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NSAI Standards

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I.S. EN ISO 14389:2014

Textiles - Determination of the phthalate content - Tetrahydrofuran method (ISO 14389:2014)

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NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

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Correction Notice

Reference: **EN ISO 14389:2014**

Title: Textiles - Determination of the phthalate content - Tetrahydrofuran method (ISO 14389:2014)

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please include the following minor editorial correction(s) in the document related to:

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- ☒ English
- ☒ French
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- ☐ PQ/UQ
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- ☐ UAP
- ☐ TC Approval
- ☐ 2nd TC Approval
- ☐ Publication
- ☒ Parallel Publication

It has been brought to our attention that this document, issued on 2014-06-04, requires modification.

The superseding note has been added to the title pages.

Forewords have been updated accordingly.

Please find enclosed the updated English and French version.

We apologise for any inconvenience this may cause.

DEL/FO004 (April 2013)

Avenue Marnix, 17 • B-1000 Bruxelles
Tel : +32 2 550 08 11 • Fax : +32 2 550 08 19

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 14389

June 2014

ICS 59.060.01

Supersedes EN 15777:2009

English Version

Textiles - Determination of the phthalate content - Tetrahydrofuran method (ISO 14389:2014)

Textiles - Détermination de la teneur en phtalates - Méthode au tétrahydrofurane (ISO 14389:2014)

Textilien - Bestimmung des Phthalatanteils - Tetrahydrofuran-Verfahren (ISO 14389:2014)

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Foreword

This document (EN ISO 14389:2014) has been prepared by Technical Committee ISO/TC 38 "Textiles" in collaboration with Technical Committee CEN/TC 248 “Textiles and textile products” 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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.

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Endorsement notice

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INTERNATIONAL STANDARD

ISO 14389

First edition
2014-05-01

Textiles — Determination of the phthalate content — Tetrahydrofuran method

Textiles — Détermination de la teneur en phtalates — Méthode au tétrahydrofurane

Reference number
ISO 14389:2014(E)

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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. www.iso.org/directives

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The committee responsible for this document is ISO/TC 38, *Textiles*.

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Introduction

This International Standard covers a test method for the determination of some phthalates in textile articles.

Phthalates are commonly used as plasticizers in polymers. Phthalates are an issue for textile manufacturers and retailers due to their use within motifs, coated fabrics, plastisol prints, buttons, etc.

Phthalates are controversial because high doses of many phthalates have shown hormonal activity in rodent studies. Studies on rodents involving large amounts of phthalates have shown damage to the liver, the kidneys, the lungs, and the developing testes.

Due to their potential effect as endocrine disruptors, some of the listed phthalates are toxic in reproduction. The listed phthalates are based on those which have been restricted in some regulations (e.g. in the European Union).

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Textiles — Determination of the phthalate content — Tetrahydrofuran method

WARNING — This International Standard calls for the use of substances and/or procedures that might be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage. It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced operators.

1 Scope

This International Standard specifies a method of determining phthalates in textiles with gas chromatography–mass spectrometry (GC-MS) with mass selective detector.

This International Standard is applicable to textile products where there is a risk of the presence of some phthalates.

2 Terms and definitions

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

2.1
plasticized or softened material
plastic material that is treated with chemicals to make it more flexible

Note 1 to entry: For this specific International Standard, the chemicals are phthalates.

EXAMPLE Examples of plastic material: coating, pigment print binder, etc.

2.2
overall treated textile
textile with a continuous finish, coating or print

2.3
locally treated textile
textile with a discontinuous finish, coating or print

2.4
representative specimen
specimen obtained by mixing pieces of all the different treated parts and colours

3 Principle

The phthalates are extracted from textile specimen by ultrasonic generator with tetrahydrofuran. As the plastic polymer is partially or completed dissolved, the phthalate extraction is followed by the precipitation of the dissolved polymer using the appropriate solvent (acetonitrile, *n*-hexane, etc.). After centrifugation and dilution of the extract to volume, gas chromatography–mass spectrometry (GC-MS) is used to identify individual phthalates in the specimen and quantify them by using an internal standard (IS).

4 Reagents

Unless otherwise specified, use only reagents of recognized analytical grade.

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