



BSI Standards Publication

Flexible sheets for waterproofing - Determination of thickness and mass per unit area

Part 2: Plastics and rubber sheets for roof waterproofing

National foreword

This British Standard is the UK implementation of EN 1849-2:2019. It supersedes BS EN 1849-2:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/546, Flexible sheets for waterproofing and water vapour control.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2019
Published by BSI Standards Limited 2019

ISBN 978 0 580 97068 9

ICS 91.100.50

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2019.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

EUROPEAN STANDARD

EN 1849-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2019

ICS 91.100.50

Supersedes EN 1849-2:2009

English Version

Flexible sheets for waterproofing - Determination of thickness and mass per unit area - Part 2: Plastics and rubber sheets for roof waterproofing

Feuilles souples d'étanchéité - Détermination de l'épaisseur et de la masse surfacique - Partie 2 : Feuilles d'étanchéité de toiture plastiques et élastomères

Abdichtungsbahnen - Bestimmung der Dicke und der flächenbezogenen Masse - Teil 2: Kunststoff- und Elastomerbahnen für Dachabdichtungen

This European Standard was approved by CEN on 22 April 2019.

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.

CEN members are the national standards bodies of 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents		Page
European foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Sampling	7
5	Determination of thickness	8
5.1	Principle	8
5.2	Apparatus	8
5.2.1	Mechanical measuring device	8
5.2.2	Optical measuring device	8
5.3	Test specimens	8
5.4	Procedure	9
5.4.1	Mechanical measurement	9
5.4.2	Optical measurement	10
5.5	Expression of results	10
6	Determination of mass per unit area	10
6.1	Principle	10
6.2	Apparatus	10
6.3	Test specimens	10
6.4	Procedure	10
6.5	Expression of results	10
7	Test report	10
Annex A (informative) Example of the cut cross-section of a fleece backed membrane		12

European foreword

This document (EN 1849-2:2019) has been prepared by Technical Committee CEN/TC 254 "Flexible sheets for waterproofing", the secretariat of which is held by NEN.

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 January 2020, and conflicting national standards shall be withdrawn at the latest by January 2020.

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 supersedes EN 1849-2:2009.

Compared with EN 1849-2:2009 the following changes have been made in EN 1849-2:2019:

- the "overall thickness" and "effective thickness" has been replaced by:
 - mechanical effective thickness (d_{effm});
 - optical effective thickness (d_{effo});
 - mechanical overall thickness (d_{m});
 - optical overall thickness (d_{o});
- Figure 1 and Figure 2 have been replaced by new Figure 1 a-d;
- Table 1 in 5.3 has been removed;
- Figure 3 has been updated;
- a new Figure 2 has been introduced in 5.2.1;
- Figure A.1 has been replaced by a new one.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

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

Introduction

This European Standard is intended for characterisation of plastic and rubber sheets as manufactured or supplied before use. This test method relates exclusively to products or to their components where appropriate, and not to waterproofing membrane systems composed of such products and installed in the works.

This test is intended to be used in conjunction with European Standard "Definition and Characteristics" for plastic and rubber sheets for roof waterproofing (EN 13956).

1 Scope

This document specifies methods for the determination of the thickness and mass per unit area of plastic and rubber sheets for roof waterproofing.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 13416, *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Rules for sampling*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

surface texture

textured pattern on one or both surfaces of the sheet together creating a difference between the effective and overall thickness not exceeding 0,15 mm

Note 1 to entry: See Figure 1 a) key 8.

3.2

surface profile (surface structure)

raised area on the surface of the sheet creating a difference between the effective and overall thickness exceeding 0,15 mm

Note 1 to entry: See Figure 1 c) key 9.

3.3

mechanical effective thickness (d_{effm})

thickness of the sheet providing the waterproofing measured with a mechanical measuring device

3.4

backing

layer of woven or non-woven fabric of synthetic or mineral fibres or other materials, fixed to the bottom of the sheet

Note 1 to entry: See Figure 1 b) key 7.

3.5

optical effective thickness (d_{effo})

thickness of the sheet providing the waterproofing measured with an optical measuring device