



MALAYSIAN STANDARD

MS ISO 13006:2014

**Ceramic tiles - Definitions, classification,
characteristics and marking
(First revision)
(ISO 13006:2012, IDT)**

ICS: 01.040.91; 91.100.23

Descriptors: ceramic tiles, terms, classifications, characteristics, marking requirements

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MS ISO 13006:2014

Committee representation

The Industry Standards Committee on Building, Construction and Civil Engineering (ISC D) under whose authority this Malaysian Standard was adopted, comprises representatives from the following organisations:

Association of Consulting Engineers Malaysia
Construction Industry Development Board Malaysia
Department of Irrigation and Drainage Malaysia
Department of Standards Malaysia
Dewan Bandaraya Kuala Lumpur
Federation of Malaysian Manufacturers
Jabatan Bomba dan Penyelamat Malaysia
Jabatan Kerajaan Tempatan
Jabatan Kerja Raya Malaysia
Lembaga Pembangunan Industri Pembinaan Malaysia
Malaysian Timber Council
Malaysian Timber Industry Board
Master Builders Association Malaysia
Pertubuhan Akitek Malaysia
Projek Lebuhraya Utara-Selatan Berhad
Real Estate and Housing Developers' Association Malaysia
SIRIM Berhad (Secretariat)
Suruhanjaya Perkhidmatan Air Negara
The Cement and Concrete Association of Malaysia
The Institution of Engineers, Malaysia
Universiti Sains Malaysia
Universiti Teknologi Malaysia

The Technical Committee on Ceramic Materials and Sanitary Fittings which supervised the adoption of the ISO Standard as Malaysian Standard consists of representatives from the following organisations:

Building Materials Distributors Association of Malaysia
Construction Industry Development Board Malaysia
Federation of Malaysian Manufacturers - Malaysian Ceramic Industry Group
IKRAM QA Services Sdn Bhd
Jabatan Kerja Raya Malaysia
Master Builders Association Malaysia
Ministry of International Trade and Industry
Ministry of Housing and Local Government
Pertubuhan Akitek Malaysia
SIRIM Berhad (Secretariat)
SIRIM QAS International Sdn Bhd
Suruhanjaya Perkhidmatan Air Negara
Universiti Teknologi MARA

Committee representation *(continued)*

The Working Group on Ceramic Tiles which recommended the adoption of the ISO Standard as Malaysian Standard consists of representatives from the following organisations:

ATSA Architects Sdn Bhd

Building Materials Distributors Association of Malaysia

Ceramic Research Company Sdn Bhd

Construction Industry Development Board Malaysia

Federation of Malaysian Manufacturers - Malaysian Ceramic Industry Group

Jabatan Kerja Raya Malaysia

Johan Ceramics Berhad

Kingres Marketing Sdn Bhd

Kolej Kemahiran Tinggi MARA

Malaysian Mosaics Berhad

Manewtech Marketing Sdn Bhd

Mapei (M) Sdn Bhd

Master Builders Association Malaysia

Ministry of Housing and Local Government

Parex Group Sdn Bhd

Pertubuhan Akitek Malaysia

SIRIM Berhad (Advanced Polymer and Composites Programme)

SIRIM Berhad (Secretariat)

SIRIM QAS International Sdn Bhd (Product Certification and Inspection Department)

SIRIM QAS International Sdn Bhd (Testing Services Department)

Universiti Teknologi MARA

National foreword

The adoption of the ISO Standard as a Malaysian Standard was recommended by the Working Group on Ceramic Tiles under the authority of the Industry Standards Committee on Building, Construction and Civil Engineering.

This Malaysian Standard is identical with ISO 13006:2012, *Ceramic tiles - Definitions, classification, characteristics and marking*, published by the International Organization for Standardization (ISO). However, for the purposes of this Malaysian Standard, the following apply:

- a) in the source text, "this International Standard" should read "this Malaysian Standard";
- b) the comma which is used as a decimal sign (if any), to read as a point;
- c) new specification introduced to ceramic tiles called 'back feet' is not applicable to Malaysia;
- d) superscript ^{'a'} and ^{'b'} in Table 1 are replaced with ^{'*} and ^{'#'} respectively; and
- e) reference to International Standards should be replaced by corresponding Malaysian Standards as follows:

