



BSI Standards Publication

**Polymer modified  
bituminous thick coatings for  
waterproofing — Reduction of  
the thickness of the layer when  
fully dried**

**National foreword**

This British Standard is the UK implementation of EN 15819:2011.

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.

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EUROPEAN STANDARD

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English Version

## Polymer modified bituminous thick coatings for waterproofing - Reduction of the thickness of the layer when fully dried

Revêtements bitumineux épais modifiés aux polymères  
pour imperméabilisation - Réduction de l'épaisseur de la  
couche lorsqu'elle est totalement sèche

Kunststoffmodifizierte Bitumendickbeschichtungen zur  
Bauwerksabdichtung - Verringerung der Schichtdicke nach  
dem Austrocknen

This European Standard was approved by CEN on 13 February 2011.

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**Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

Page

Foreword.....	3
1 Scope .....	4
2 Normative references .....	4
3 Terms and definitions .....	4
4 Principle.....	4
5 Apparatus .....	4
6 Test specimens .....	4
7 Preparation .....	5
8 Procedure .....	5
8.1 Test conditions .....	5
8.2 Procedure .....	5
9 Expression of results and precision.....	5
9.1 Expression of results .....	5
9.2 Precision.....	5
10 Test report .....	6

## Foreword

This document (EN 15819:2011) has been prepared by Technical Committee CEN/TC 361 "Project Committee — Polymer modified bituminous thick coatings for waterproofing — Definitions/requirements and test methods", 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of an identical text or by endorsement, at the latest by September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.

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## 1 Scope

This European Standard specifies a procedure for determining the reduction in the thickness of polymer modified bituminous thick coatings due to drying for waterproofing.

## 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 1426, *Bitumen and bituminous binders — Determination of needle penetration*

FprEN 15814:2011, *Polymer modified bituminous thick coatings for waterproofing — Definitions and requirements*

ISO 554, *Standard atmospheres for conditioning and/or testing — Specifications*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in FprEN 15814:2011 apply.

## 4 Principle

The reduction of thickness of polymer modified bitumen emulsion is the difference between measuring of wet and dry layer thickness under special conditions on a coated surface.

## 5 Apparatus

**5.1 Stiff metal or glass plate** with the following minimum dimensions: 25 cm × 25 cm.

**5.2 Plastic or metal frame** with a height of 5 mm and inside dimensions of 15 cm × 20 cm.

**5.3 Palette knife**, smoothing trowel, mixing equipment.

**5.4 Instrument for measuring the thickness of the wet layer**, e.g. penetrometer as described in EN 1426.

**5.5 Suitable instrument for measuring the thickness of the dry layer**, e.g. sliding calliper or inductive measuring instrument.

## 6 Test specimens

Test specimen with dimensions of 200 mm × 150 mm × 5 mm.

## 7 Preparation

The ready-to-use bitumen coating shall be prepared in accordance with the manufacturer's instructions. In case of a two component emulsion, mix the bitumen emulsion (component A) and cement (component B), using a low-speed mixer setting to avoid entrapping any air.

Fasten the frame to the degreased metal or glass plate and place it on a horizontal surface. Fill the frame up to the top with the mixed coating, taking care not to entrap any air. Strike off the top of the coating with the smoothing trowel so that it is level with the top of the frame.

## 8 Procedure

### 8.1 Test conditions

The test shall be carried out at a temperature of  $(23 \pm 2)$  °C.

### 8.2 Procedure

Determine the thickness of the wet layer immediately after preparation of the specimens.

NOTE A penetrometer as described in EN 1426 is suitable for this purpose.

The frame shall remain in place to prevent the fresh specimen spreading outwards. Measure the wet thickness to 0,1 mm at five equally spaced points in each third of the specimen but at a distance of not less than around 1 cm from the edges. Clean the test instrument (e.g. the point of the needle of the penetrometer) prior to each measurement to avoid measuring errors.

The thickness of the wet layer ( $d_{na}$ ) is the mean value of the 15 results, rounded to 0,1 mm.

After the thickness of the wet layer has been measured, carefully remove the frame and store the specimen in a horizontal position in a normal climate of  $(23 \pm 2)$  °C and a relative humidity of  $(50 \pm 5)$  % in accordance with ISO 554 for 28 days ( $d_{tr}$ ).

$$\Delta_D = (d_{na} - d_{tr} / d_{na}) \times 100 \%$$

After conditioning, measure the dry thickness of the layer.

The thickness of the dry layer shall be measured using vernier callipers permitting a reading to 0,1 mm. 12 readings shall be taken. The highest and lowest values shall be ignored and the mean value calculated from the remaining 10 values.

## 9 Expression of results and precision

### 9.1 Expression of results

The test result is the reduction in the thickness of the layer ( $\Delta_D$ ) in relation to the thickness of the wet layer, expressed as a percentage.

### 9.2 Precision

Precision data are currently not available.

## 10 Test report

The test report shall include at least the following information:

- a) all details necessary to identify the product tested;
- b) a reference to this European Standard (i.e. EN 15819) and any deviation from it;
- c) details of preparation of test specimens in accordance with Clause 7;
- d) test procedure including:
  - specimen thickness (wet/dry and reduction in %);
  - deviation of test conditions;
- e) the test results in accordance with Clause 9;
- f) the dates of the tests.





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## BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

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