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Irish Standard
I.S. EN 16002:2010

Flexible sheets for waterproofing - Determination of the resistance to wind load of mechanically fastened flexible sheets for roof waterproofing

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16002

May 2010

ICS 91.100.50

English Version

Flexible sheets for waterproofing - Determination of the resistance to wind load of mechanically fastened flexible sheets for roof waterproofing

Feuilles souples d'étanchéité - Feuilles bitumineuses, en plastique et en caoutchouc destinées à assurer l'étanchéité des toitures - Détermination de la résistance à l'arrachement au vent

Abdichtungsbahnen - Bestimmung des Widerstandes gegen Windlast von mechanisch befestigten Dachabdichtungsbahnen

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Foreword

This document (EN 16002:2010) has been prepared by Technical Committee CEN/TC 254 “Flexible sheets for waterproofing”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by November 2010, and conflicting national standards shall be withdrawn at the latest by November 2010.

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Introduction

The test is performed on a standard test configuration, i.e. a load-bearing structure, a layer of insulation material and the mechanically fastened membrane(s).

For the determination of the performance of the mechanical fastening system (fastener and washer), with or without possible substrates, ETAG 006:2000, Annex D may be used. The suppliers of these mechanical fastening systems should provide the required information.

For the calculation of the performance of wind load resistance of the whole roof, see the relevant national and/or international standards.

The result of this standard is the resistance to wind load of the flexible sheet expressed as the characteristic load per fastener. Safety factors may be defined by national regulation and/or within European or national application documents.

In principle, the test apparatus may also be used to assess (partially) bonded flexible sheets, but some modifications and additional guidance are needed. This is the reason to limit the scope of this standard to mechanically fastened sheets only.

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1 Scope

This European Standard specifies a test method to determine the resistance to wind load of mechanically fastened flexible sheets for roof waterproofing.

The assessment is limited to the performance of the mechanically fastened flexible sheets only. The test method does not include the determination of the performance of the mechanical fastener and/or the combination of the mechanical fastener and the substrate.

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.

EN 10346:2009, *Continuously hot-dip coated steel flat products — Technical delivery conditions*

EN 13162, *Thermal insulation products for buildings — Factory made mineral wool (MW) products — Specification*

EN 13416, *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Rules for sampling*

EN 13707:2004+A2:2009, *Flexible sheets for waterproofing — Reinforced bitumen sheets for roof waterproofing — Definitions and characteristics*

EN 13956:2005, *Flexible sheet for waterproofing — Plastic and rubber sheets for roof waterproofing — Definitions and characteristics*

ETAG 006:2000, *Guideline for European Technical Approval systems of systems mechanically fastened flexible roof waterproofing membranes*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13707:2004+A2:2009 and EN 13956:2005 and the following apply.

3.1
fastener
object to fasten the flexible sheet to a structural deck

NOTE A fastener may be made of a washer, a metal sleeve and a screw or of a plastic washer with an integrated sleeve and a metal shank.

3.2
fastening system
assembly of components intended to secure a waterproofing system to the structural deck by means of point fasteners or linear fasteners

NOTE Whilst primarily intended to secure the covering against wind uplift forces, the system may contribute to securing intermediate layers such as thermal insulation, vapour control layers, etc.

3.3
jointing technique
sealing of at least two layers of flexible sheets for roof waterproofing

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