

Test method - Determination of thermal resistance of filled textile articles and similar items using small guarded hotplate apparatus

## EESTI STANDARDI EESSÕNA

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EUROPEAN STANDARD

EN 17667

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

## Test method - Determination of thermal resistance of filled textile articles and similar items using small guarded hotplate apparatus

Méthode d'essai - Détermination de la résistance thermique d'articles textiles garnis et de produits similaires au moyen d'un appareillage à petite plaque chaude gardée

Prüfverfahren - Bestimmung des Wärmedurchgangswiderstands von gefüllten textilen Artikeln und ähnlichen Gegenständen unter Verwendung einer kleinen Guarded-Hotplate-Vorrichtung

This European Standard was approved by CEN on 27 April 2022.

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## European foreword

This document (EN 17667:2022) has been prepared by 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of an identical text or by endorsement, at the latest by December 2022, and conflicting national standards shall be withdrawn at the latest by December 2022.

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## Introduction

This test method has been developed to provide a simple method of determining the thermal resistance of filled textile products and similar articles using a small guarded hotplate apparatus. Other methods such as ISO 5085-1 and EN ISO 11092 may have limitations on the range of their measurement capability and/or require the use of complex apparatus. The apparatus used in this method is broadly comparable with that specified in ISO 5085-1 but with a number of differences which are intended to provide a more reliable test result. It is based on a test method British Standard BS 8510:2009, which has proven successful in the United Kingdom over a period of more than 10 years.

This test method measures thermal resistance in a similar manner to EN ISO 11092 when using  $R_{ct}$  mode but is a simplified version of the test method. Limited trials in the development of this test method indicate that it has a good correlation with other test methods in use including ISO 5085-1 in single plate mode and EN ISO 11092.

## 1 Scope

This method of test specifies a test method for determining the thermal resistance of textile articles which may be filled, e.g. padded coats and jackets, child sleep bags, cot duvets, etc., or textiles articles with a thermal resistance of up to 0,5 m<sup>2</sup>K/W (5,0 tog) and/or which do not have uniform thickness.

The test method is applicable to products with a thermal resistance within the range 0,025 m<sup>2</sup>K/W (0,25 tog) to approximately 0,5 m<sup>2</sup>K/W (5,0 tog) but is limited only by the ability of the test apparatus to cope with the thickness of the test sample.

## 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.

EN ISO 139, *Textiles - Standard atmospheres for conditioning and testing (ISO 139)*

ISO 8302, *Thermal insulation — Determination of steady-state thermal resistance and related properties — Guarded hot plate apparatus*

## 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

### 3.1

#### **textile article**

any textile product formed of a single layer of textile or multiple layers of textile material, with or without a filling material (textile or non-textile) present

### 3.2

#### **children's sleep bag**

bedding item consisting of a full length fabric bag, which may be lined or filled, with a neck opening and armholes, designed to contain a child which may be used in conjunction with nightwear

[SOURCE: EN 16781:2018, 3.1]

### 3.3

#### **cot duvet**

bedding item intended to cover the child's body, consisting of a filling material permanently sewn into a textile over intended to be used with or without a secondary removable textile cover

[SOURCE: EN 16779-1:2018, 3.1, modified – Note 1 to entry has been deleted.]