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BSI Standards Publication

Soft soldering fluxes — Classification and requirements

Part 2: Performance requirements

bsi.

National foreword

This British Standard is the UK implementation of EN ISO 9454-2:2020. It is identical to ISO 9454-2:2020. It supersedes BS EN ISO 9454-2:2001, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/501, Electronic Assembly Technology.

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European foreword

This document (EN ISO 9454-2:2020) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 “Welding and allied processes” the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2021, and conflicting national standards shall be withdrawn at the latest by May 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 9454-2:2020 has been approved by CEN as EN ISO 9454-2:2020 without any modification.

Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Flux condition **2**
5 Performance requirements for fluxes **2**
Bibliography **6**

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 12, *Soldering materials,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 9454-2:1998), of which it constitutes a minor revision.

The main changes compared to the previous edition are as follows:

— Clause 2 has been updated;

— the coding of the fluxes has been updated in accordance with ISO 9454-1:2016;

— the format of this document has been updated.

A list of all parts in the ISO 9454 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

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Introduction

Fluxes assist molten solder to wet metals surfaces to be joined by removing oxides and related contaminants from the solder and surfaces of the parts during soldering. Fluxes also protect surfaces from oxidization and assist wetting of the base metals by molten solder.

Care is necessary when selecting a flux for a particular application, in order to ensure an adequate service life of the assembly. Factors such as the ease of residue removal, corrosiveness, possible health and safety hazards and the efficacy of the flux, should all be considered when making the choice.

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INTERNATIONAL STANDARD **ISO 9454-2:2020(E)**

Soft soldering fluxes — Classification and requirements —

Part 2: Performance requirements

1 Scope

This document specifies the performance requirements for fluxes in solid, liquid and paste forms intended for use with soft solders.

NOTE 1 ISO 9454-1 specifies the requirements for labelling and packaging as well as the coding system for the classification of the fluxes.

NOTE 2 Some of the fluxes intended for inert gas and vapour phase soldering may not pass some of the criteria in Tables 1 and 2.

Requirements for these fluxes are agreed between the purchaser and the supplier.

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 9455-3:2019, *Soft soldering fluxes — Test methods — Part 3: Determination of acid value, potentiometric and visual titration methods*

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:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
flux
chemical substance in a form which assists molten solder to wet metal surfaces to be joined, by removing oxides and related contaminants from the solder and from the surfaces of the parts during soldering

Note 1 to entry: Flux can be in solid, liquid or paste form.

3.2
liquid flux
solution of a flux in a suitable liquid solvent

3.3
paste flux
solution or uniform dispersion of flux in a suitable viscous medium

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