Product Guideline No.1

Factory-made mineral wool products

Revision index	Date of implementation
B	30/06/2013

ASSOCIATION POUR LA CERTIFICATION DES MATERIAUX ISOLANTS
4, avenue du Recteur-Poincarré, 75782 Paris Cedex 16 – Tel. 33.(0)1.64.68.84.97 – Fax. 33.(0)1.64.68.83.45
ASSOCIATION REGISTERED (LAW OF 1ST JULY 1901) AS AN APPROVED CERTIFYING BODY NO. 19 (LAW 7823 OF 10TH JANUARY 1978)
CSTB - LNE

Table of contents

1 Purpose

This Product Guideline supplements the measures in the General Guidelines.

This Product Guideline concerns panels and rolls of mineral wool, in accordance with harmonised European standard NF EN 13162.

2 Additional elements of the certificate application technical file

The technical file defined in paragraph 2.2 of the General Guidelines is supplemented by the following items.

The mineral wool fibres must have been exonerated from rating as a carcinogen according to the measures of notes Q or R of European Directive 97/69/CE amended by EC regulation 1272/2008.

Note R allows exoneration based on diameter and note Q allows exoneration based on in-vivo testing.

For examination of its certificate application, the manufacturer must provide the following in its technical file:

- a test report from an independent laboratory;
- establishing exoneration of the fibres based on note Q or note R;
- in the case of in-vivo testing and exoneration according the criteria of note Q, the test report must specify the chemical composition of the fibres tested.

In order to prove that the manufactured products are constituted of fibres similar to those tested, the following controls must be performed after acceptance of the product:

- Checking of the chemical composition or diameter of the fibres is performed at least once a month internally for each oven in each factory;
- Checking of the chemical composition or diameter of the fibres is performed at least once a year for each oven by an independent laboratory.

The lead member shall check that these measures are being applied during follow-up audits of the production unit.

If the manufacturer has third party controls in relation to the clauses described, ACERMI will take them into account.

3 Characteristics which can be certified

The characteristics which can be certified are the characteristics listed in paragraph 4 of standard NF EN 13162, supplemented by the following characteristics:

- Service compression strength, normal service deformation
- Class of insulating underlayers beneath screed or floating slab and under tiles
- Emissivity
- Specific heat capacity

For the application of fire protection bands on external thermal insulation systems, the products must also comply with the following points.

- Euroclass A1
- T5 thickness class
- Compressive strength CS(10\Y) ≥ 30 for mono-density products
- Compressive strength CS(10\Y) ≥ 20 for bi-density products
- Dimensional stability DS(70,-)
- Tensile strength perpendicular to faces ≥ 10 for mono-density products
- Tensile strength perpendicular to faces ≥ 7.5 for bi-density products
- The density should be ≥ 90kg/m^3

In the light of these checks, it will be indicated on the certificates the mention:

« Les caractéristiques minimales, relatives à l'utilisation comme bandes filantes pour protection incendie des procédés d'isolation par l'extérieur sous enduit relevant d'un DTA délivré par le GS7 ont été vérifiées »

"The minimum requirements relating to the use as fire protection bands of exterior insulation systems under coating according to a DTA issued by GS7 have been verified."

4 Methods of determination of the certified characteristics by the pilot laboratories

The test methods applied by the pilot laboratory for each of the characteristics are defined in paragraph 5 of standard NF EN 13162, supplemented by the following measures.

4.1 Thermal conductivity

The measures of paragraph 1.1 of Technical Specification No.1 apply.

Thermal conductivity is determined at the thickness defined below:

4.1.1 Products not compressed in packaging

Thermal measurement is carried out at the thickness measured according to standard NF EN 823.

4.1.2 Products compressed in packaging

Thickness is measured in compliance with standard NF EN 823 after storage of the material in its packaging for 9 weeks counting from the date of manufacturing. Thermal measurement is made:

- at nominal thickness if it is lower than or equal to the average thickness measured,
- otherwise, at the average thickness measured.

So that the results of determination of thermal resistance by the verification body can be transmitted to the manufacturer within a reasonable period of time, these measurement and those for thickness are made independently of each other. Measurements corresponding to determination of thermal resistance are made without waiting for the storage period defined above. Thickness measurements aremade on additional samples after storage. If the thickness measured is less than the nominal thickness, thermal measurement is made and its result incorporated in the sampling programme instead of that of the next sample.

4.2 Thermal resistance

Certified thermal resistance is defined according to the procedures in Technical Specification No.2.

4.3 Reaction to fire

The measures in Technical Specification No.3 apply.

4.4 Service compression strength, normal service deformation

The measures in Technical Specification No.5 apply.

4.5 Class of insulating underlayers beneath screed or floating slab and under tiles

If the class of insulating underlayers beneath screed or floating slab and under tiles defined in the DTU guidelines 26.2/52.1 is certified, the procedures in Technical Specification No.6 apply.

4.6 Emissivity

If the product has a surface coating for which the emissivity is certified, the procedures in Technical Specification No.7 apply.

