

Wearable electronic devices and technologies - Part
204-1: Electronic textile - Test method for assessing
washing durability of e-textile products

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Wearable electronic devices and technologies - Part 204-1:
Electronic textile - Test method for assessing washing durability
of e-textile products
(IEC 63203-204-1:2023)

Technologies et dispositifs électroniques prêts-à-porter -
Partie 204-1: Textile électronique - Méthode d'essai pour
l'évaluation de la durabilité au lavage des produits e-textiles
(IEC 63203-204-1:2023)

Tragbare elektronische Geräte und Technologien -
Teil 204-1: Elektronische Textilien - Prüfverfahren zur
Beurteilung der Waschbeständigkeit von E-
Textilerzeugnissen
(IEC 63203-204-1:2023)

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European foreword

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



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durabilité au lavage des produits e-textiles**



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INTERNATIONAL STANDARD

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –**Part 204-1: Electronic textile – Test method for assessing
washing durability of e-textile products**

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IEC 63203-204-1 has been prepared by IEC technical committee 124: Wearable electronic devices and technologies. It is an International Standard.

This second edition cancels and replaces the first edition published in 2021. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Subclause 3.2 on conductive textiles has been deleted.
- b) Subclause 3.3 on leisurewear and sportswear has been deleted.
- c) Subclause 3.2 on washing procedure has been added.
- d) Figure 1 has been updated.

- e) The optional measurement of conductive tracks has been added in 4.1 to the checklist before carrying out washing durability test.
- f) Additions have been made to the list in Clause 6.

The text of this International Standard is based on the following documents:

Draft	Report on voting
124/214/FDIS	124/217/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 63203 series, published under the general title *Wearable electronic devices and technologies*, can be found on the IEC website.

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WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

Part 204-1: Electronic textile – Test method for assessing washing durability of e-textile products

1 Scope

This document specifies a household washing durability test method for e-textile products. This document includes testing procedures for e-textile products with electrically conductive components and sensors to collect the data of the user.

This document does not cover safety or heat-generation test methods. Products containing components other than those listed in this clause are 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 139, *Textiles – Standard atmospheres for conditioning and testing*

ISO 6330:2012, *Textiles – Domestic washing and drying procedures for textile testing*

3 Terms and definitions

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

ISO and IEC maintain terminology 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

e-textile product

product made from textiles and integrated electronics that together perform one or more functions such as measuring body temperature, heart rate or electrocardiogram, etc.

3.2

washing procedure

cycle of washing action including water supplying, washing, and repeated rinsing, spinning and water supplying and ending with spinning as predetermined on the washing machine

4 Test method – General

4.1 Checklist before carrying out washing durability test

Check the product as described in the user manual and confirm the proper operation according to the instructions in the manual. (Measurement of conductive tracks is optional. If the product contains areas of non-isolated conductive textile, resistance measurement