Plastics piping systems - Polyethylene (PE), crosslinked polyethylene (PE-X) and unplasticized polyamide (PA-U) pipes - Test method for the resistance to internal pressure after application of squeeze-off

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12106:2025 sisaldab Euroopa standardi EN 12106:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 12106:2025 consists of the English text of the European standard EN 12106:2025.
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 07.05.2025.	Date of Availability of the European standard is 07.05.2025.
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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English Version

Plastics piping systems - Polyethylene (PE), crosslinked polyethylene (PE-X) and unplasticized polyamide (PA-U) pipes - Test method for the resistance to internal pressure after application of squeeze-off

Systèmes de canalisations en plastique - Tubes en polyéthylène (PE), polyéthylène réticulé (PE-X) et polyamide non plastifié (PA-U) - Méthode d'essai de résistance à la pression interne après application de l'écrasement

Kunststoff-Rohrleitungssysteme - Rohre aus Polyethylen (PE), vernetztem Polyethylen (PE-X) und weichmacherfreiem Polyamid (PA-U) - Bestimmung der Widerstandsfähigkeit gegen Innendruck nach Abquetschen

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.

CEN members are the national standards bodies of 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 United Kingdom.

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

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Contents

Page

European foreword

This document (EN 12106:2025) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems”, 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 12106:1997.

EN 12106:2025 includes the following significant technical changes with respect to EN 12106:1997:

— PA-U, PE-X and PE 100-RC materials with test parameters have been added;

— ISO 1167-1 and ISO 1167-2 are referenced for the pipe hydrostatic pressure test in place of EN 921 which has been withdrawn.

This document is one of a series of standards on test methods which support System Standards for plastics piping systems and ducting systems.

The material-dependent parameters and/or performance requirements are incorporated in the System Standard(s) concerned.

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.

1 Scope

This document specifies a method to determine the resistance to internal pressure of polyethylene (PE), crosslinked polyethylene (PE-X) and unplasticized (PA-U) pipes to verify the condition of the pipe after being subjected to a squeeze-off procedure.

The equipment and procedure used to prepare the test samples and test parameters are given in this document, i.e.:

a) the diameter and series of the pipe to be tested (see 6.1);

b) the number of test pieces (see 6.2);

c) the parameters for the hydrostatic strength tests (see 7.6).

NOTE 1 Further information on the squeeze-off procedure is given in EN 12007-2 and ISO/TS 10839 for polyethylene, and CEN/TS 12007-6 for unplasticized polyamide.

NOTE 2 The squeeze-off procedure is specified to limit gas flow to allow maintenance, repair or to make network connections. Squeeze-off is used in an emergency for pipes carrying other media.

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 ISO 1167-1, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 1: General method (ISO 1167-1)*

EN ISO 1167-2, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 2: Preparation of pipe test pieces (ISO 1167-2)*

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 Terms related to geometry

3.1.1
nominal size
DN
numerical designation of the size of a component, which is a convenient round number approximately equal to the manufacturing dimension

Note 1 to entry: It is expressed in millimetres (mm).

3.1.2
nominal size
DN/OD
nominal size (3.1.1), related to the outside diameter