4.7 Specific heat capacity

The measures in Technical Specification No.10 apply.

5 Factory production control

Production control in the production unit satisfies the requirements of appendix B of European standard NF EN 13162.

In addition to these measures, for the following certified characteristics for the purposes of these regulations and described in detail in the various Technical Specifications, the procedures (methods and minimum test frequencies) provided for in this Technical Specification apply:

- Reaction to fire
- Service compression strength and normal service deformation
- Class of insulating underlayers beneath screed or floating slab and under tiles
- Emissivity
- Specific heat capacity

In addition, the following specific measures must be complied with.

5.1 Thickness and density

The lengths and widths are measured in accordance with standard NF EN 822 complying at least with the measuring plan indicated. These measurements are made on the full-sized product (roll or panel) using a tape measure.

The thickness measurements are made in accordance with standard NF EN 823 (or by any other method leading to the same results), and possibly after the manufacturer's packaging and storage.

The density is defined in accordance with standard NF EN 1602 on the scale of a roll or all the panels constituting a packaging unit, minus the coating and in relation to the nominal thickness.

In the case of products compressed in the packaging, thickness controls will be conducted periodically after storage for 9 weeks in the packaging.

5.2 Deviation under its own weight

For certain applications in vertical walls (lining partitions or false walls) the product must be semi rigid.

Appendix C of standard NF P 10-202-1-2 (DTU 20.1 Part 1.2) defines the semi-rigid character depending on the deviation of the product under the its own weight.

When the semi-rigidity is certified, a control of deviation under its own weight must be performed once a month.

6 Tests performed during follow-up

For characteristics requiring monitoring, random tests are conducted at least once a year according to the table below when relevant to the product in question.

The tests are conducted in accordance with the measures in European standard NF EN 13162, supplemented if applicable by the procedures described in the Technical Specifications corresponding to the characteristics tested.

Characteristics (NF EN 13162)	**Test methods**	**Place of performance of the tests**
Thermal resistance – Thermal conductivity	NF EN 12667 NF EN 12939	Pilot laboratory
Length and width	NF EN 822	Production unit and pilot laboratory
Thickness	NF EN 823 or NF EN 12431	Production unit and pilot laboratory
Squaring	NF EN 824	Production unit
Flatness	NF EN 825	Production unit
Reaction to fire[1]	NF EN 13501-1	Pilot laboratory
Other characteristics or criteria	**Test methods**	**Place of performance of the tests**
Emissivity	Technical Specification No.7	Pilot laboratory
Density	NF EN 1602	Pilot laboratory
Service resistance (R_{CS})	Technical Specification No.5	Production unit and pilot laboratory

The certifying body may also perform tests to verify other characteristics not listed in the table below, in particular if there is any doubt as to the compliance of the certified values.

[1] The reaction to fire classification is monitored by conducting random tests once every two years.

Random testing is performed for reaction to fire in the case of products coming under conformity certificate system 1 for CE marking, in the case of the Keymark or at the manufacturer's request. The following measures also apply for follow-up tests:

Reaction to fire classes	**Type of product**	**Non-combustibility tests in oven** **NF EN ISO 1182**	**Determination of HHV** **NF EN ISO 1716**	**SBI** **NF EN 13823**
A1	Bare	1 test on product of maximum density in maximum organic fraction	1 test on maximum organic fraction	-
A2	Bare		1 test on the product having the highest organic fraction	1 test on the product having the highest density among those having the highest organic fraction
A1	Coated with glass fibre mat	1 test on the product having the highest density among those having the highest organic fraction	1 test on the product having the highest organic fraction + 1 test per mat	1 test on the worst case according to the ITT tests
A1	Coated with aluminium	1 test on the product having the highest density among those having the highest organic fraction	1 test on the product having the highest organic fraction	1 test on the worst case according to the ITT tests
A2	Coated with glass fibre mat or aluminium or aluminium/glass fibre mat		1 test on the product having the highest organic fraction + 1 test per mat if applicable	1 test on the worst case according to the ITT tests
B	Coated with aluminium (or kraft)/glass fibre mat			1 test on the worst case according to the ITT tests + 1 ignitability test
C	Coating			1 test on the worst case according to the ITT tests + 1 ignitability test

7 Certificate maintenance rules

The certificate maintenance rules are defined in paragraph 4 of the General Guidelines.

Based on the results of the tests performed by the pilot body, product compliance is verified:

- For the dimensional characteristics according to the requirements of paragraph 4 of European standard NF EN 13162[1];
- For the thermal performance according to paragraphs 2.1 or 2.2 of Technical Specification E;
- For the following characteristics certified under these regulations and described in detail in the various Technical Specifications, according to the conditions stipulated in these Technical Specifications:
    - Reaction to fire
    - Service compression strength and normal service deformation
    - Emissivity

8 Marking Rules

The marking rules laid out in Technical Specification D apply.

In particular, the information label complies with the measures in paragraph 3.1.1 of this Technical Specification.

[1] Due to an inconsistency between the French and English versions of the 2009 edition of this standard, the English version is to be used for evaluation of the thickness tolerances.