Thermal insulation products for buildings — In-situ formed loose fill cellulose (LFCI) products

Part 1: Specification for the products before installation

Wärmedämmstoffe für Gebäude — An der Verwendungsstelle hergestellter Wärmedämmstoff aus Zellulosefüllstoff (LFCI) — Teil 1: Prüfverfahren

Produits isolants thermiques destinés aux applications du bâtiment — Isolation thermique formée en place à base de cellulose (LFCI) — Partie 1: Spécification des produits en vrac avant la mise en oeuvre
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Wärmedämmstoffe für Gebäude - An der Verwendungsstelle hergestellter Wärmedämmstoff aus Zellulosefüllstoff (LFCI) - Teil 1: Spezifikation für die Produkte vor dem Einbau

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European Foreword

This document (EN 15101-1:2013+A1:2019) has been prepared by Technical Committee CEN/TC 88 “Thermal insulating materials and products”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2019, and conflicting national standards shall be withdrawn at the latest by October 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

For relationship with EU Regulation(s), see informative Annex ZA, which is an integral part of this document.

This document includes Amendment 1 approved by CEN on 01 January 2019.

This document supersedes EN 15101-1:2013.

The start and finish of text introduced or altered by amendment is indicated in the text by tags.

This European Standard consists of two parts which form a package. The first part is the harmonized part satisfying the mandate and is the basis for the CE marking covering the products, which are placed on the market. The second part, which is the non-harmonized part, covers the installation checks for the installed products.

This European Standard is one of a series for mineral wool, expanded clay, expanded perlite, exfoliated vermiculite, polyurethane/polyisocyanurate, cellulose, bound expanded polystyrene and expanded polystyrene in situ formed insulation products used in buildings, but this standard may be used in other areas where appropriate.

The reduction in energy used and emissions produced during the installed life of insulation products exceeds by far the energy used and emissions made during the production and disposal processes.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.
1 Scope

This European Standard specifies requirements for loose-fill cellulose insulation (LFCI) products for the thermal and/or sound insulation of buildings when installed into walls, floors, galleries, roofs and ceilings.

This European Standard is a specification for the loose-fill cellulose insulation (LFCI) products before installation.

This European Standard describes the product characteristics and includes procedures for testing, marking and labelling and the rules for evaluation of conformity.

Products covered by this European Standard may also be used in prefabricated thermal insulation systems and composite panels; the structural performance of systems incorporating these products is not covered.

Products with a declared thermal conductivity at 10 °C greater than 0,060 W/(m × K) or a declared thermal resistance lower than 0,25 m² × K/W are not covered by this European Standard.

This European Standard does not specify the required level of all properties to be achieved by a product to demonstrate fitness for purpose in a particular application. The required levels are to be found in local regulations or non-conflicting standards.

This European Standard does not cover factory made cellulose products placed on the market as bats, mats or boards intended to be used for the insulation of buildings or loose-fill cellulose products for the insulation of building equipment and industrial installations.

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.

EN 312, Particleboards - Specifications

EN 508-1, Roofing and cladding products from metal sheet - Specification for self-supporting of steel, aluminium or stainless steel sheet - Part 1: Steel

EN 520, Gypsum plasterboards — Definitions, requirements and test methods

EN 1609, Thermal insulating products for building applications - Determination of short term water absorption by partial immersion

EN 12086:2013, Thermal insulating products for building applications - Determination of water vapour transmission properties

EN 12667, Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance

EN 13172:2012, Thermal insulation products - Evaluation of conformity

EN 13238, Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates

EN 13501-1, Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests
3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

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

3.1.1 open blow applications
all applications except cavity applications

3.1.2 declared insulation thickness: “open blow” applications
installed insulation thickness minus the thickness loss according to the settlement class of the product

3.1.3 declared insulation thickness: cavity applications
identical with the thickness of the cavity

3.1.4 floor
horizontal division between two storeys, over a crawl space or a floor directly on the ground

3.1.5 frame construction
walls with wood or metal studs, sloping roof with insulation between and above rafters, as well as stud girders and internal and external insulation on solid masonry construction

3.1.6 settlement
decrease of installed insulation thickness in lofts or height in cavities and frame constructions either under vibration, humidity, cyclic conditions and time, expressed as a percentage of the initial installed insulation thickness (after compaction if required)