



**SLOVENSKI STANDARD**  
**SIST EN ISO 9455-6:2001**  
**01-februar-2001**

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Soft soldering fluxes - Test methods - Part 6: Determination and detection of halide (excluding fluoride) content (ISO 9455-6:1995)

Flußmittel zum Weichlöten - Prüfverfahren - Teil 6: Bestimmung und Nachweis des Halogenidgehaltes (außer Fluorid) (ISO 9455-6:1995)

Flux de brasage tendre - Méthodes d'essai - Partie 6: Dosage et détection des halogénures (à l'exception des fluorures) (ISO 9455-6:1995)

Ta slovenski standard je istoveten z: EN ISO 9455-6:1997

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**ICS:**

25.160.50 Trdo in mehko lotanje Brazing and soldering

**SIST EN ISO 9455-6:2001 en**

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EUROPEAN STANDARD

EN ISO 9455-6

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January 1997

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English version

**Soft soldering fluxes - Test methods - Part 6:  
Determination and detection of halide (excluding  
fluoride) content (ISO 9455-6:1995)**

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

**Foreword**

The text of the International Standard from Technical Committee ISO/TC 44 "Welding and allied processes" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DS.

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of an identical text or by endorsement, at the latest by July 1997, and conflicting national standards shall be withdrawn at the latest by July 1997.

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**Endorsement notice**

The text of the International Standard ISO 9455-6:1995 has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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**Annex ZA (normative)**  
**Normative references to international publications**  
**with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 9454-1	1990	Soft soldering fluxes - Classification and requirements - Part 1: Classification, labelling and packaging	EN 29454-1	1993
ISO 9455-1	1990	Soft soldering fluxes - Test methods - Part 1: Determination of non-volatile matter, gravimetric method	EN 29455-1	1993
ISO 9455-2	1993	Soft soldering fluxes - Test methods - Part 2: Determination of non-volatile matter, ebulliometric method	EN ISO 9455-2	1995

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# INTERNATIONAL STANDARD

**ISO**  
**9455-6**

First edition  
1995-09-15

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## Soft soldering fluxes — Test methods —

### Part 6:

Determination and detection of halide  
(excluding fluoride) content

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*Flux de brasage tendre — Méthodes d'essai —*

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*Partie 6: Dosage et détection des halogénures (à l'exception des fluorures)*



Reference number  
ISO 9455-6:1995(E)

## ISO 9455-6:1995(E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9455-6 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 12, *Soldering and brazing materials*.

ISO 9455 consists of the following parts, under the general title *Soft soldering fluxes — Test methods*:

- Part 1: *Determination of non-volatile matter, gravimetric method*
- Part 2: *Determination of non-volatile matter, ebulliometric method*
- Part 3: *Determination of acid value, potentiometric and visual titration methods*
- Part 5: *Copper mirror test*
- Part 6: *Determination and detection of halide (excluding fluoride) content*
- Part 8: *Determination of zinc content*
- Part 9: *Determination of ammonia content*
- Part 10: *Flux efficacy tests, solder spread method*
- Part 11: *Solubility of flux residues*

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- *Part 12: Steel tube corrosion test*
- *Part 13: Determination of flux spattering*
- *Part 14: Assessment of tackiness of flux residues*
- *Part 15: Copper corrosion test*
- *Part 16: Flux efficacy tests, wetting balance method*  
[Technical Report]
- *Part 17: Determination of surface insulation resistance of flux residues (Comb test)*
- *Part 18: Electrochemical migration test for flux residues*

Annex A forms an integral part of this part of ISO 9455.

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# Soft soldering fluxes — Test methods —

## Part 6:

## Determination and detection of halide (excluding fluoride) content

### 1 Scope

This part of ISO 9455 specifies three quantitative methods for the determination of the ionic halide (excluding fluoride) content of soldering fluxes. Halides are calculated as chlorides. A useful qualitative test method for the detection of ionic halides is also described.

Method A is a potentiometric titration method for the determination of halide (excluding fluoride) content and is applicable to flux classes 1 and 2, defined in ISO 9454-1. This method, which is to be considered the reference method for these fluxes, is suitable for halide contents generally within the range 0,05 % (*m/m*) to 2 % (*m/m*) in the non-volatile matter of the flux.

Method B is a titration method for the determination of the total halide (excluding fluoride) content of water-soluble fluxes. It is applicable to flux classes 2.1.2.A and 3.1.1.A, as defined in ISO 9454-1.

Method C is a titration method for the determination of the halide (excluding fluoride) content of water-soluble fluxes containing phosphates and is applicable to flux class 3.2.1.A, as defined in ISO 9454-1.

Method D is a qualitative test, using silver chromate test paper, for the presence of ionic halides. The technique may be used for all classes of flux.

### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions

of this part of ISO 9455. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9455 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5725-2:1994, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method.*

ISO 9454-1:1990, *Soft soldering fluxes — Classification and requirements — Part 1: Classification, labelling and packaging.*

ISO 9455-1:1990, *Soft soldering fluxes — Test methods — Part 1: Determination of non-volatile matter, gravimetric method.*

ISO 9455-2:1993, *Soft soldering fluxes — Test methods — Part 2: Determination of non-volatile matter, ebulliometric method.*

### 3 Method A: Potentiometric method (Reference method)

#### 3.1 Principle

A prepared, weighed sample of the flux is dissolved in a suitable solvent. The resulting solution is titrated with standard silver nitrate solution, using a silver electrode, the mV readings being recorded simul-