INTERNATIONAL STANDARD

ISO

29470

Thermal insulating products for building applications — Determination of the apparent density

Produits isolants thermiques destinés aux applications du bâtiment — Détermination de la masse volumique apparente
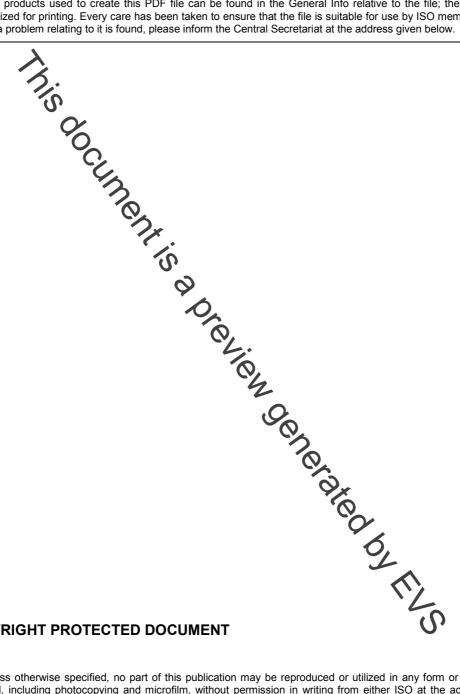
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Foreword

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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 29470 was prepared by Technical Committee ISO/TC 163, *Thermal performance and energy use in the built environment*, Subcommittee SC 1, *Test and measurement methods*.

Introduction

For this document, the conditions of approval within the Fast-Track procedure were not met, thus this document could not progress to the publication stage. ISO/TC 163/SC 1 decided per Resolution 205 in its Nanjing-meeting on 2008-04-15, that this document shall be forwarded modified to the FDIS-vote.

This International Standard includes the original EN 1602:1996 and EN 1602:1996/AC:1997 prepared by Technical Committee CEN/TC 88, *Thermal insulating materials and products*.

This International Standard is one of a series of documents specifying test methods, based on existing European Standards, that are being adopted by ISO. This "package" of standards includes the following group of interrelated documents.

ISO document	Respective EN standard
ISO 29465, *Thermal insulating products for building applications — Determination of length and width*	EN 822
ISO 29466, *Thermal insulating products for building applications — Determination of thickness*	EN 823
ISO 29467, *Thermal insulating products for building applications — Determination of squareness*	EN 824
ISO 29468, *Thermal insulating products for building applications — Determination of flatness*	EN 825
ISO 29469, *Thermal insulating products for building applications — Determination of compression behaviour*	EN 826
ISO 29470, *Thermal insulating products for building applications — Determination of the apparent density*	EN 1602
ISO 29471, *Thermal insulating products for building applications — Determination of dimensional stability under constant normal laboratory conditions (23 °C/50 % relative humidity)*	EN 1603
ISO 29472, *Thermal insulating products for building applications — Determination of dimensional stability under specified temperature and humidity conditions*	EN 1604
ISO 29764, *Thermal insulating products for building applications — Determination of deformation under specified compressive load and temperature conditions*	EN 1605
ISO 29765, *Thermal insulating products for building applications — Determination of tensile strength perpendicular to faces*	EN 1607
ISO 29766, *Thermal insulating products for building applications — Determination of tensile strength parallel to faces*	EN 1608
ISO 29767, *Thermal insulating products for building applications — Determination of short-term water absorption by partial immersion*	EN 1609
ISO 29768, *Thermal insulating products for building applications — Determination of linear dimensions of test specimens*	EN 12085

ISO 29769, *Thermal insulating products for building applications — Determination of behaviour under point load*　　EN 12430

ISO 29770, *Thermal insulating products for building applications — Determination of thickness for floating-floor insulating products*　　EN 12431

ISO 29771, *Thermal insulating materials for building applications — Determination of organic content*　　EN 13820

ISO 29803, *Thermal insulation products for building applications — Determination of the resistance to impact of external thermal insulation composite systems (ETICS)*　　EN 13497

ISO 29804, *Thermal insulation products for building applications — Determination of the tensile bond strength of the adhesive and of the base coat to the thermal insulation material*　　EN 13494

ISO 29805, *Thermal insulation products for building applications — Determination of the mechanical properties of glass fibre meshes*　　EN 13496

Thermal insulating products for building applications — Determination of the apparent density

1 Scope

This International Standard specifies the equipment and procedures for determining the apparent overall density and the apparent core density under reference conditions. It is applicable to full-size thermal insulating products and test specimens. This International Standard can also be applied to the individual layers of multi-layered products.

2 Normative references

The following referenced documents are indispensable for the application 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 29465, *Thermal insulating products for building applications — Determination of length and width*

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

ISO 29768, *Thermal insulating products for building applications — Determination of linear dimensions of test specimens*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
apparent overall density
ρ_a
mass per unit volume of a product, including all surface skins formed during production, but excluding any facings and/or coatings

3.2
apparent core density
ρ_c
mass per unit volume of the core of a product after all surface skins formed during production and all facings and/or coatings have been removed

4 Principle

The density is determined as the ratio of the mass and the volume of the specimen.

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