
**Thermal insulation — Mineral-wool
loose-fill for horizontal applications
in ventilated roof spaces —**

**Part 2:
Principal responsibilities of installers**

iTeh STANDARD PREVIEW
*Isolation thermique — Fibres minérales en vrac pour applications
horizontales dans les combles ventilées —*
(standards.iteh.ai)
Partie 2: Principales responsabilités des installateurs

ISO 9076-2:2008

<https://standards.iteh.ai/catalog/standards/sist/2d5fda7c-c933-459c-801a-a78b7e5f46db/iso-9076-2-2008>



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9076-2 was prepared by Technical Committee ISO/TC 163, *Thermal performance and energy use in the built environment*, Subcommittee SC 3, *Thermal insulation products*.

ISO 9076 consists of the following parts, under the general title *Thermal insulation — Mineral-wool loose-fill for horizontal applications in ventilated roof spaces*:

- *Part 1: Material specification and test methods* [ISO 9076-2:2008](https://standards.iteh.ai/catalog/standards/sist/2d5fda7c-c933-459c-801a-a78b7e5f46db/iso-9076-2-2008)
- *Part 2: Principal responsibilities of installers* <https://standards.iteh.ai/catalog/standards/sist/2d5fda7c-c933-459c-801a-a78b7e5f46db/iso-9076-2-2008>

Introduction

This document specifies the principal responsibilities of installers, as these are common in all countries. It does not specify the application procedures or requirements of the installation, which can vary greatly from one construction to another, from one country to another, or from one jurisdiction in a country to another. This part of ISO 9076 does not conflict with local building codes or labour practices. This part of ISO 9076 serves to clearly delineate the principal responsibilities of the manufacturer of the thermal insulation, which are specified in the material specification, from the principal responsibilities of the installer listed in this document. Because of the uniqueness of the concept of principal responsibilities for the installer, the following general definitions in more than one form are given to assist in translation of the word to other languages. Specific definitions are given in Clause 3.

— Principal requirements:

- 1) Principal requirements are essential procedures that are common to all installations regardless of the construction of the building or the country in which the installation is to occur. Principal requirements can include instructions to carry out a policy statement (meet an objective) but do not necessarily provide a linear progression of steps or actions to be taken.
- 2) A document that provides methods that are necessary to use to accomplish the objective of producing a functional installation.

— Responsibility:

- 1) This is the condition of being accountable for your actions. Accepting responsibility for one's actions means that the individual who commits an act is the one who is required to explain the act and accept any consequences.
- 2) This is the condition of being obliged to answer, as for one's actions, to an authority that can impose a penalty for failure.

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Thermal insulation — Mineral-wool loose-fill for horizontal applications in ventilated roof spaces —

Part 2: Principal responsibilities of installers

1 Scope

This part of ISO 9076 specifies the principal responsibilities of the installers of mineral-wool loose-fill thermal insulation products for buildings. A product that is manufactured and packaged according to ISO 9076-1 and then installed in ventilated roof spaces as described in ISO 9774 is assured of having the properties declared by the manufacturer.

This part of ISO 9076 gives the principal responsibilities of the installer in the installation of the product, in the documentation of the installation and in the declaration that all requirements of this part of ISO 9076 have been met.

This part of ISO 9076 does not specify the fitness of the product for the intended use beyond those aspects relating to installation. Many aspects relating to the fitness for use are specified in government regulations. It is necessary that the installer ensure, when installing the product, that the product installed is suitable for the application, based on the government regulations and the manufacturer's recommendations.

The installer can be required to meet ancillary (additional) requirements specified in local regulations or by the customer.

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.

ISO 7345, *Thermal insulation — Physical quantities and definitions*

ISO 9229, *Thermal insulation — Vocabulary*

ISO 9076-1, *Thermal insulation — Mineral-wool loose-fill for horizontal applications in ventilated roof spaces — Part 1: Material specification and test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 7345 and ISO 9229 and the following apply.

3.1

application training

training provided by a manufacturer or by a training institute for which certification is provided

3.2

attic
roof space
loft space

enclosed space between the roof and ceiling

3.3

authority having jurisdiction

agency of the government or trade having responsibility for the safe and proper installation of thermal insulation

3.4

blowing wool

fibrous insulation material sub-divided into granules or pellets for application or installation by pneumatic equipment

[ISO 9229]

3.5

coverage

area provided by a package of loose-fill insulation when applied as per the manufacturer's instructions to achieve a declared thermal performance

[ISO 9229]

3.6

designation code

shift, production and/or date code used by the manufacturer to identify a particular product lot

3.7

declared thermal resistance

thermal resistance of the insulation declared by the manufacturer for a specific settled thickness, density, and mean temperature

NOTE The declared thermal resistance is expressed in square metre kelvins per watt.

3.8

equipment manufacturer

organization that manufactures or markets equipment designed to apply mineral-wool loose-fill thermal insulation

3.9

inspection authority

authority that has regulatory responsibility for enforcement

3.10

installed thickness

initial thickness at the time of installation necessary to provide the declared thickness after settlement

See **settled thickness** (3.18).

