



SLOVENSKI STANDARD SIST EN ISO 9455-15:2001

01-februar-2001

**Talila za mehko spajkanje - Preskusne metode - 15. del: Korozijski preskus bakra
(ISO 9455-15:1996)**

Soft soldering fluxes - Test methods - Part 15: Copper corrosion test (ISO 9455-15:1996)

Flußmittel zum Weichlöten - Prüfverfahren - Teil 15: Kupferkorrosionsprüfung (ISO 9455-15:1996)

iTeh STANDARD PREVIEW

Flux de brasage tendre - Méthodes d'essai - Partie 15: Essai de corrosion du cuivre (ISO 9455-15:1996)

[SIST EN ISO 9455-15:2001](https://standards.iteh.ai/catalog/standards/sist/0c1fbhf6-d155-4f37-888b-17c8807ca1da/sist-en-iso-9455-15-2001)

Ta slovenski standard je istoveten z: EN ISO 9455-15:1999

ICS:

25.160.50 Trdo in mehko lotanje Brazing and soldering

SIST EN ISO 9455-15:2001

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 9455-15:2001](#)

<https://standards.iteh.ai/catalog/standards/sist/0c1fbbf6-d155-4f37-888b-f7c88b7ca1da/sist-en-iso-9455-15-2001>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 9455-15

April 1999

ICS 25.160.50

English version

Soft soldering fluxes - Test methods - Part 15: Copper corrosion
test (ISO 9455-15:1996)

Flux de brasage tendre - Méthodes d'essai - Partie 15:
Essai de corrosion du cuivre (ISO 9455-15:1996)

Flußmittel zum Weichlöten - Prüfverfahren - Teil 15:
Kupferkorrosionsprüfung (ISO 9455-15:1996)

This European Standard was approved by CEN on 22 March 1999.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

(standards.iteh.ai)

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN ISO 9455-15:2001](https://standards.iteh.ai/catalog/standards/sist/0c1fbbf6-d155-4f37-888b-f7c88b7ca1da/sist-en-iso-9455-15-2001)

<https://standards.iteh.ai/catalog/standards/sist/0c1fbbf6-d155-4f37-888b-f7c88b7ca1da/sist-en-iso-9455-15-2001>



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 October 1999, and conflicting national standards shall be withdrawn at the latest by October 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 9455-15:1996 has been approved by CEN as a European Standard without any modification.

ITC STANDARD PREVIEW
(standards.iteh.ai)

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

SIST EN ISO 9455-15:2001

<https://standards.iteh.ai/catalog/standards/sist/0c1fbbf6-d155-4f37-888b-f7c88b7ca1da/sist-en-iso-9455-15-2001>

1999-10

ABIMEVOLI...
TROPE KI TROMAK...
OBJECTION ni...
AVABJUBU

.....TOIR
EWTIOAJOSAR...



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 9453	1990	Soft soldering fluxes - Chemical compositions and forms	EN 29453	1993
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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 9455-15:2001](#)

<https://standards.iteh.ai/catalog/standards/sist/0c1fbbf6-d155-4f37-888b-f7c88b7ca1da/sist-en-iso-9455-15-2001>

INTERNATIONAL
STANDARD

ISO
9455-15

First edition
1996-09-01

Soft soldering fluxes — Test methods —

Part 15:

Copper corrosion test

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Flux de brasage tendre — Méthodes d'essai —

SIST EN ISO 9455-15:2001

Partie 15: Essai de corrosion du cuivre
<https://standards.iteh.ai/en/standards/SIST/EN/ISO/9455-15:2001/37-888b-f7c88b7ca1da/sist-en-iso-9455-15-2001>



Reference number
ISO 9455-15:1996(E)

ISO 9455-15:1996(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.

iTeh STANDARD PREVIEW

International Standard ISO 9455-15 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 12, *Soldering and brazing materials*.

SIST EN ISO 9455-15:2001

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 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*
- Part 12: *Steel tube corrosion test*

© ISO 1996

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

- *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*
- *Part 17: Surface insulation resistance comb test and electrochemical migration test of flux residues*

Annex A of this part of ISO 9455 is for information only.

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

[SIST EN ISO 9455-15:2001](https://standards.iteh.ai/catalog/standards/sist/0c1fbbf6-d155-4f37-888b-f7c88b7ca1da/sist-en-iso-9455-15-2001)

<https://standards.iteh.ai/catalog/standards/sist/0c1fbbf6-d155-4f37-888b-f7c88b7ca1da/sist-en-iso-9455-15-2001>

iTeh STANDARD PREVIEW
This page intentionally left blank
(standards.iteh.ai)

SIST EN ISO 9455-15:2001

<https://standards.iteh.ai/catalog/standards/sist/0c1fbbf6-d155-4f37-888b-f7c88b7ca1da/sist-en-iso-9455-15-2001>

Soft soldering fluxes — Test methods —

Part 15:

Copper corrosion test

1 Scope

This part of ISO 9455 specifies a qualitative method for determination of the corrosive properties of flux residues on a copper substrate, when subjected to controlled environmental conditions. The test is applicable to type 1 fluxes, as defined in ISO 9454-1.

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 1634-1:1987, *Wrought copper and copper alloy plate, sheet and strip — Part 1: Technical conditions of delivery for plate, sheet and strip for general purposes.*

ISO 9453:1990, *Soft solder alloys — Chemical compositions and forms.*

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.*

IEC 68-2-3:1969, *Environmental testing — Part 2: Tests — Test Ca: Damp heat, steady state.*

3 Principle

A pellet of solder is melted in contact with the flux to be tested on a test piece of copper sheet. The test piece is then exposed to a controlled temperature/humidity environment and the resulting corrosion of the copper, if any, is assessed using a low-power microscope.

4 Reagents and materials

Use only reagents of recognized analytical quality and only distilled, or deionized, water.

4.1 Ammonium peroxodisulfate solution, prepared as follows.

Dissolve 250 g of ammonium peroxodisulfate $[(\text{NH}_4)_2\text{S}_2\text{O}_8]$ in water and add cautiously 5 ml of sulfuric acid (density 1,84 g/ml). Mix, cool, dilute to 1 litre and mix. This solution is to be freshly prepared before use.

4.2 Sulfuric acid, 5 % (V/V) solution.

Add cautiously, with stirring, 50 ml of sulfuric acid (density 1,84 g/ml) to 400 ml of water and mix. Cool, dilute to 1 litre and mix well.

4.3 Degreasing solvent, such as acetone or petroleum ether.

4.4 0,5 mm thick copper sheet, complying with ISO 1634-1, grade Cu—ETP, condition HA.