



**NSAI**  
Standards

Irish Standard  
I.S. EN 1847:2009

Flexible sheets for waterproofing -  
Plastics and rubber sheets for roof  
waterproofing - Methods for exposure to  
liquid chemicals, including water

I.S. EN 1847:2009

*Incorporating amendments/corrigenda issued since publication:*

This is a free 8 page sample. Access the full version online.

<i>This document replaces:</i> EN 1847:2001	<i>This document is based on:</i> EN 1847:2009 EN 1847:2001	<i>Published:</i> 9 December, 2009 4 May, 2001
This document was published under the authority of the NSAI and comes into effect on: 29 December, 2009		ICS number: 91.100.50
<b>NSAI</b> 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	<b>Sales:</b> T +353 1 857 6730 F +353 1 857 6729 W standards.ie
Údarás um Chaighdeáin Náisiúnta na hÉireann		

English Version

## Flexible sheets for waterproofing - Plastics and rubber sheets for roof waterproofing - Methods for exposure to liquid chemicals, including water

Feuilles souples d'étanchéité - Feuilles d'étanchéité de toiture plastiques et élastomères - Méthodes d'exposition aux produits chimiques liquides y compris l'eau

Abdichtungsbahnen - Kunststoff- und Elastomerbahnen für Dachabdichtungen - Bestimmung der Einwirkung von Flüssigchemikalien einschließlich Wasser

This European Standard was approved by CEN on 19 October 2009.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

<b>Contents</b>		Page
<b>Foreword</b>		<b>4</b>
<b>Introduction</b>		<b>5</b>
<b>1</b>	<b>Scope</b>	<b>6</b>
<b>2</b>	<b>Normative references</b>	<b>6</b>
<b>3</b>	<b>Terms and definitions</b>	<b>6</b>
<b>4</b>	<b>Principle</b>	<b>6</b>
<b>5</b>	<b>Apparatus</b>	<b>6</b>
<b>5.1</b>	<b>Container</b>	<b>6</b>
<b>5.2</b>	<b>Enclosure</b>	<b>6</b>
<b>5.3</b>	<b>Thermometer</b>	<b>6</b>
<b>5.4</b>	<b>Weighing bottle</b>	<b>7</b>
<b>5.5</b>	<b>Balance</b>	<b>7</b>
<b>5.6</b>	<b>Ventilated oven</b>	<b>7</b>
<b>6</b>	<b>Sampling</b>	<b>7</b>
<b>7</b>	<b>Preparation of test specimens</b>	<b>7</b>
<b>8</b>	<b>Procedure</b>	<b>7</b>
<b>8.1</b>	<b>Test liquids</b>	<b>7</b>
<b>8.2</b>	<b>Temperature</b>	<b>8</b>
<b>8.3</b>	<b>Exposure durations</b>	<b>8</b>
<b>8.4</b>	<b>Immersion procedure</b>	<b>8</b>
<b>8.4.1</b>	<b>Quantity of test liquid</b>	<b>8</b>
<b>8.4.2</b>	<b>Positioning of specimens</b>	<b>8</b>
<b>8.4.3</b>	<b>Rinsing and wiping</b>	<b>9</b>
<b>8.5</b>	<b>Determination of changes in mass</b>	<b>9</b>
<b>8.5.1</b>	<b>Test specimen</b>	<b>9</b>
<b>8.5.2</b>	<b>Initial value</b>	<b>9</b>
<b>8.5.3</b>	<b>Exposure</b>	<b>9</b>
<b>8.5.4</b>	<b>Measurement of mass</b>	<b>9</b>
<b>8.6</b>	<b>Determination of changes in appearance</b>	<b>10</b>
<b>8.6.1</b>	<b>Test specimen</b>	<b>10</b>
<b>8.6.2</b>	<b>Exposure</b>	<b>10</b>
<b>8.6.3</b>	<b>Procedure</b>	<b>10</b>
<b>8.7</b>	<b>Determination of changes in tensile properties</b>	<b>10</b>
<b>8.7.1</b>	<b>General</b>	<b>11</b>
<b>8.7.2</b>	<b>Test specimen</b>	<b>11</b>
<b>8.7.3</b>	<b>Initial value</b>	<b>11</b>
<b>8.7.4</b>	<b>Exposure</b>	<b>11</b>
<b>8.7.5</b>	<b>Follow up test</b>	<b>11</b>
<b>9</b>	<b>Expression of results</b>	<b>11</b>
<b>9.1</b>	<b>Changes in mass</b>	<b>11</b>
<b>9.1.1</b>	<b>Change in mass</b>	<b>11</b>
<b>9.1.2</b>	<b>Change in mass per unit area</b>	<b>12</b>
<b>9.1.3</b>	<b>Percentage change in mass</b>	<b>12</b>
<b>9.1.4</b>	<b>Mean value</b>	<b>12</b>
<b>9.2</b>	<b>Change in appearance</b>	<b>12</b>
<b>9.3</b>	<b>Changes in physical properties</b>	<b>12</b>
<b>9.3.1</b>	<b>Change in tensile properties (strength and elongation)</b>	<b>12</b>

