DRAFT TANZANIA STANDARD

Wood-based panels — Particleboard

TANZANIA BUREAU OF STANDARDS

Second Edition 2025

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Tanzania Bureau of Standards (TBS) is the statutory national standards body for Tanzania established under the Standards Act No. 3 of 1975, repealed and replaced by the Standards Act No. 2 of 2009.

The Building and Construction Divisional Standards Committee (BCDC), under whose supervision this Tanzania Standard was prepared, consists of representatives from the following organizations:

*College of Engineering and Technology (CoET), University of Dar es Salaam (UDSM)
Ministry of Works and Transport (MoWT)
National Housing Corporation (NHC)
Contractors Registration Board (CRB)
Ardhi University (ARU)
Jeshi la Kujenga Taifa (JKT)
*National Estates and Designing Consultancy Company Ltd (NEDCO)
Architects and Quantity Surveyors Registration Board (AQRB)
Institution of Engineers Tanzania (IET)
*National Construction Council (NCC)
Engineers Registration Board (ERB)

The organizations marked with an asterisk (*) in the above list, together with the following were directly represented on the Technical Committee entrusted with the preparation of this Tanzania Standard:

Tanzania Forestry Research Institute (TAFORI)
Sokoine University of Agriculture (SUA)
Sao Hill Industries Ltd
Tanzania Forest Services Agency (TFS)
Zanzibar Bureau of Standards (ZBS)

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0 National Foreword

The Tanzania Bureau of Standards is the statutory national standards body for Tanzania, established under standards Act No. 3 of 1975, amended by Act No. 2 of 2009.

This draft Tanzania Standard is being prepared by BCDC 6 Sawn timber, Sawn logs and Wood based Components technical committee under the supervision of the Building and Construction Divisional Committee (BCDC).

This draft Tanzania Standard is the identical adoption of *ISO 16893: 2016 Wood-based panels — Particleboard* published by International Organization for Standardization.

This draft Tanzania Standard replaces TZS 1946: 2017 *Wood-based panels — Particleboard* which has been revised.

Terminologies and conventions

The International Standard text is recommended for approval with a modification to Annex A, clause A.3.2, which addresses the standard deviation within each panel. The equal sign (=) has been added in formula A.2, as shown in the formula below:

$$S_{w,j} = \sqrt{\sum_{i=1}^{m} \left(X_{ij} - \bar{X}_j\right)^2 / (m-1)}$$

Some terminologies and certain conventions are not identical with those used as Tanzania Standard; attention is drawn to the following:

The comma (,) has been used as decimal marker (.) for metric dimensions. In Tanzania Standards, its current practice to use a full point on the baseline as decimal marker.

Whenever the words “International Standard” appear, referring to this standard, they should be interpreted as “Tanzania Standard”.

INTERNATIONAL STANDARD

ISO 16893

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2016-01-15

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2016-03-15

Wood-based panels — Particleboard

Panneaux à base de bois — Panneaux de particules

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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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 89, *Wood-based panels*, Subcommittee SC 2, *Particle boards*.

This first edition cancels and replaces ISO 16893-1:2008 and ISO 16893-2:2010, which have been technically revised.

This corrected version of ISO 16893:2016 incorporates the following corrections.

The revision statement has been corrected in the Foreword, correctly identifying the documents which this International Standard cancels and replaces.

The footer [a] in Table 4 has been amended and changed to NOTE 2.

The expression of thickness ranges have been corrected in the headers in Tables 5 to 16.

Wood-based panels — Particleboard

1 Scope

This International Standard specifies a classification matrix and the related mandatory tests and thickness ranges to be applied to wood-based particleboard for general purposes, furniture, load-bearing applications and heavy-duty load-bearing applications. It then provides the manufacturing property requirements for these types of uncoated particleboard.

The values listed in this International Standard relate to product properties used to classify particleboards into one of four grades (P-GP, P-FN, P-LB or P-HLB, see Clause 3), for use in three service conditions (REG, MR1 and MR2). The values are not characteristic values to be used for design purposes.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3340, *Fibre building boards — Determination of sand content*

ISO 9426, *Wood-based panels — Determination of dimensions of panels*

ISO 9427, *Wood-based panels — Determination of density*

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

ISO 12460-3, *Wood-based panels — Determination of formaldehyde release — Part 3: Gas analysis method*

ISO 12460-4, *Wood-based panels — Determination of formaldehyde release — Part 4: Desiccator method*

ISO 12460-5, *Wood-based panels — Determination of formaldehyde release — Part 5: Extraction method (called the perforator method)*

ISO 16572, *Timber structures — Wood-based panels — Test methods for structural properties*

ISO 16978, *Wood-based panels — Determination of modulus of elasticity in bending and of bending strength*

ISO 16979, *Wood-based panels — Determination of moisture content*

ISO 16981, *Wood-based panels — Determination of surface soundness*

ISO 16983, *Wood-based panels — Determination of swelling in thickness after immersion in water*

ISO 16984, *Wood-based panels — Determination of tensile strength perpendicular to the plane of the panel*

ISO 16985, *Wood-based panels — Determination of dimensional changes associated with changes in relative humidity*

ISO 16987, *Wood-based panels — Determination of moisture resistance under cyclic test conditions*

ISO 16998, *Wood-based panels — Determination of moisture resistance — Boil test*

ISO 17064, *Wood-based panels — Fibreboard, particleboard and oriented strand board (OSB) — Vocabulary*

ISO 20585:2005, *Wood-based panels — Determination of wet bending strength after immersion in water at 70 degrees C or 100 degrees C (boiling temperature)*