

Hygrothermal performance of building components and building elements — Determination of the resistance of external wall systems to driving rain under pulsating air pressure

The European Standard EN 12865:2001 has the status of a
British Standard

ICS 91.120.30

National foreword

This British Standard is the official English language version of EN 12865:2001.

The UK participation in its preparation was entrusted by Technical Committee B/540, Energy performance of materials, components and buildings, to Subcommittee B/540/1, European Standards for thermal insulation, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

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The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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This British Standard, having been prepared under the direction of the Sector Committee for Building and Civil Engineering, was published under the authority of the Standards Committee and comes into effect on 15 May 2001

Summary of pages

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English version

Hygrothermal performance of building components and building elements - Determination of the resistance of external wall systems to driving rain under pulsating air pressure

Performance hygrothermique des composants et parois de bâtiments - Détermination de la résistance à la pluie battante des systèmes de murs extérieurs sous pression d'air pulsatoire

Wärme- und feuchteschutztechnisches Verhalten von Bauteilen - Bestimmung des Widerstandes des Außenwandsystems gegen Schlagregen bei pulsierendem Luftdruck

This European Standard was approved by CEN on 29 December 2000.

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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 Management Centre has the same status as the official versions.

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 89 "Thermal performance of buildings and building components", the secretariat of which is held by SIS.

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 September 2001, and conflicting national standards shall be withdrawn at the latest by September 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This standard is one of a series of standards which specify test methods for the thermal and moisture related properties of buildings, building components, building products and building materials.

Annex A is informative.

Introduction

Driving rain is often the cause of building damage due to the penetration of wind driven rain into or through external wall elements. The amount of driving rain impinging on a local part of an external wall surface depends on the rainfall and wind speed occurring simultaneously, the exposure of the building and the architectural / structural details of the surface. National standards define areas with different classes of driving rain severity which may be used to determine the protection needed against driving rain.

Protection can be achieved by measures such as:

- a) architectural / structural design to reduce the amount of driving rain (e.g. roof overhangs);
- b) ventilated or unventilated air space behind cladding (any water penetrating the cladding flows down on the internal face of the cladding and is drained out at specified openings; an air flow in a ventilated air space due to stack effects accelerates the drying);
- c) rendering on external wall surfaces with appropriate properties to absorb or repel the water during driving rain and allow drying during the following drying period;
- d) proper detailing to prevent water ingress around openings;
- e) providing a defined water tightness of the wall element including existing joints so as to limit water penetration to an acceptable level.

This standard specifies a test method to determine the resistance of wall elements to driving rain, thus mainly covering measure e).