



**NSAI**  
Standards

Irish Standard  
I.S. EN 13469:2012

Thermal insulating products for building  
equipment and industrial installations -  
Determination of water vapour  
transmission properties of preformed  
pipe insulation

## I.S. EN 13469:2012

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

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SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces:*  
EN 13469:2001

<i>This document is based on:</i>	<i>Published:</i>
EN 13469:2012	24 October, 2012
EN 13469:2001	11 December, 2001

This document was published under the authority of the NSAI and comes into effect on:  
24 October, 2012

**ICS number:**  
91.100.60

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English Version

**Thermal insulating products for building equipment and industrial installations - Determination of water vapour transmission properties of preformed pipe insulation**

Produits isolants thermiques pour l'équipement du bâtiment et les installations industrielles - Détermination des propriétés de transmission de la vapeur d'eau des coquilles isolantes préformées

Wärmedämmstoffe für die Haustechnik und für betriebstechnische Anlagen - Bestimmung der Wasserdampfdurchlässigkeit von vorgeformten Rohrdämmstoffen

This European Standard was approved by CEN on 24 August 2012.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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## Foreword

This document (EN 13469:2012) 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 April 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

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

This document supersedes EN 13469:2001.

The following main technical changes have been implemented in this new edition of EN 13469:

- a) the content of Annex A "Correction for air pressure variations during test" has been included in the main part of the standard and the annex has been deleted;
- b) the document has been editorially updated.

This European Standard is one of a series of standards which specify test methods for determining dimensions and properties of thermal insulating materials and products. It supports a series of product standards for thermal insulating materials and products which derive from the Council Directive of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (Directive 89/106/EEC) through the consideration of the essential requirements.

This European Standard has been prepared for products used to insulate building equipment and industrial installations, but it may also be applied to products used in other areas.

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, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies the equipment and procedure for determining the water vapour transmission properties in the steady state under specified test conditions for test specimens of preformed pipe insulation. It is applicable to thermal insulating products.

It is intended to be used for homogeneous materials (see NOTE) and for products which may have integral skins or adhered facings of some different material.

NOTE A material is considered to be homogeneous in terms of mass distribution if its density is approximately the same throughout, i.e. if the measured density values are close to its mean density.

The water vapour transmission rate and permeance values are specific to the test specimen (i.e. the product) thickness tested. For homogeneous products, the water vapour permeability is a property of the material.

If the pipe insulation is cut from a flat product, then the water vapour transmission properties can be obtained from tests carried out on the flat product with similar properties in accordance with EN 12086.

## 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 12085, *Thermal insulating products for building applications — Determination of linear dimensions of test specimens*

EN 12086, *Thermal insulating products for building applications — Determination of water vapour transmission properties*

EN 13467, *Thermal insulating products for building equipment and industrial installations — Determination of dimensions, squareness and linearity of preformed pipe insulation*

## 3 Terms and definitions

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

### 3.1

#### **water vapour flow rate**

*G*

quantity of water vapour transmitted through the surface of the test specimen in unit time

### 3.2

#### **water vapour transmission rate**

*g*

quantity of water vapour transmitted through unit area in unit time under specified conditions of temperature, humidity and thickness

### 3.3

#### **water vapour permeance**

*W*

quotient of water vapour transmission rate of the test specimen and the water vapour pressure difference between the test specimen faces during the test

### 3.4

#### **water vapour resistance**

*Z*

inverse of water vapour permeance ( $1/W$ )

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