Flexible sheets for waterproofing - Determination of resistance to tearing (nail shank) - Part 1: Bitumen sheets for roof waterproofing

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12310-1:2025 sisaldab Euroopa standardi EN 12310-1:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 12310-1:2025 consists of the English text of the European standard EN 12310-1:2025.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 25.06.2025.	Date of Availability of the European standard is 25.06.2025.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English Version

Flexible sheets for waterproofing - Determination of resistance to tearing (nail shank) - Part 1: Bitumen sheets for roof waterproofing

Feuilles souples d'étanchéité - Détermination de la résistance à la déchirure (au clou) - Partie 1: Feuilles d'étanchéité de toiture bitumineuses

Abdichtungsbahnen - Bestimmung des Weiterreißwiderstandes (Nagelschaft) - Teil 1: Bitumenbahnen für Dachabdichtungen

This European Standard was approved by CEN on 14 April 2025.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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

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European foreword

This document (EN 12310-1:2025) 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 November 2025, and conflicting national standards shall be withdrawn at the latest by November 2025.

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 12310-1:1999.

EN 12310-1:2025 includes the following significant technical changes with respect to EN 12310-1:1999:

— the normative reference has been updated;

— Figure 1 has been amended;

— the “or” has been deleted in Clause 7, 1st paragraph, last sentence.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This document is intended for the characterization of bitumen sheets as manufactured or supplied before use. The 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 Standards on product characteristics on reinforced and unreinforced bitumen sheets for roof waterproofing.

1 Scope

This document specifies a method for the determination of the resistance tearing (nail shank) of bitumen sheets for roofing.

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*

EN ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system (ISO 7500-1)*

3 Terms and definitions

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

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

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

3.1
resistance to tearing (nail shank)
tensile force required to tear a test specimen held by a nail shank

4 Principle

The test measures the force required to tear a test specimen pierced by a nail shank by a force applied to the product at right angles to the shank axis.

5 Apparatus

5.1 Tensile testing machine

Tensile testing machine equipped with a continuous recording of force and corresponding distance, shall be capable of maintaining a uniform rate of grip separation as specified below. The tensile testing machine shall have a sufficient loading capacity (at least 2 000 N) and a sufficient distance of grip separation, with a grip separation speed of (100 ± 10) mm per minute. The width of grip shall not be less than 100 mm.

The tensile testing machine shall be equipped with grips of a type which maintain or increase the gripping pressure as a function of the increase of the force applied to the specimen. The test specimen shall be held so that it does not slip in the grips more than 2 mm. To prevent slippage from the grips exceeding 2 mm cooled grips may be permitted. The grip system shall not provoke an early failure of the test specimen on or at the grips.

The force measuring system shall meet at least class 2 in accordance with EN ISO 7500-1 (i.e. ± 2 %).