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Thermal insulation products for building equipment and industrial installations — Calcium silicate products

Produits isolants thermiques pour l'équipement du bâtiment et les installations industrielles — Produits en silicate de calcium



Reference number ISO 8143:2010(E)

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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 Maison 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 applied 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 8143 was prepared by Technical Committee ISO/TC 163, Thermal performance and energy use in the built environment, Subcommittee SC 3, Therman insulation products.



Thermal insulation products for building equipment and industrial installations — Calcium silicate products

1 Scope

This International Standard specifies the requirements for factory-made calcium silicate products which are used for thermal insulation of industrial installations and building equipment with an operating temperature of up to approximately +1100 °C.

NOTE Calcium silicate products can be used at temperatures lower than 0 °C. For operating temperatures below 0 °C, special tests, regarding the spitability of the product in the intended application, are advised (e.g. liquefaction of oxygen). It is advisable to seek the advice of the manufacturer(s) in all cases.

The products are manufactured in the form of boards, pipe sections, segments and prefabricated ware.

This International Standard describes for testing, evaluation of conformity, marking and labelling.

Products covered by this International Standard are also used in prefabricated thermal insulation systems and composite panels; the structural performance of existems incorporating these products is not covered.

This International Standard does not specify the required level or class of a given property required to be achieved by a product in order to demonstrate fitness for purpose in a particular application. The levels required for a given application can be found in regulations and invitations to tender.

This International Standard is not applicable to

- a) products with a declared thermal conductivity greater than 66 W/(m·K) at 23 °C;
- b) products intended to be used for the insulation of the building source;
- c) the acoustical aspects
 - 1) direct airborne sound insulation, and
 - 2) impact noise transmission index.

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 1182¹), *Reaction to fire tests for products* — *Non-combustibility test*

¹⁾ To be published. (Revision of ISO 1182:2002)

ISO 1716²), Reaction to fire tests for products — Determination of the heat of combustion (calorific value)

ISO 2477, Shaped insulating refractory products — Determination of permanent change in dimensions on heating

ISO 8894-1, Refractory materials — Determination of thermal conductivity — Part 1: Hot-wire method (cross-array)

ISO 8302, Thermal insulation — Determination of steady-state thermal resistance and related properties — Guarded hot plate apparatus

ISO 8497, Thermal insulation — Determination of steady-state thermal transmission properties of thermal insulation for circular pipes

ISO 9229, Thermal insulation Vocabulary

ISO 12576-1, Thermal insulation Insulating materials and products for buildings — Conformity control systems — Part 1: Factory-made products

ISO 13787, Thermal insulation products or building equipment and industrial installations — Determination of declared thermal conductivity

ISO 21129, Hygrothermal performance of building materials and products — Determination of water-vapour transmission properties — Box method

ISO 29465, Thermal insulating products for building applications — Determination of length and width

ISO 29466, Thermal insulating products for building applications — Determination of thickness

ISO 29467, Thermal insulating products for building applications — Determination of squareness

ISO 29468, Thermal insulating products for building application of flatness

ISO 29469:2008, Thermal insulating products for building applications — Determination of compression behaviour

ISO 29472, Thermal insulating products for building applications — Ottermination of dimensional stability under specified temperature and humidity conditions

ISO 29767, Thermal insulating products for building applications — Decomination of short-term water absorption by partial immersion

EN 13467, Thermal insulating products for building equipment and industrial installations — Determination of dimensions, squareness and linearity of preformed pipe insulation

EN 13468, Thermal insulating products for building equipment and industrial installations Determination of trace quantities of water soluble chloride, fluoride, silicate, sodium ions and pH

EN 13469:2002, Thermal insulating products for building equipment and industrial installations — Determination of water vapour transmission properties of preformed pipe insulation

EN 13472, Thermal insulating products for building equipment and industrial installations — Determination of short term water absorption by partial immersion of preformed pipe insulation

²⁾ To be published. (Revision of ISO 1716:2002)