

SVENSK STANDARD

SS-EN ISO 9454-1:2016



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Fluss för mjuklödning – Klassificering och krav – Del 1: Klassificering, märkning och förpackning (ISO 9454-1:2016)

Soft soldering fluxes – Classification and requirements – Part 1: Classification, labelling and packaging (ISO 9454-1:2016)

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Europastandarden EN ISO 9454-1:2016 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 9454-1:2016.

Denna standard ersätter SS-EN 29454-1, utgåva 1.

The European Standard EN ISO 9454-1:2016 has the status of a Swedish Standard. This document contains the official English version of EN ISO 9454-1:2016.

This standard supersedes the Swedish Standard SS-EN 29454-1, edition 1.

**Förhållandet till övriga delar under samma huvudtitel - Utdrag ur Förord i ISO 9454-1:2016/
Relations to other parts under the same general title - Extract from the Foreword of ISO 9454-1:2016**

ISO 9454 consists of the following parts, under the general title *Soft soldering fluxes — Classification and requirements*:

- Part 1: *Classification, labelling and packaging*
- Part 2: *Performance requirements*

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EUROPEAN STANDARD

EN ISO 9454-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2016

ICS 25.160.50

Supersedes EN 29454-1:1993

English Version

Soft soldering fluxes - Classification and requirements -
Part 1: Classification, labelling and packaging (ISO 9454-
1:2016)

Flux de brasage tendre - Classification et exigences -
Partie 1: Classification, marquage et emballage (ISO
9454-1:2016)

Flussmittel zum Weichlöten - Einteilung und
Anforderungen - Teil 1: Einteilung, Kennzeichnung und
Verpackung (ISO 9454-1:2016)

This European Standard was approved by CEN on 2 January 2016.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN ISO 9454-1:2016) 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 September 2016, and conflicting national standards shall be withdrawn at the latest by September 2016.

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

This document supersedes EN 29454-1:1993.

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Endorsement notice

The text of ISO 9454-1:2016 has been approved by CEN as EN ISO 9454-1:2016 without any modification.

Introduction

Fluxes assist molten solder to wet metal surfaces to be joined by removing oxides and related contaminations from the solder and surfaces of the parts during soldering. Fluxes also protect surfaces from oxidation 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.

Soft soldering fluxes — Classification and requirements —

Part 1: Classification, labelling and packaging

WARNING — This part of ISO 9454-1 deals with products which might be hazardous to health, or which might cause other hazards such as corrosion, fire, etc., if adequate precautions are not taken. It refers only to the technical suitability of substances and in no way absolves the testing laboratory, the supplier, or the user from legal obligations relating to health and safety at any stage of flux manufacture or use.

1 Scope

This part of ISO 9454-1 specifies a coding system for the classification of fluxes intended for use with soft solders, according to their active fluxing ingredients, together with requirements for labelling and packaging.

2 Classification of fluxes

Fluxes specified in this part ISO 9454-1 have been classified in terms of their main ingredients and shall be encoded in accordance with [Table 1](#).

For example, a phosphoric acid activated inorganic, flux with a halide content <0,01 % by mass, shall be encoded 3311, a non-halide activated rosin flux shall be encoded 1131.

3 Labelling and packaging

Fluxes supplied according to this part of ISO 9454-1 shall be packed in suitable containers, resistant to the flux they contain, and shall carry a label bearing the following information:

- a) supplier's name and address;
- b) name of the product;
- c) reference to this part of ISO 9454, i.e. ISO 9454-1, and the flux classification code according to [Table 1](#);
- d) batch number;
- e) date of manufacture;
- f) details of any legal requirements concerning aspects of safety.

Labels shall be made of material resistant to the flux in the container.

Additional labelling requirements may be agreed upon between the supplier and the purchaser in accordance with the rules and regulations of the country or countries in question.

Table 1 — Classification of soft soldering fluxes according to their main ingredients

| Flux type | Flux basis | Flux activation | Halide content % (by mass) |
|--------------------------------------|---|--|---|
| 1 resin | 1 rosin (non-modified colophony) | 1 no activator added 2 halide activated 3 non-halide activated | 1 <0,01 2 <0,15 3 0,15 to 2,0 4 >2,0 |
| | 2 resin (modified colophony or synthetic) | | |
| 2 organic (low or non-resin flux) | 1 water-soluble | | |
| | 2 non-water-soluble | | |
| 3 inorganic | 1 salts in aqueous solution | 1 with ammonium chloride | |
| | 2 salts in organic formulation | 2 without ammonium chloride | |
| | 3 acids | 1 with phosphoric acid 2 without phosphoric acid | |
| | 4 alkalis | 1 amines and/or ammonium carbonates | |

Annex A (informative)

Grades of fluxes

[Table A.1](#) indicates, for guidance, the various grades of fluxes and only refers to halide content. Flux selection can also be done from different points of view.

Table A.1 — Guidance for the uses of the various grades of fluxes

| ISO-Code | Type description | Halides in % (by mass) | Guidance for use |
|----------|---|---------------------------|---|
| 1111 | on basis of rosin (colophony) without additives | <0,01 | electronics electrotechnology |
| 1122 | on basis of rosin (colophony) with additives of organic activators containing halides (e.g. glutamic acid hydrochloride) | <0,15 | electronics electrotechnology electronic device construction metal goods |
| 1123 | on basis of rosin (colophony) with additives of organic activators containing halides (e.g. glutamic acid hydrochloride) | 0,15 to 2,0 | electronics electrotechnology electronic device construction metal goods |
| 1124 | on basis of rosin (colophony) with additives of organic activators containing halides (e.g. glutamic acid hydrochloride) | >2,0 | electronics electrotechnology electronic device construction metal goods |
| 1131 | on basis of rosin (colophony) with additives of organic activators containing no halides (e.g. adipic, stearic, salicylic acid) | <0,01 | electronics electrotechnology precision soldering metal goods |
| 1211 | on basis of modified resin without additives | <0,01 | electronics electrotechnology |
| 1222 | on basis of modified resin with additives of organic activators containing halides (e.g. glutamic acid hydrochloride) | <0,15 | electronics electrotechnology electronic device construction metal goods |