

**Dentistry - Wires for use in orthodontics (ISO  
15841:2014)**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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ICS 11.060.10

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English Version

**Dentistry - Wires for use in orthodontics (ISO 15841:2014)**

Médecine bucco-dentaire - Fils pour utilisation en  
orthodontie (ISO 15841:2014)

Zahnheilkunde - Drähte für die Kieferorthopädie (ISO  
15841:2014)

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EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

This document (EN ISO 15841:2014) has been prepared by Technical Committee ISO/TC 106 “Dentistry” in collaboration with Technical Committee CEN/TC 55 “Dentistry” 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of an identical text or by endorsement, at the latest by February 2015, and conflicting national standards shall be withdrawn at the latest by February 2015.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.

This document supersedes EN ISO 15841:2006.

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### Endorsement notice

The text of ISO 15841:2014 has been approved by CEN as EN ISO 15841:2014 without any modification.

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## Introduction

As with the first edition, the second edition of this International Standard has been developed to help clinicians compare the wires from different manufacturers and suppliers. In particular, it has been written as a result of the development of new test methods.

Specific qualitative and quantitative test methods for demonstrating freedom from unacceptable biological hazards are not included in this International Standard. For the assessment of possible biological hazards, reference can be made to ISO 10993 and ISO 7405.

# 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.

## 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 1942, *Dentistry — Vocabulary*

ISO 6892-1, *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 Recovery*

## 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

### 3.4 diagonal

largest cross-sectional dimension of a rectangular wire

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