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Thermal insulation products — Hemp fiber mat and board — Specification

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National foreword

This British Standard is the UK implementation of ISO 24260:2022.

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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CP 401 • Ch. de Blandonnet 8
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Phone: +41 22 749 01 11
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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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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, components and systems*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Thermal insulation products — Hemp fiber mat and board — Specification

1 Scope

This document specifies requirements for factory-made products of hemp fibre, which are used for the thermal insulation of buildings. This document applies to material containing more than 50 % (by mass) natural hemp fibre, with or without the other natural fibre and 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 use of moth proof agent residues is outside the scope of this document.

This document does not address 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 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*

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

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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 terminology databases for use in standardization at the following addresses:

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

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

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* (3.1)].

3.3
hemp fibre mat
HFM
soft matted material made from natural hemp fibre as the main (>50 % by mass) material with or without the other natural fibre and the balance being polymeric material.

3.4
hemp fibre board
HFB
plate type products with certain degree of rigidity made from natural hemp fibre as the main (>50 % by mass) material with or without the other natural fibre and the balance being polymeric material.

4 Symbols, units and abbreviated terms

4.1 Symbols and units

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	Specimen's 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}	Specimens' mean thermal conductivity, W/(m·K)
H	moisture content, %

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