NOTE 1 The initial thickness is equal to or greater than the declared thickness, and it is necessary to take into account any settling after installation.

NOTE 2 The term "as-blown thickness" is also used.

3.11

installer

individual who has application training to install mineral-wool loose-fill thermal insulation in roof spaces, such that it conforms to the labelling on the package and other applicable requirements and regulations

3.12**loose-fill system**

blowing machine and blowing hose required to install mineral-wool loose-fill insulation to the specifications given on the performance chart

3.13**manufacturer**

organization that manufactures or markets mineral-wool loose-fill thermal insulation products and which is responsible for the packaging and labelling of the material and specifying the system for application

3.14**performance chart**

table specifying the installed and settled thickness of insulation required to give tabulated values of thermal resistance and maximum area of attic surface covered by each bag

3.15**principal requirement**

essential procedures that are common to all installations regardless of the construction of the building or the country in which the installation occurs

NOTE Principal requirements may include instructions to carry out a policy statement (meet an objective) but do not necessarily provide a linear progression of steps or actions to be taken. Methods that it is necessary to use to accomplish the objective of a functional installation are normally included.

3.16**R-value**

thermal resistance of the insulation expressed in $\text{m}^2\cdot\text{K}/\text{W}$ for a given settled thickness and density

NOTE 1 The R-value is expressed in square metre kelvins per watt.

NOTE 2 This term is defined for the convenience of installers who may use the term.

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3.17**responsibility**

condition of being accountable for your actions, accepting responsibility for one's actions, explaining the act, and answering to an authority and accepting any consequences or penalties

3.18**settled thickness**

thickness declared by the manufacturer as that which provides the declared thermal resistance after settlement

3.19**settlement**

decrease in the thickness of installed insulation with time

NOTE The settlement is expressed as a percentage of the initially installed thickness.

4 Symbols and abbreviated terms

R Thermal resistance, expressed in square metre kelvins per watt

R_{D10} Declared thermal resistance at the respective mean temperature, expressed in square metre kelvins per watt

R_{D23} Declared thermal resistance at the respective mean temperature, expressed in square metre kelvins per watt

5 General responsibilities of the installer

5.1 Installer training

The installer shall ensure that there is at least one employee present at the site who is trained in the following:

- a) site inspection and preparation;
- b) physical properties of the insulation materials;
- c) use and maintenance of equipment;
- d) manufacturer's installation requirements;
- e) verification of the specific requirements in Clause 6;
- f) material storage and handling;
- g) installation procedures;
- h) consumer (site) safety issues;
- i) local applicable codes and regulations;
- j) limitations of use;
- k) related building science;
- l) record keeping;
- m) disposal of material waste;
- n) installer safety.

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5.2 Documentation obtained from the manufacturer

The installer shall obtain from the manufacturer of the mineral-wool loose-fill thermal insulation information that includes the following:

- a) brand name, name of the manufacturer or supplier and identification of the manufacturing facility location;
- b) type of insulation and its intended use;
- c) instructions for installation of the product;
- d) limitations for use of the product;
- e) coverage chart for the product or the specified maximum area to be covered per package;
- f) material safety data sheet;
- g) transportation and storage requirements;

This information may be printed on the package.

5.3 Responsibility for health and safety

The installer shall have knowledge of related health and safety requirements specified by the local authority having jurisdiction, requirements of the appropriate regulatory bodies and relevant application-related recommendations of the manufacturer and shall conform to the requirements and recommendations.

5.4 Transportation and storage

The installer shall verify that the transport and storage of the insulation products is in accordance with the manufacturer's recommendations.

5.5 Verification of material compliance

The installer shall ensure that the package labels state that the material meets the requirements of this part of ISO 9076.

5.6 Suitability for installation

The installer shall verify that

- a checklist of possible defects and safety hazards has been created by the appropriate persons and is similar to the example in Annex C;
- the checklist has been applied to the area where the mineral-wool loose-fill is being installed;
- if any of the conditions on this checklist are not satisfied, they are brought to the attention of the appropriate person and are resolved before the product is installed;
- the areas of the building in which the product is being installed have been evaluated for suitability for the application of the product according to the building code, other governmental regulations, the manufacturer's guidelines and the installer training courses.

5.7 Defects prior to installation

The installer shall ensure that the material is inspected before installation and that it is free from defects that can significantly affect its serviceability, including empty packaging. The installer shall ensure that the material being installed does not have any objectionable odour.

5.8 Authority having jurisdiction

The installer shall ensure that the labelling on the packages of material being installed indicates that the material meets the requirements of the authority having jurisdiction and that the installation is in accordance with applicable building codes and all local regulations.

5.9 Installer qualifications on-site

The installer shall ensure that the on-site supervisor carries proof of training in accordance with this part of ISO 9076 and with instructions given by the product manufacturer.

5.10 Equipment requirements

The installer shall ensure that the equipment being used for the installation is that specified by the material manufacturer and that the equipment is maintained in accordance with the equipment manufacturer's instruction.

The installer shall ensure that the operating parameters used are those specified by the equipment manufacturer and that the equipment is adjusted in accordance with the equipment manufacturer's