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TECHNICAL REPORT

Printed electronics –
Part 250: Material technologies required in printed electronics for wearable smart devices

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IEC TR 62899-250 has been prepared by IEC technical committee 119: Printed electronics. It is a Technical Report.

This second edition cancels and replaces the first edition published in 2016. This edition constitutes a technical revision.

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

a) added classification of e-textile integrated type;
b) added Clause 5, “Verification of conclusions in IEC TR 62899-250:2016 (edition 1)”;
c) added explanation of 3D printed circuits;

d) introduced trends in standardization activities, especially those after the first edition publication;

e) added new issues that became clear after the first edition was published.

The text of this Technical Report is based on the following documents:

Draft	Report on voting
119/509/DTR	119/536/RVDTR

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 Technical Report 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 62899 series, published under the general title *Printed electronics*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

IEC TR 62899-250 (edition 1), published in 2016, discussed and summarized the applicability of printed electronics technology in the rapidly expanding area of wearable electronics and the concomitant need for standardization of new measurement methods. Many of the issues raised by the TR regarding the need for new standardization have actually been developed and have already been published as international standards.

The establishment of IEC/TC 124 in 2017 is a particularly noteworthy event in this standardization field. And multiple industrial organizations have progressed standardization activities in flexible electronics field that span both wearable and printed electronics.

During this period, the evolution of this technology field has accelerated, and new technologies are being introduced one after another. Therefore, there is no change in the situation where there is an ongoing need for new standards.

The second edition of this document, following the first edition, aims to provide guidance for future standardization work on wearable and printed electronic. And standardization activities in the field of both printed and wearable electronics are reviewed from a global perspective, in order to prevent standardization conflicts between different standardization organizations.

PRINTED ELECTRONICS –

Part 250: Material technologies required in printed electronics for wearable smart devices

1 Scope

This part of IEC 62899, which is a Technical Report, explores a new technological field to establish standardization activities in TC 119 (Printed electronics) in particular, and to contribute to the development and market expansion of wearable smart device (WSD) technology.

2 Normative references

There are no normative references in this document.