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Soft soldering fluxes - Test methods - Part 9: Determination of ammonia content (ISO 9455-9:2020)

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 9455-9

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Supersedes EN ISO 9455-9:1995

English Version

Soft soldering fluxes - Test methods - Part 9: Determination of ammonia content (ISO 9455-9:2020)

Flux de brasage tendre - Méthodes d'essai - Partie 9: Dosage de l'ammoniac (ISO 9455-9:2020)

Flussmittel zum Weichlöten - Prüfverfahren - Teil 9: Bestimmung des Ammoniumgehaltes (ISO 9455 9:2020)

This European Standard was approved by CEN on 1 November 2020.

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European foreword

This document (EN ISO 9455-9:2020) 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of an identical text or by endorsement, at the latest by May 2021, and conflicting national standards shall be withdrawn at the latest by May 2021.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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The text of ISO 9455-9:2020 has been approved by CEN as EN ISO 9455-9:2020 without any modification.

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Contents

Page

Foreword ..... **iv**
1 Scope **1**
2 Normative reference **1**
3 Terms and definitions **1**
4 Principle **1**
5 Reagents **1**
6 Apparatus **2**
7 Procedure **2**
7.1 General 2
7.2 Preparation of flux test solution 2
7.2.1 Solid fluxes 2
7.2.2 Paste fluxes 2
7.2.3 Liquid fluxes 2
7.3 Determinations 3
8 Calculation of results **4**
8.1 Solid or paste flux samples 4
8.2 Liquid flux samples 4
9 Precision **4**
9.1 General 4
9.2 Precision data 4
10 Test report **5**
Bibliography **6**

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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.

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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO TC 44, *Welding and allied processes*, Sub-Committee 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 9455-9:1993), of which it constitutes a minor revision.

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

— Clause 2 has been updated;

— new Clause 3, Terms and definitions, has been inserted;

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

A list of all parts in the ISO 9455 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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Soft soldering fluxes — Test methods —

Part 9: Determination of ammonia content

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1 Scope

This document specifies a distillation method for the determination of the ammonia content of solid, paste or liquid fluxes. The method is applicable to fluxes of class 311 and 321 only, as defined in ISO 9454-1.

2 Normative reference

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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/

4 Principle

The prepared flux solution is distilled with sodium hydroxide to expel the ammonia present in the flux. The resulting distillate is passed into a standard sulfuric acid solution. The excess acid is then titrated with sodium hydroxide solution and the ammonia content of the flux is calculated.

5 Reagents

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

5.1 Sodium hydroxide solution, 1,0 mol/l standard solution, commercially available.

Alternatively, use an approximately 1,0 mol/l solution of sodium hydroxide, prepared by the following method. Dissolve 40 g of sodium hydroxide in water and cool. Transfer the solution to a 1-litre volumetric flask, dilute to the mark and mix well. Standardize this solution with 0,5 mol/l sulfuric acid solution (5.3).

5.2 Sulfuric acid, 0,5 mol/l, standard solution, commercially available.

Alternatively, use an approximately 0,5 mol/l solution of sulfuric acid prepared by the following method. Cautiously add 30 ml of sulfuric acid (ϱ = 1,84 g/ml) to 400 ml of water and mix. Cool and transfer to a 1-litre volumetric flask, dilute to the mark and mix well. Standardize this solution with a standard solution prepared from anhydrous sodium carbonate.

NOTE 1 ml of 0,5 mol/l sulfuric acid is equivalent to 0,053 5 g of ammonium chloride.

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