<u>Referenced International Standards</u>	<u>Corresponding Malaysian Standards</u>
ISO 10545-1, <i>Ceramic tiles - Part 1: Sampling and basis for acceptance</i>	MS ISO 10545-1, <i>Ceramic tiles - Part 1: Sampling and basis for acceptance</i>
ISO 10545-2, <i>Ceramic tiles - Part 2: Determination of dimensions and surface quality</i>	MS ISO 10545-2, <i>Ceramic tiles - Part 2: Determination of dimensions and surface quality</i>
ISO 10545-3, <i>Ceramic tiles - Part 3: Determination of water absorption, apparent porosity, apparent relative density and bulk density</i>	MS ISO 10545-3, <i>Ceramic tiles - Part 3: Determination of water absorption, apparent porosity, apparent relative density and bulk density</i>
ISO 10545-4, <i>Ceramic tiles - Part 4: Determination of modulus of rupture and breaking strength</i>	MS ISO 10545-4, <i>Ceramic tiles - Part 4: Determination of modulus of rupture and breaking strength</i>
ISO 10545-5, <i>Ceramic tiles - Part 5: Determination of impact resistance by measurement of coefficient of restitution</i>	MS ISO 10545-5, <i>Ceramic tiles - Part 5: Determination of impact resistance by measurement of coefficient of restitution</i>
ISO 10545-6, <i>Ceramic tiles - Part 6: Determination of resistance to deep abrasion for unglazed tiles</i>	MS ISO 10545-6, <i>Ceramic tiles - Part 6: Determination of resistance to deep abrasion for unglazed tiles</i>

National foreword (continued)

Referenced International Standards

Corresponding Malaysian Standards

ISO 10545-7, *Ceramic tiles - Part 7: Determination of resistance to surface abrasion for glazed tiles*

MS ISO 10545-7, *Ceramic tiles - Part 7: Determination of resistance to surface abrasion for glazed tiles*

ISO 10545-8, *Ceramic tiles - Part 8: Determination of linear thermal expansion*

MS ISO 10545-8, *Ceramic tiles - Part 8: Determination of linear thermal expansion*

ISO 10545-9, *Ceramic tiles - Part 9: Determination of resistance to thermal shock*

MS ISO 10545-9, *Ceramic tiles - Part 9: Determination of resistance to thermal shock*

ISO 10545-10, *Ceramic tiles - Part 10: Determination of moisture expansion*

MS ISO 10545-10, *Ceramic tiles - Part 10: Determination of moisture expansion*

ISO 10545-11, *Ceramic tiles - Part 11: Determination of crazing resistance for glazed tiles*

MS ISO 10545-11, *Ceramic tiles - Part 11: Determination of crazing resistance for glazed tiles*

ISO 10545-12, *Ceramic tiles - Part 12: Determination of frost resistance*

MS ISO 10545-12, *Ceramic tiles - Part 12: Determination of frost resistance*

ISO 10545-13, *Ceramic tiles - Part 13: Determination of chemical resistance*

MS ISO 10545-13, *Ceramic tiles - Part 13: Determination of chemical resistance*

ISO 10545-14, *Ceramic tiles - Part 14: Determination of resistance to stains*

MS ISO 10545-14, *Ceramic tiles - Part 14: Determination of resistance to stains*

ISO 10545-15, *Ceramic tiles - Part 15: Determination of lead and cadmium given off by glazed tiles*

MS ISO 10545-15, *Ceramic tiles - Part 15: Determination of lead and cadmium given off by glazed tiles*

ISO 10545-16, *Ceramic tiles - Part 16: Determination of small colour differences*

MS ISO 10545-16, *Ceramic tiles - Part 16: Determination of small colour differences*

Major modifications in this revision are as follows:

- a) additional of maximum value to the tolerance of ceramic tiles dimensional properties; and
- b) additional of back feet to ceramic tiles specification.

This Malaysian Standard cancels and replaces MS ISO 13006:2003, *Ceramic tiles - Definitions, classification, characteristics and marking*.

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

NOTE. IDT on the front cover indicates an identical standard i.e. a standard where the technical content, structure, and wording (or is an identical translation) of a Malaysian Standard is exactly the same as in an International Standard or is identical in technical content and structure although it may contain the minimal editorial changes specified in clause 4.2 of ISO/IEC Guide 21-1.

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 13006 was prepared by Technical Committee ISO/TC 189, *Ceramic tile*.

This second edition cancels and replaces the first edition (ISO 13006:1998), which has been technically revised.