

## Dentistry - Laser welding

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 28319:2010 sisaldab Euroopa standardi EN ISO 28319:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.08.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.05.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 28319:2010 consists of the English text of the European standard EN ISO 28319:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.08.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 15.05.2010.

The standard is available from Estonian standardisation organisation.

ICS 11.060.10

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English Version

## Dentistry - Laser welding (ISO 28319:2010)

Médecine bucco-dentaire - Soudage par laser (ISO  
28319:2010)

Zahnheilkunde - Laserschweißen (ISO 28319:2010)

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COMITÉ EUROPÉEN DE NORMALISATION  
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## Foreword

This document (EN ISO 28319:2010) 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of an identical text or by endorsement, at the latest by November 2010, and conflicting national standards shall be withdrawn at the latest by November 2010.

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### Endorsement notice

The text of ISO 28319:2010 has been approved by CEN as a EN ISO 28319:2010 without any modification.

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# Dentistry — Laser welding

## 1 Scope

This International Standard specifies requirements and test methods for laser welding, in the dental laboratory, of materials suitable for use in metallic restorations and appliances.

## 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 3585, *Borosilicate glass 3.3 — Properties*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 6344-1, *Coated abrasives — Grain size analysis — Part 1: Grain size distribution test*

ISO 10271, *Dental metallic materials — Corrosion test methods*

ISO 22674:2006, *Dentistry — Metallic materials for fixed and removable dental 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.

### 3.1

#### **laser welding**

method for joining similar or dissimilar metallic materials, using a laser beam as heat source, with or without a metallic filler material (welding rod), which produces coalescence by melting the metallic materials in order to join them by creating a fusion zone

### 3.2

#### **brazing**

method for joining similar or dissimilar metallic materials by applying heat and using a metallic brazing material as filler

NOTE 1 The brazing materials used have liquidus temperatures above 450 °C, but below the melting range of the metallic materials being joined. They flow by capillary action into the gap between the metallic base materials and join them by creating a metallurgical bond.

NOTE 2 Brazing differs from welding in that brazing does not melt the metallic base materials.