



IEC 63203-204-1

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REDLINE VERSION

# INTERNATIONAL STANDARD



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**Wearable electronic devices and technologies –  
Part 204-1: Electronic textile – Test method for assessing washing durability of  
~~leisurewear and sportswear e-textile systems~~ e-textile products**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

#### Part 204-1: Electronic textile – Test method for assessing washing durability of ~~leisurewear and sportswear e-textile systems~~ 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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

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## WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

### Part 204-1: Electronic textile – Test method for assessing washing durability of ~~leisurewear and sportswear e-textile systems~~ e-textile products

#### 1 Scope

This document specifies a household washing durability test method for ~~leisurewear and sportswear e-textile systems~~ e-textile products. This document includes testing procedures for ~~leisurewear and sportswear~~ 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*

~~EN 16812:2016, *Textiles and textile products – Electrically conductive textiles – Determination of the linear electrical resistance of conductive tracks*~~

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



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

**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**

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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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## **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.

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ISO 139, *Textiles – Standard atmospheres for conditioning and testing*

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

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## COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

## 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**

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Cette deuxième édition annule et remplace la première parue en 2021. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) Le 3.2 sur les textiles conducteurs a été supprimé;
- b) Le 3.3 sur les vêtements de sport et de loisirs a été supprimé;
- c) Le 3.2 sur la méthode de lavage a été ajouté;

- d) La Figure 1 a été mise à jour;
- e) Le mesurage facultatif des pistes conductrices a été ajouté en 4.1 à la liste de contrôle avant l'essai de durabilité au lavage;
- f) Des ajouts ont été apportés à la liste de l'Article 6.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
124/214/FDIS	124/217/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). Les principaux types de documents développés par l'IEC sont décrits plus en détail sous [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

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## **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**

#### **1 Domaine d'application**

Le présent document spécifie une méthode d'essai de la durabilité au lavage des produits e-textiles. Le présent document contient des modes opératoires d'essai pour les produits e-textiles qui comportent des composants électriquement conducteurs et des capteurs destinés à recueillir des données de l'utilisateur.

Le présent document ne traite pas des méthodes d'essai portant sur la sécurité ou la production de chaleur. Les produits qui comportent des composants autres que ceux énumérés dans cet article ne sont pas couverts par le présent document.

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ISO 139, *Textiles – Atmosphères normales de conditionnement et d'essai*

ISO 6330:2012, *Textiles – Méthodes de lavage et de séchage domestiques en vue des essais des textiles*