SLOVENSKI STANDARD
SIST EN IEC 62321-2:2022

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SIST EN 62321-2:2014

Določevanje posameznih snovi v elektrotehničnih izdelkih - 2. del: Razstavljanje, odklop in mehanska priprava vzorca

Determination of certain substances in electrotechnical products - Part 2: Disassembly, disjunction and mechanical sample preparation

Détermination de certaines substances dans les produits électrotechniques - Partie 2: Démontage, désassemblage et préparation mécanique de l'échantillon

Ta slovenski standard je istoveten z: **EN IEC 62321-2:2021**

ICS:

29.020	Elektrotehnika na splošno	Electrical engineering in general
31.020	Elektronske komponente na splošno	Electronic components in general
71.040.50	Fizikalnokemijske analitske metode	Physicochemical methods of analysis

SIST EN IEC 62321-2:2022 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62321-2

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ICS 13.020.01; 43.040.10

Supersedes EN 62321-2:2014 and all of its amendments and corrigenda (if any)

English Version

Determination of certain substances in electrotechnical products - Part 2: Disassembly, disjointment and mechanical sample preparation (IEC 62321-2:2021)

Détermination de certaines substances dans les produits électrotechniques - Partie 2: Démontage, défabrication et préparation mécanique de l'échantillon (IEC 62321-2:2021)

Verfahren zur Bestimmung von bestimmten Substanzen in Produkten der Elektrotechnik - Teil 2: Demontage, Zerlegung und mechanische Probenvorbereitung (IEC 62321-2:2021)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 111/619/FDIS, future edition 2 of IEC 62321-2, prepared by IEC/TC 111 “Environmental standardization for electrical and electronic products and systems” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62321-2:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022–07–04
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024–10–04

This document supersedes EN 62321-2:2014 and all of its amendments and corrigenda (if any).

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Any feedback and questions on this document should be directed to the users’ national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 62321-2:2021 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62554:2011	NOTE Harmonized as EN 62554:2011 (not modified)
IEC 63000:2016	NOTE Harmonized as EN IEC 63000:2018 (not modified)
IEC 62137-1-2:2007	NOTE Harmonized as EN 62137-1-2:2007 (not modified)
IEC 62239-1:2018	NOTE Harmonized as EN IEC 62239-1:2018 (not modified)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 62321	(series)	Determination of certain substances electrotechnical products	inEN 62321	(series)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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DETERMINATION OF CERTAIN SUBSTANCES IN ELECTROTECHNICAL PRODUCTS –

Part 2: Disassembly, disjointment and mechanical sample preparation

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

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IEC 62321-2 has been prepared by IEC technical committee 111: Environmental standardization for electrical and electronic products and systems. It is an International Standard.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

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

a) Reference to the IEC 62321 series instead of to a list of individual parts of the IEC 62321 series.

b) Update of the flow chart in Figure 1. Restructure of Clause 4 and update of examples in Annex A.

c) Adjustment of the risk levels of certain parts and materials to reflect the recent technology development and material change. Update of Table B.1 to include the risk levels of phthalates. Creation of Table B.2 for other substances (e.g. HBCDD, PAH) in polymeric materials.

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

FDIS	Report on voting
111/619/FDIS	111/628/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/standardsdev/publications.

A list of all parts in the IEC 62321 series, published under the general title *Determination of certain substances in electrotechnical products,* 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,
- replaced by a revised edition, or
- amended.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

The widespread use of electrotechnical products has drawn increased attention to their impact on the environment. In many countries this has resulted in the adaptation of regulations affecting wastes, substances and energy use of electrotechnical products.

The use of certain substances in electrotechnical products is a source of either concern or importance in current and proposed regional legislations.

The purpose of the IEC 62321 series is therefore to provide test methods that will allow the electrotechnical industry to determine the levels of certain substances in electrotechnical products on a consistent global basis. This document, as an important part of the IEC 62321 series, covers strategies of sampling along with the mechanical preparation.

WARNING – Persons using this document should be familiar with normal laboratory practice. This document does not purport 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.

DETERMINATION OF CERTAIN SUBSTANCES IN ELECTROTECHNICAL PRODUCTS –

Part 2: Disassembly, disjointment and mechanical sample preparation

1 Scope

This part of IEC 62321 provides strategies of sampling along with the mechanical preparation of samples from electrotechnical products. These samples can be used for analytical testing to determine the levels of certain substances as described in the test methods in other parts of the IEC 62321 series. Restrictions for substances will vary between geographic regions and can be updated on a regular basis. This document describes a generic process for obtaining and preparing samples prior to the determination of any substance of concern.

This document does not provide:

– full guidance on each and every product that could be classified as electrotechnical product. Since there is a huge variety of electrotechnical parts, with various structures and compositions, along with the continuous innovations in the industry, it is unrealistic to attempt to provide procedures for the disjointment of every type of part;

– guidance regarding other routes to gather additional information on certain substances in a product, although the information collected has relevance to the sampling strategies in this document;

– safe disassembly and mechanical disjointment instructions related to electrotechnical products (e.g. mercury-containing switches) and the recycling industry (e.g. how to handle CRTs or the safe removal of batteries). See IEC 62554 [1][1] for the disjointment and mechanical sample preparation of mercury-containing fluorescent lamps;

– sampling procedures for packaging and packaging materials;

– analytical procedures to measure the levels of certain substances. This is covered by other standards (e.g. other parts of the IEC 62321 series), which are referred to as "test standards" in this document;

– guidelines for assessment of compliance.

This document has the status of a horizontal standard in accordance with IEC Guide 108 [2].

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.

IEC 62321 (all parts), *Determination of certain substances in electrotechnical products*

1 Numbers in square brackets refer to the bibliography.

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62321-1 and the following apply.

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

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

3.1.1
composite testing
testing of two or more materials as a single sample that could be mechanically disjointed if necessary

3.1.2
certain substance
substance subject to test methods developed or under development in IEC 62321 (all parts), such as cadmium, lead, mercury, hexavalent chromium, polybrominated biphenyl, polybrominated diphenyl ether, phthalates

Note 1 to entry: IEC 62321-1 includes test methods for the evaluation of each of the substances identified in the definition above.

3.1.3
disassembly
process whereby an item is taken apart in such a way that it could subsequently be reassembled and made operational

3.1.4
disjointment
process whereby materials are separated by mechanical means such that the item cannot subsequently be reassembled to make it operational

3.1.5
homogeneous material
one material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjointed or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes

[SOURCE: EU RoHS DIRECTIVE 2011/65/EU [3]]

3.1.6
sampling
process of obtaining a sample of an electrotechnical product intended for the analysis for the presence of certain substance(s)

3.2 Abbreviated terms

AC	alternating current
BGA	ball grid array
CRT	cathode ray tube (television)
DVD	digital versatile disc
IC	integrated circuit
ICP-MS	inductively coupled plasma mass spectrometry