



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 15841:2013**  
**01-oktober-2013**

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**Zobozdravstvo - Žice za uporabo v ortodontiji (ISO/DIS 15841:2013)**

Dentistry - Wires for use in orthodontics (ISO/DIS 15841:2013)

Zahnheilkunde - Drähte für die Kieferorthopädie (ISO/DIS 15841:2013)

Médecine bucco-dentaire - Fils pour utilisation en orthodontie (ISO/DIS 15841:2013)

**Ta slovenski standard je istoveten z: prEN ISO 15841 rev**

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11.060.10      Zobotehnični materiali      Dental materials

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## DRAFT INTERNATIONAL STANDARD ISO/DIS 15841

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

# Dentistry — Wires for use in orthodontics

*Médecine bucco-dentaire — Fils pour utilisation en orthodontie*

[Revision of first edition (ISO 15841:2006)]

ICS 11.060.10

## iTeh STANDARD PREVIEW

### ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

**To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.**

**Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.**

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Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

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## ISO/DIS 15841

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 15841 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 1, *Filling and restorative materials*.

This second/third/... edition cancels and replaces the first/second/... edition (), [clause(s) / subclause(s) / table(s) / figure(s) / annex(es)] of which [has / have] been technically revised.

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## Introduction

This second edition of ISO 15841 has been developed as a result of the difficulty often encountered by clinicians when comparing wires using the information currently available from manufacturers and suppliers.

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# Dentistry — Wires for use in orthodontics

## 1 Scope

This International Standard specifies requirements and test methods for wires to be used in fixed and removable orthodontic appliances. It includes preformed orthodontic archwires but excludes springs and other preformed components.

This International Standard gives detailed requirements concerning the presentation of the physical and mechanical properties of orthodontic wires, the test methods by which they can be determined, and packaging and labelling information.

Specified qualitative and quantitative requirements for freedom from biological hazard are not included in this International Standard but it is recommended that to assess possible biological or toxicological hazards, reference should be made to ISO 7405 and ISO 10993-1.

## 2 Normative references

The following referenced documents are indispensable for the application 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 6892, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ASTM F2082, *Standard Test Method for Determination of Transformation Temperature of Nickel-Titanium Shape Memory Alloys by Bend and Free*

## 3 Terms and definitions

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

### 3.1

#### **austenite-finish temperature**

$T_{af}$

temperature at which the metallurgical transformation from the low-temperature martensite phase to the high-temperature austenite phase is completed

### 3.2

#### **force deflection rate**

$F_{\Delta}$

increment of load to produce a unit increment of deflection in the proportional region, expressed in N/mm (e.g. used in the bend test)

### 3.3

#### **descriptor**

code to identify the nominal dimension(s) in thousandths of an inch without unit designation, in accordance with accepted orthodontic practice

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- 3.4 diagonal**  
largest cross-sectional dimension of a rectangular wire
- 3.5 multistrand wire**  
orthodontic wire fabricated from two or more individual strands of wire that may be twisted, braided or made into a co-axial wire

- 3.6 offset bending force**  
 $F_{S(0,1)}$   
force measured at a permanent deflection of 0,1 mm during loading in the bend test

- 3.7 height**  
smallest cross-sectional dimension of a rectangular wire

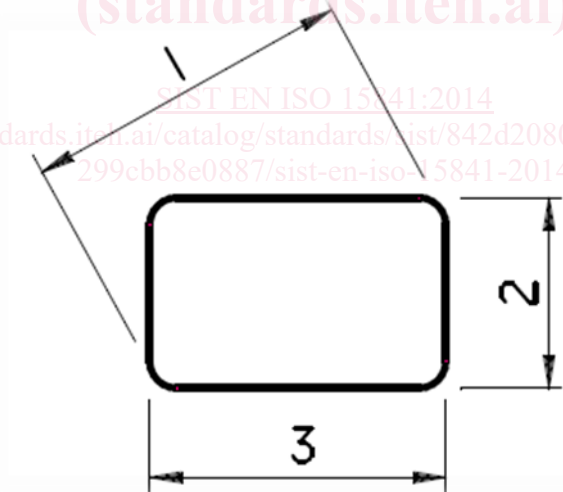
See Figure 1.

- 3.8 width**  
larger of the height and width dimensions of a rectangular wire

See Figure 1.

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**Key**

- 1 diagonal
- 2 height
- 3 width

**Figure 1 — Dimensions of cross section of a wire**