

STN	Fľaše na plyn Kompatibilita fľašových a ventilových materiálov s plynovým obsahom Časť 5: Skúšobné metódy na hodnotenie plastových vložiek (ISO 11114-5: 2022)	STN EN ISO 11114-5 07 8609
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Gas cylinders - Compatibility of cylinder and valve materials with gas contents - Part 5: Test methods for evaluating plastic liners (ISO 11114-5:2022)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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Gas cylinders - Compatibility of cylinder and valve materials with gas contents - Part 5: Test methods for evaluating plastic liners (ISO 11114-5:2022)

Bouteilles à gaz - Compatibilité des matériaux des bouteilles et des robinets avec les contenus gazeux - Partie 5: Méthodes d'essai pour l'évaluation des liners en plastique (ISO 11114-5:2022)

Gasflaschen - Verträglichkeit von Werkstoffen für Gasflaschen und Ventile mit den in Berührung kommenden Gasen - Teil 5: Prüfverfahren zur Bewertung der Kunststoffinnenbehälter (ISO 11114-5:2022)

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EN ISO 11114-5:2022 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 11114-5:2022) has been prepared by Technical Committee ISO/TC 58 "Gas cylinders" in collaboration with Technical Committee CEN/TC 23 "Transportable gas cylinders" the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by July 2022, and conflicting national standards shall be withdrawn at the latest by July 2022.

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INTERNATIONAL STANDARD

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Gas cylinders — Compatibility of cylinder and valve materials with gas contents —

Part 5: Test methods for evaluating plastic liners

*Bouteilles à gaz — Compatibilité des matériaux des bouteilles et des
robinets avec les contenus gazeux —*

Partie 5: Méthodes d'essai pour l'évaluation des liners en plastique



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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General requirements	2
5 Tests to be performed on specimens	2
5.1 Permeation test.....	2
5.1.1 Disc samples.....	2
5.1.2 Test bench and set-up.....	3
5.1.3 Procedure.....	5
5.1.4 Calculation of the permeability coefficient.....	6
5.1.5 Recording and interpretation of test results.....	6
5.2 Swelling/blistering test.....	7
5.2.1 Disc samples.....	7
5.2.2 Recording and interpretation of tests results.....	7
5.3 Ageing test.....	8
5.3.1 Samples.....	8
5.3.2 Procedure.....	8
5.3.3 Recording and interpretation of the results.....	8
6 Tests to be performed on cylinders	9
6.1 Liner collapse due to internal pressure in the cylinder being below atmospheric pressure.....	9
6.1.1 General.....	9
6.1.2 Procedure.....	9
6.1.3 Evaluation parameters.....	9
6.2 Permeability test.....	9
6.2.1 General.....	9
6.2.2 Procedure.....	9
6.2.3 Evaluation parameters.....	10
6.3 Liner collapse and blistering test.....	10
6.3.1 General.....	10
6.3.2 Procedure.....	10
6.3.3 Evaluation parameters.....	10
7 Rejection and rendering cylinders used for testing unserviceable	12
8 Test report	12
Bibliography	14

ISO 11114-5:2022(E)

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).

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This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 23, *Transportable gas cylinders*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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Introduction

Non-metallic materials are used for the manufacturing of liners of some composite gas cylinders and therefore are in contact with gas contents.

The compatibility of plastic liners with gas cylinder contents is a key parameter for the manufacturing of composite gas cylinders with plastic liners. Therefore, it is necessary to clarify such compatibility and to give test procedures and evaluation parameters.

This document provides some testing methodologies to evaluate suitability of plastic materials concerning the risks identified in ISO 11114-2. Furthermore, this document is intended to be used together with the design standard (e.g. ISO 11515, EN 12245) which gives the requirements for certain tests, as well as the criteria, while this document describes the test procedure.

Gas cylinders — Compatibility of cylinder and valve materials with gas contents —

Part 5: Test methods for evaluating plastic liners

1 Scope

This document specifies some gas compatibility test methods to evaluate plastic materials suitable for use in the manufacture of composite gas cylinder liners. It is also applicable to the evaluation of the suitability of plastic matrix materials used for Type 5 cylinders.

Some fluids like water, used for cylinders testing, can react positively or negatively when in contact with plastic liners. This compatibility issue is not covered by this document.

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.

ISO 178, *Plastics — Determination of flexural properties*

ISO 179-2, *Plastics — Determination of Charpy impact properties — Part 2: Instrumented impact test*

ISO 527 (all parts), *Plastics — Determination of tensile properties*

ISO 3167, *Plastics — Multipurpose test specimens*

ISO 8256, *Plastics — Determination of tensile-impact strength*

ISO 10286, *Gas cylinders — Vocabulary*

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