PD ISO/TR 17870-2:2015

BSI Standards Publication

Ceramic tiles — Guidelines for installation

Part 2: Installation of thin ceramic wall and floor tiles and panels

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National foreword

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Part 2: Installation of thin ceramic wall and floor tiles and panels

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Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
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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 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 189, *Ceramic tile*.

ISO/TR 17870 consists of the following parts, under the general title *Ceramic tiles — Guidelines for installation*:

— *Part 1: Installation of ceramic wall and floor tiles*

— *Part 2: Installation of thin ceramic wall and floor tiles and panels*

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Introduction

There are currently International Standards available for

— ceramic tiles, and

— adhesives and grouts for tiles.

NOTE ISO test methods for thin ceramic tiles and panels, as well as ISO 13007-5 dealing with liquid-applied waterproofing membranes for use beneath ceramic tiling bonded with adhesives, are under preparation.

For these products to give satisfactory service, they need to be selected and installed competently, and they have to receive appropriate initial treatment, protection, and maintenance.

Some countries have published standards and/or guides that specify the design and installation of ceramic tiling. The purpose of ISO/TR 17870 is to foster good installation practices for thin ceramic wall and floor tiles and panels, internationally.

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Ceramic tiles — Guidelines for installation —

Part 2: Installation of thin ceramic wall and floor tiles and panels

1 Scope

This part of ISO/TR 17870 defines the quality of thin ceramic tiling and provides guidance for materials selection, installation, and use, to achieve required levels of quality and performance.

It considers aspects related to the specification and installation of the tiling project, in terms of:

— manufacture and distribution of the materials (thin ceramic tiles and panels, adhesives, grouts, etc.),

— specification of the thin tiling, and

— installation of the tiling (thin tile fixing operations).

It is applicable to internal and external thin ceramic floor and wall tiling, installed by adhesive methods.

NOTE The quality of thin ceramic tiling depends on the following general characteristics:

— regularity;

— durability;

— safety.

The durability of the thin tiling can depend on its use and management.

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 13006, *Ceramic tiles — Definitions, classification, characteristics and marking*

ISO 13007-1, *Ceramic tiles — Grouts and adhesives — Part 1: Terms, definitions and specifications for adhesives*

ISO 13007-3, *Ceramic tiles — Grouts and adhesives — Part 3: Terms, definitions and specifications for grouts*

ISO 13007-5[1)], *Ceramic tiles — Grouts and adhesives — Part 5: Liquid applied waterproofing membranes for use beneath ceramic tiling bonded with adhesives — Requirements, test methods, evaluation of conformity, classification and designation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given ISO 13006, ISO 13007-1, ISO 13007-3, ISO 13007-5, and the following apply.

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3.1 General

3.1.1
thin ceramic tile
ceramic tile with thickness ≤5,5 mm, surface area ≤3 600 cm^2, and no tile edge > 600 mm or a ceramic tile declared as a thin ceramic tile by its manufacturer or having properties meeting an international or national standard for thin ceramic tiles

3.1.2
thin ceramic large format tile
ceramic tile with thickness ≤5,5 mm, surface area >3 600 cm^2, and no tile edge >1 200 mm or a ceramic tile declared as a thin ceramic large format tile by its manufacturer or having properties meeting an international or national standard for thin ceramic large format tiles

3.1.3
thin ceramic panel
ceramic panel with thickness ≤5,5 mm, surface area >1 m^2, and any tile edge > 1 200 mm or a ceramic tile declared as a thin ceramic panel by its manufacturer or having properties meeting an international or national standard for thin ceramic panels

3.1.4
thin ceramic tiling
thin ceramic tiles and panels installed, together with its associated bedding and jointing

3.1.5
design (of thin ceramic tiling)
specification (of thin ceramic tiling)
selection of thin ceramic tiles and panels, backgrounds, fixing methods, and fixing and jointing materials as appropriate for the structure and intended use

3.1.6
installation (of thin ceramic tiling)
thin tile fixing
application of thin ceramic tiling in accordance with the specification

3.2 Components of thin ceramic tiling

3.2.1
background
any material system used as a base over which the thin ceramic tile or panel is to be fixed

3.2.2
filling out layer
separate application of material to achieve the required vertical flatness (walls)

EXAMPLE Plaster, render, proprietary tile backer boards.

3.2.3
fixing surface
plane rigid surface upon which the thin tile or panel is fixed

3.2.4
insulating layer
layer included to obtain sound or thermal insulation

3.2.5
intermediate joint
movement joint to divide large areas of tiling into smaller, approximately square areas

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3.2.6
levelling layer
layer applied to compensate for unevenness and differences in height of the base or to accommodate services (floors)

3.2.7
movement joint
joint in thin tiles or panels, backgrounds or substrates, designed to accommodate movement

Note 1 to entry: Types of movement joints: structural joint, perimeter joint, intermediate joint.

3.2.8
perimeter joint
movement joint to isolate the thin ceramic tiling from adjacent building elements

3.2.9
primer
fluid material, used separately or mixed with binder to form a slurry, applied as a thin layer to improve adhesion of the bedding to the background, or to isolate the bedding material from the background surface

3.2.10
separating layer
material which separates layers within the thin tiling system (floors)

3.2.11
structural joint
movement joint in thin ceramic tiling to correspond with structural movement joint in the background

3.2.12
tile bed
bedding
layer of specified materials in which the thin tile or panel is set and which bonds the thin tiles or panels to the background

3.2.13
tile joint
space between adjacent thin tiles or panels

3.2.14
waterproofing membrane
continuous layer of impervious material to resist the passage of water

3.3 Thin tiling techniques and operations

3.3.1
bonded method
floor tiling laid with a system where the bedding is bonded to the background

3.3.2
buttering method
adhesive applied to the back of the thin tile or panel, just before the tile or panel is placed

3.3.3
contact area
proportion of the thin tile or panel back and/or background support that is in contact with the bedding after the thin tile or panel has been fixed into position

3.3.4
direct bedding
thin tile or panel fixing directly onto a structural background

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