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

Systèmes de canalisations en matières plastiques — Assemblages mécaniques entre raccords et tubes sous pression — Méthode d'essai pour l'étanchéité sous pression négative



This document is a preview generated by EUS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	iv
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Principle.....	1
5 Test parameters and requirements.....	1
6 Apparatus.....	2
6.1 Apparatus for Procedure A.....	2
6.2 Apparatus for Procedure B.....	3
7 Test pieces.....	4
8 Procedure A: Pressure outside.....	4
9 Procedure B: Vacuum inside.....	5
10 Test report.....	5
Annex A (normative) Test parameters.....	6

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 155, *Plastics piping systems and ducting systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 3459:2015), which has been technically revised.

The main changes are as follows:

- references to diameters >63 mm have been deleted;
- a change in vacuum pressure that can be considered to be leaktight has been introduced.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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 document can involve hazardous materials, operations and equipment. This document 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 document to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This document specifies two methods of testing for checking the leaktightness of assembled joints between mechanical fittings and plastic pressure pipes with diameters 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 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological 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/>

4 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 a vacuum inside the pipe segment and an atmospheric pressure outside the pipe, procedure B shall be used.

5 Test parameters and requirements

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

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

- a) test medium;