
Dentistry — Brazing materials

Médecine bucco-dentaire — Produits pour brasage



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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 106, *Dentistry*, Subcommittee SC 2, *Prosthetic materials*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 55, *Dentistry*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 9333:2006), which has been technically revised.

The main changes are as follows:

- the brazing materials with silver as the main component have been excluded from the scope;
- the definitions in [Clause 3](#) have been clarified and harmonized with ISO 22674;
- the corrosion requirements in [4.4](#) have been harmonized with ISO 22674 and ISO 10271;
- the analysis of corrosion elements has been added as a requirement in [7.4.2](#);
- the melting range requirements ([7.5](#)) have been harmonized with ISO 22674;
- a requirement for a test report has been added as a new [Clause 8](#);
- the IFU requirement for a working temperature has been added in [Clause 9](#);
- the labelling requirement for marking of working temperature has been added in [Clause 10](#) as optional.

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.

Dentistry — Brazing materials

1 Scope

This document specifies the requirements and test methods for dental brazing materials suitable for use in metallic restorations.

Brazing materials with silver as the main component are excluded from this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1942, *Dentistry — Vocabulary*

ISO 6344-3, *Coated abrasives — Determination and designation of grain size distribution — Part 3: Microgrit sizes P240 to P5000*

ISO 10271:2020, *Dentistry — Corrosion test methods for metallic materials*

ISO 15223-1:2021, *Medical devices — Symbols to be used with information to be supplied by the manufacturer — Part 1: General requirements*

ISO 22674:2022, *Dentistry — Metallic materials for fixed and removable restorations and appliances*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942, ISO 22674 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

brazing material

alloy suitable for use as a filler material in operations in which dental alloy parts are joined by brazing to form dental appliances and restorations

Note 1 to entry: The process and principle of brazing are identical to soldering. Brazing is done at higher temperatures than soldering.

3.2

flux

chemical cleaning, flowing or purifying agent that supports the flow of the molten *brazing material* (3.1) to wet the substrate

3.3

working temperature

temperature based on the liquidus temperature plus x [whereby x is given by the manufacturer of the *brazing material* (3.1)]