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Thermal insulation products — Sheep wool mat and board — Specification

Produits d'isolation thermique — Panneaux et tapis en laine de mouton — Spécifications

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

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Thermal insulation products — Sheep wool mat and board — Specification

1 Scope

This document specifies requirements for factory-made products of sheep wool, which are used for the thermal insulation of buildings. This document applies to material containing more than 50 % (by mass) natural sheep wool, with the balance being polymeric material. The products are delivered as a mat or board with or without facings.

This document describes product characteristics and testing methods, marking, labelling and packaging.

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

The sheep wool mat and board thermal insulation is not to be used when the continuous service temperature of the substrate is outside the range of −60 °C to +80 °C.

The use of mothproof agent residues is outside the scope of this document.

This document does not address all the health and safety aspects associated with its use. It is the responsibility of the user of this document to establish appropriate health and safety practices.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 354, *Acoustics — Measurement of sound absorption in a reverberation room*

ISO 8301, *Thermal insulation — Determination of steady-state thermal resistance and related properties — Heat flow meter apparatus*

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

ISO 9229, *Thermal insulation — Vocabulary*

ISO 11654, *Acoustics — Sound absorbers for use in buildings — Rating of sound absorption*

ISO 11925-2, *Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 2: Single-flame source test*

ISO 12460-1, *Wood-based panels — Determination of formaldehyde release — Part 1: Formaldehyde emission by the 1-cubic-metre chamber method*

ISO 12570, *Hygrothermal performance of building materials and products — Determination of moisture content by drying at elevated temperature*

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

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

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

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ISO 29470, *Thermal insulating products for building applications — Determination of the apparent density*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
production line
equipment that produces products in a continuous process

Note 1 to entry: For initial type test (ITT) and factory production control (FPC), each production line is considered separately.

3.2
production unit
equipment that produces products in a discontinuous process

Note 1 to entry: For initial type test (ITT) and factory production control (FPC), units using the same process in one factory are considered together (as one production line).

3.3
sheep wool mat
soft mat material made from natural sheep wool as the main material (>50 % by mass) with polymeric materials added

3.4
sheep wool board
board type products with a certain degree of rigidity made from natural sheep wool as the main material (>50 % by mass) with polymeric materials added

4 Symbols and abbreviated terms

4.1 Symbols

b	width, mm
d	thickness, mm
l	length, mm
d_N	nominal thickness of the product, mm
λ	thermal conductivity, W/(m·K)
λ_D	declared thermal conductivity, W/(m·K)
λ_i	one test result of thermal conductivity, W/(m·K)
$\lambda_{90/90}$	90 % fractile with a confidence level of 90 % for the thermal conductivity, W/(m·K)
λ_{mean}	mean thermal conductivity, W/(m·K)
H	moisture content, %

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