<b>9.3.2</b>	<b>Percentage change of measurable physical property</b>	<b>13</b>
<b>9.3.3</b>	<b>Documentation of change in property</b>	<b>13</b>
<b>10</b>	<b>Test report</b>	<b>13</b>
<b>11</b>	<b>General comments</b>	<b>13</b>
<b>Annex A</b>	<b>(informative) Calibration of apparatus</b>	<b>15</b>
<b>A.1</b>	<b>Temperature calibration</b>	<b>15</b>
<b>A.2</b>	<b>Ventilation conditions</b>	<b>15</b>
	<b>Bibliography</b>	<b>16</b>

## Foreword

This document (EN 1847:2009) 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 June 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

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 1847:2001.

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

## Introduction

This European Standard is intended for characterisation and /or classification 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 EN 13956, *Flexible sheet for waterproofing — Plastic and rubber sheets for roof waterproofing — Definitions and characteristics*.

Only testing by immersion of the entire surface of the test specimen is considered.

The methods for determination of changes in properties are specified as follows:

- a) changes in mass immediately after immersion or after immersion and drying;
- b) changes in appearance immediately after immersion or after immersion and drying;
- c) changes in physical properties (changes of tensile properties) immediately after immersion or after immersion and drying.

Tests immediately after immersion are used when it is required to ascertain the state of the material while still acted upon by the liquid.

Tests after immersion and drying are used when it is required to ascertain the state of the material after the liquid, if it is volatile, has been eliminated.

## 1 Scope

This European Standard specifies a method of exposing test specimens of plastic and rubber sheets for roofing, free from all external restraint, to liquid chemicals (including water), and methods for determining the changes in properties resulting from such exposure.

## 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 1849-2, *Flexible sheets for waterproofing — Determination of thickness and mass per unit area — Part 2: Plastic and rubber sheets for roof waterproofing*

EN 12311-2, *Flexible sheets for waterproofing — Determination of tensile properties — Part 2: Plastic and rubber sheets for roof waterproofing*

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

EN ISO 175:2000, *Plastics — Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175:1999)*

## 3 Terms and definitions

For the purposes of this document no additional terms and definitions are required.

## 4 Principle

Complete immersion of the test specimens in a specified quantity of a test liquid for a specified time and at a specified temperature. Determination of the properties before and after immersion and, if applicable, after drying. In the latter case the determinations are made, if possible, one after the other on the same specimens.

## 5 Apparatus

### 5.1 Container

Beakers of suitable dimensions and fitted with lids (airtight, if necessary, and fitted with condensers in the case of volatile liquids or those which give off vapours).

### 5.2 Enclosure

Enclosure which is thermostatically controlled at the test temperature.

### 5.3 Thermometer

Thermometer of suitable range and accuracy.



This is a free preview. Purchase the entire publication at the link below:

## **I.S. EN 1847 : 2009 : EN : COMBINED PDF**

- 
- ⊙ Looking for additional Standards? Visit SAI Global Infostore
  - ⊙ Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
- 

Need to speak with a Customer Service Representative - Contact Us