and be assisted particularly during sampling and testing.

The manufacturer must inform the certification body of any change in the quality system which is (or may be) directly linked to the quality of the products.

4.2.1 Factory verifications

Factory verifications concern:

- any modifications made to the manufacturing procedure,
- compliance of manufacturing with the indications in the acceptance file from the previous audit, in particular, the nature of the insulation products used to manufacture the finished product,
- execution of the manufacturer's controls and tests (frequency, procedures and results) and compliance with the indications relating to the product family and specific conditions attached to the product certificate,
- the complaints register concerning the ACERMI certified production (see § 3.5 of these General Guidelines),
- the control equipment (calibration, operating condition, maintenance, etc.).
- The procedures relating to sub-contracting and the corresponding records, as described in § 3.2.9.

- the appearance, storage, packaging and marking of products ready for sale.

4.2.2 Tests conducted in the factory

The officer has the series of tests scheduled under the manufacturer's control and test procedure carried out on site.

The manufacturer:

- performs the tests in the factory's laboratory requested by the officer in charge of verification which could not be carried out in the officer's presence and transmits the results to the lead member,
- sends the samples previously identified to the designated external laboratory for verification tests with the sample sheets, specifying that the results are to be sent to the relevant lead member.

4.2.3 Sampling from the control registers

The agent takes a copy for each of the certified products of the manufacturer's control and final test records (individual results and statistical evaluation) required for subsequent detailed examination of the certified magnitudes.

4.2.4 Product sampling

For the random testing described in §4.3, samples must be taken at the factory for each group of products in order to check their compliance with the product standard or product guidelines. These samples must be taken randomly, in principle during the factory follow-up audit, and must be representative of normal production. The samples are only taken off the production site if the lead member and the manufacture agree on this.

The samples taken are marked by the inspector with a distinctive sign allowing them to be authenticated subsequently and sent under the producer's responsibility to the laboratory in charge of performing the test, together with the sample sheet.

Samples intended for verification of the product's characteristics must comply with the measures defined in the relevant product guidelines.

During each audit, the officer in charge of the audit takes samples either at the end of the production line or from stock in order to perform the necessary measurements for certificate maintenance in an authorised laboratory according to the following details.

Sampling is spread over a sufficient period to cover several successive batches. The minimum sample for a manufacturing date is 3 m² for products in slabs, panels and rolls and 3 bags for bulk products. The sampling rules can be specified in each product guideline.

In the case of occasional production, the factory must keep the quantity of product corresponding to a sample for each of the last 4 production campaigns (4 dates).

The officer in charge of verification establishes a sheet of observations showing any non-compliances and a sample sheet signed by both parties. A copy is left on site.

4.2.5 Audit report

An audit report taking into account modifications concerning the factory and the manufacturing procedure, the evaluation of the results of the factory tests, the results of examination of the extracts from the control registers, any completed non-compliance sheets and the results of cross-checking carried out at the factory, is drafted and sent with the auditor's comments to the holder

If any deviations are observed in relation to these guidelines, the lead member makes the decisions defined in § 9 of the ACERMI General Regulations.

4.2.6 Corrective action

Following the comments made by the officer in charge of the audit and those of the lead member, the holder must undertake corrective action in order to come into line with the ACERMI guidelines. If necessary an additional audit may be required to check that the corrective action has been implemented.

4.3 Verification tests by the pilot body

4.3.1 Principle

For a given certificate, the tests are performed on samples taken during the various audits in the factories.

In the case where a product is manufactured in several factories, the lead member defines the sampling plan for the performance of tests covering all the production lines.

The various tests, their conditions and frequency are defined in the product guidelines and take place in the external laboratory selected by the lead.

4.3.2 Test Report

The results of these tests are addressed to the manufacturer by the lead member once a year in the form of a test report drafted by the selected laboratory, together with the results of the compliance test defined in the paragraph below.

An intermediate test report (after the first audit of the year) is addressed to the manufacturer by the lead member to give the initial results.

4.3.3 Compliance test

The compliance test is defined in the product guidelines. It is performed with the samples taken during the follow-up audit.

In the case of manufacturing which is judged to be non-compliant with the certified characteristics, the procedure is as follows:

a) The certificate holder may request a new audit from the Certifying Body, for sampling. The result of the measurements is sent to the manufacturer by the lead member 30 days after the tests are performed at the latest. In the case of a non-compliant surveillance test of conformity, an additional audit is performed for each production line having produced non-compliant sample. During this (these) audit(s), the corresponding product is sampled in a sufficient quantity to perform a test of conformity on these samples.

   If the result of the measurements satisfies the thermal compliance test, the certified values are maintained.

   If the result of the measurements is not satisfactory, the measures in articles 9.13 and 9.14 of the ACERMI General Regulations apply.

b) Immediately after the results are sent, the certificate holder may also apply for other certified values corresponding to the results obtained.

If a new audit is not requested by the certificate holder for sampling or for a new certified value, the certificate is suspended or withdrawn.

4.4 Procedure in the case of temporary suspension

A certificate may be suspended temporarily at the request of the holder. The conditions of this request and the conditions for reinstatement of the certificate are described below.

4.4.1 Request for temporary suspension

- letter signed by the certificate holder, including the reason for the request, the duration of the planned suspension and the quantity of stock remaining and forecasted time to use it up (including stock already in stores);
- acknowledgement of receipt of the request by the lead member;
- withdrawal of the certificate (or the factory in question on the certificate) after approval of the request.

4.4.2 Reinstating the certificate

Prior to reinstating the certificate, the holder provides the lead member with the proof described in the technical file (see § 2.2.4).

An audit is scheduled during the quarter following the restart of manufacture. The certificate is reinstated according to the conclusions of the audit.

If suspension lasts longer than 12 months, the reinstatement is treated according to the procedure for acceptance of the product in question.