

Plastic piping systems - Mechanical joints between fittings and pressure pipes - Test method for leaktightness under negative pressure (ISO 3459:2015)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 3459:2015 sisaldab Euroopa standardi EN ISO 3459:2015 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 3459:2015 consists of the English text of the European standard EN ISO 3459:2015.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.03.2015.	Date of Availability of the European standard is 04.03.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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

ICS 23.040.60

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

Aru 10, 10317 Tallinn, Eesti; koduleht [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto:info@evs.ee)

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Aru 10, 10317 Tallinn, Estonia; homepage [www.evs.ee](http://www.evs.ee); phone +372 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

English Version

Plastic piping systems - Mechanical joints between fittings and pressure pipes - Test method for leaktightness under negative pressure (ISO 3459:2015)

Systèmes de canalisations en matières plastiques -  
Assemblages mécaniques entre raccords et tubes sous  
pression - Méthode d'essai pour l'étanchéité sous pression  
négative (ISO 3459:2015)

Kunststoff-Rohrleitungssysteme - Mechanische  
Verbindungen zwischen Fittings und Druckrohren - Prüfung  
der Dichtheit bei Unterdruck (ISO 3459:2015)

This European Standard was approved by CEN on 12 December 2014.

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, 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: Avenue Marnix 17, B-1000 Brussels

## Foreword

This document (EN ISO 3459:2015) has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" in collaboration 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 September 2015, and conflicting national standards shall be withdrawn at the latest by September 2015.

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 911:1995.

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

### Endorsement notice

The text of ISO 3459:2015 has been approved by CEN as EN ISO 3459:2015 without any modification.

<b>Contents</b>		<b>Page</b>
<b>Foreword</b> .....		<b>iv</b>
<b>1</b>	<b>Scope</b> .....	<b>1</b>
<b>2</b>	<b>Principle</b> .....	<b>1</b>
<b>3</b>	<b>Test parameters and requirements</b> .....	<b>1</b>
<b>4</b>	<b>Apparatus</b> .....	<b>1</b>
4.1	Apparatus for procedure A.....	1
4.2	Apparatus for procedure B.....	2
<b>5</b>	<b>Test pieces</b> .....	<b>3</b>
<b>6</b>	<b>Procedure A: Pressure outside</b> .....	<b>4</b>
<b>7</b>	<b>Procedure B: Vacuum inside</b> .....	<b>4</b>
<b>8</b>	<b>Test report</b> .....	<b>4</b>
<b>Annex A (normative) Test parameters</b> .....		<b>6</b>

# Plastic piping systems — Mechanical joints between fittings and pressure pipes — Test method for leaktightness under negative pressure

**WARNING** — Persons using this document should be familiar with normal laboratory practice, if applicable. The use of this International Standard may involve hazardous materials, operations, and equipment. This International Standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

## 1 Scope

This International Standard specifies two methods of testing for checking the leaktightness of assembled joints between mechanical fittings and plastic pressure pipes up to and including 63 mm. The test applies regardless of the design and material of the fitting used for jointing plastics pipe.

This test method is not applicable to fusion-welded joints.

## 2 Principle

Checking of the leaktightness of an assembled joint when submitted to external pressure greater than the pressure within the pipe.

For measurements where the external hydraulic pressure is greater than the atmospheric pressure within the pipe, procedure A shall be used.

For measurements with vacuum inside the pipe segment and an atmospheric pressure outside the pipe, procedure B shall be used.

## 3 Test parameters and requirements

The test parameters of the standard which refers to this test standard shall be used and the requirements shall be fulfilled. If one or more parameters are not given in the referring International Standard, the ones given in [Annex A](#) shall apply.

The following test parameters should be given by the standard which refers to this test standard:

- a) test medium;
- b) test pressure (bar or MPa);
- c) test duration (h);
- d) test temperature (°C);
- e) free length (mm).

## 4 Apparatus

### 4.1 Apparatus for procedure A

**4.1.1** A suitable apparatus for procedure A is shown in [Figure 1](#).