BS EN ISO 9453:2014



BSI Standards Publication

Soft solder alloys — Chemical compositions and forms (ISO 9453:2014)

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National foreword

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The UK participation in its preparation was entrusted by Technical Committee NFE/27, Tin and tin alloys, to Subcommittee NFE/27/4, Solders and soldering fluxes.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

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Weichlote - Chemische Zusammensetzung und Lieferformen (ISO 9453:2014)

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Foreword

This document (EN ISO 9453:2014) has been prepared by Technical Committee ISO/TC 44 “Welding and allied processes” in collaboration with Technical Committee CEN/TC 121 “Welding” 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of an identical text or by endorsement, at the latest by February 2015, and conflicting national standards shall be withdrawn at the latest by February 2015.

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.

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Endorsement notice

The text of ISO 9453:2014 has been approved by CEN as EN ISO 9453:2014 without any modification.

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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. www.iso.org/directives

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The committee responsible for this document is ISO/TC 44, *Welding*, Subcommittee SC 12, *Soldering materials*.

This third edition cancels and replaces the second edition (ISO 9453:2006), which has been technically revised.

Request for an official interpretation of technical aspects of this International Standard should be directed to the relevant secretariat of ISO/TC 44/SC 12 "Soldering materials" via the user's national standardization body; a listing of these bodies can be found at: http://www.iso.org.

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Introduction

The International Organization for Standardization (ISO) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning soft solder alloy compositions given in Table 3.

ISO takes no position concerning the evidence, validity and scope of this patent right.

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Soft solder alloys — Chemical compositions and forms

1 Scope

WARNING — National or regional regulations may limit the employment of certain alloys.

This International Standard specifies the requirements for chemical composition for soft solder alloys containing two or more of tin, lead, antimony, copper, silver, bismuth, zinc, indium and/or cadmium.

An indication of the forms generally available is also included.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3677, *Filler metal for soft soldering, brazing and braze welding — Designation*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
soft solder
metallic filler material which is used to join metallic parts and which has a melting temperature (liquidus) lower than that of the parts to be joined and, usually, lower than 450 °C and which wets the parent metals

3.2
batch
collection of one or more units of product, made in a single production operation

4 Chemical composition

The chemical composition of the soft solder, sampled and analysed in accordance with Clause 6, shall be as given for the appropriate material in Table 1 or Table 2.

5 Forms of delivery

5.1 General

Soft solders conforming to this International Standard shall be supplied in one of the following forms: ingot, slab, stick, bar, rod, wire, pellets, preforms, rings, spheres, ribbons, powder or soldering pastes. Solder shall be uniform in quality and free from detrimental conditions such as contamination or surface oxide that prevent melting and flow in a manner suitable for the intended application.

NOTE 1 Solders supplied in the form of rod, wire, or preforms can be supplied with or without an integral flux, subject to agreement between the supplier and the purchaser.

NOTE 2 Not all the solder compositions given in the tables are necessarily available in all the product forms listed.

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