
**Dentistry — Brackets and tubes for
use in orthodontics**

Médecine bucco-dentaire — Consoles et tubes utilisés en orthodontie



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Published in Switzerland

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Requirements	3
4.1 Hazardous elements.....	3
4.2 Dimensions and angles.....	4
4.3 Release.....	4
5 Test methods	4
5.1 Dimensions.....	4
5.1.1 Apparatus.....	4
5.1.2 Measurement procedures.....	4
5.2 Static immersion corrosion test method.....	9
5.2.1 Apparatus.....	9
5.2.2 Samples.....	9
5.2.3 Test procedure.....	10
5.3 Treatment of results.....	10
6 Packaging and labelling information to be provided to the user	10
6.1 General requirements.....	10
6.2 Packaging.....	10
6.3 Labelling.....	10
Bibliography	12

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.

ISO 27020 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 1, *Filling and restorative materials*.

This second edition cancels and replaces the first edition ISO 27020:2010, which has been technically revised. The main changes compared to the previous edition are as follows:

- the inclusion of a new corrosion test.

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.

Introduction

This document has been developed as a result of the difficulty often encountered by clinicians to make meaningful comparisons between brackets and tubes using the information currently available from manufacturers and suppliers.

Dentistry — Brackets and tubes for use in orthodontics

1 Scope

This document specifies requirements and test methods to compare the functional dimensions of orthodontic brackets and tubes and their chemical ion release, as well as packaging and labelling information.

This document is applicable to brackets and tubes for use in fixed orthodontic appliances.

This document does not specify specific qualitative and quantitative requirements for freedom from biological hazards; which are covered in ISO 10993-1 and ISO 7405.

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 10271:2011, *Dentistry — Corrosion test methods for metallic materials*

3 Terms and definitions

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

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/>

3.1

angle of torque

θ

occlusal-gingival angle formed between the intersection of the line perpendicular to the tangent to the tooth side surface of the base and the line bisecting the *slot* (3.12) in the occlusal-gingival direction, when viewed along the mesial-distal long-axis of the *slot* (3.12)

Note 1 to entry: If the angle is oriented toward the occlusal (gingival), it is designated as positive (negative).

Note 2 to entry: See [Figure 1](#).

3.2

angulation

α

angle between the line perpendicular to the mesial-distal long-axis of the slot and the central occlusal-gingival axis of the *bracket/tube* (3.9), when viewed from the buccal/labial

Note 1 to entry: The angulation is positive (negative) when the gingival part of the central occlusal-gingival axis is inclined toward the distal (mesial) relative to the line perpendicular to the mesial-distal long-axis of the slot.

Note 2 to entry: See [Figure 2](#).