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Textiles - Test method for phthalates

I.S. EN 15777:2009

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English Version

Textiles - Test method for phthalates

Textiles - Méthodes d'essai des phtalates

Textilien - Prüfverfahren für Phthalate

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Contents

Page

Foreword.....	3
Introduction	4
1 Scope	5
2 Terms and definitions	5
3 Preparation of the test specimens	5
4 Apparatus and reagents.....	5
4.1 Apparatus	5
4.2 Reagents (analytical grade)	6
5 Test procedure	6
5.1 Principle	6
5.2 Reagent (standard solutions).....	6
5.3 Extraction of phthalates	7
5.4 Calculation of results	7
6 Test report	8
Annex A (normative) Calculations.....	9
A.1 Overall treated.....	9
A.2 Locally treated.....	10
Annex B (informative) Suitable Gas Chromatography - Mass Spectrometry (GC-MS) apparatus, method and precision data for determination of phthalate plasticizers [3].....	11
Bibliography	13

Foreword

This document (EN 15777:2009) has been prepared by Technical Committee CEN/TC 248 “Textile 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of an identical text or by endorsement, at the latest by February 2010, and conflicting national standards shall be withdrawn at the latest by February 2010.

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Introduction

This European Standard covers a test method for determination of phthalates in textile articles.

Phthalates are commonly used as plasticizers in polymers. Toxicological concern has arisen due to their potential effect as endocrine disruptors and some of the listed phthalates are toxic in reproduction. The level of media publicity will ensure that their use will continue to be of concern to consumers.

Phthalates are an issue for textile manufacturers and retailers due to their use within motifs, coated fabrics, plastisol prints, buttons, etc. There are textile articles that have to comply with the Directive 2005/84/EC [1] and also articles that fall outside the scope of this legislation, that could be covered by the General Products Safety Directive (2001/95/EC) [2].

WARNING — Persons using this European Standard should be familiar with normal laboratory practice. This European Standard does not claim to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

This European Standard calls for the use substances and/or procedures that may be injurious to health if appropriate precautions are not observed. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

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.

IMPORTANT — It is absolutely essential that tests conducted according to this European Standard be carried out by suitably trained staff.

1 Scope

This standard specifies a test method for taking representative specimens, extraction of phthalates from the material and determination of phthalates by gas chromatography – mass spectrometry.

This standard applies to textiles articles, where there is a possibility of the presence of some phthalates.

2 Terms and definitions

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

2.1

blank

application of the method without test specimen

2.2

plasticized or softened materials

plastic material (coating, pigment print binder, etc) that is treated with chemicals (for this specific standard they are phthalates) to make it more flexible

2.3

overall treated textiles

textiles with a continuous finish, coating or print

2.4

locally treated textiles

textile with a discontinuous finish, coating or print

2.5

representative specimen

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

3 Preparation of the test specimens

Remove the untreated mass of the specimen if possible (see Annex A). If the untreated mass cannot be removed, see 5.4.

Use a scalpel or other appropriate cutting tool to cut two representative specimens into small pieces.

4 Apparatus and reagents

4.1 Apparatus

4.1.1 Balance (resolution of 1 mg).

4.1.2 150 ml flask.

4.1.3 Soxhlet extractor with siphon cup of approximately 20 ml.

4.1.4 Soxhlet cellulose thimble, approximately 15 mm in diameter and 50 mm height.

4.1.5 Water-cooled condenser.

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