



# SLOVENSKI STANDARD SIST EN ISO 17296-3:2016

01-november-2016

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**Aditivna proizvodnja - Osnovna načela - 3. del: Glavne karakteristike in ustrezne preskusne metode (ISO 17296-3:2014)**

Additive manufacturing - General principles - Part 3: Main characteristics and corresponding test methods (ISO 17296-3:2014)

Additive Fertigung - Grundlagen - Teil 3: Haupteigenschaften und entsprechende Testmethoden (ISO 17296-3:2014)

Fabrication additive - Principes généraux - Partie 3: Principales caractéristiques et méthodes d'essai correspondantes (ISO 17296-3:2014)

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**Ta slovenski standard je istoveten z: EN ISO 17296-3:2016**

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**ICS:**

25.030            3D-tiskanje            Additive manufacturing

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EUROPEAN STANDARD

EN ISO 17296-3

NORME EUROPÉENNE

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English Version

## Additive manufacturing - General principles - Part 3: Main characteristics and corresponding test methods (ISO 17296-3:2014)

Fabrication additive - Principes généraux - Partie 3:  
Principales caractéristiques et méthodes d'essai  
correspondantes (ISO 17296-3:2014)

Additive Fertigung - Grundlagen - Teil 3:  
Haupteigenschaften und entsprechende Testmethoden  
(ISO 17296-3:2014)

This European Standard was approved by CEN on 29 August 2016.

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

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## European foreword

The text of ISO 17296-3:2014 has been prepared by Technical Committee ISO/TC 261 “Additive manufacturing” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 17296-3:2016 by Technical Committee CEN/TC 438 “Additive Manufacturing” the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by March 2017, and conflicting national standards shall be withdrawn at the latest by March 2017.

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.

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INTERNATIONAL  
STANDARD

ISO  
17296-3

First edition  
2014-09-01

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**Additive manufacturing — General  
principles —**

**Part 3:  
Main characteristics and  
corresponding test methods**

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*Fabrication additive — Principes généraux —*  
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*Partie 3: Principales caractéristiques et méthodes d'essai*  
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## ISO 17296-3:2014(E)

### 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](http://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](http://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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 261, *Additive manufacturing*.

ISO 17296 consists of the following parts, under the general title *Additive manufacturing — General principles*:

- Part 1: Terminology
- Part 2: Overview of process categories and feedstock
- Part 3: Main characteristics and corresponding test methods
- Part 4: Overview of data processing

## Introduction

Additive manufacturing is a process of joining bulk raw materials to make parts from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing and formative methodologies. It is an inherent part of the parts development or production process. It is used to manufacture prototypes and production parts.

This part of ISO 17296 aims to offer recommendations and advice to machine manufacturers, feedstock suppliers, machine users, part providers, and customers, to improve communication between these stakeholders concerning test methods.

This International Standard has been developed within a set of consistent documents from terminology to test methods and data exchange.

The manufacturing of parts by additive manufacturing processes is subject to numerous variables. The processes described in ISO 17296-2 can be used to manufacture parts that meet technological requirements only if these factors are controlled, optimized and, if necessary, customized for each order. When assessing parts quality, comparison with the specific requirements is one of the most important aspects.

Additive manufacturing processes require the selective application of thermo-physical and/or chemical mechanisms to generate the part. Thus it is possible to produce parts with different characteristics, depending on the method used and the process parameters. However, complete testing of all parts characteristics is neither cost-effective nor technologically feasible. Therefore, when formulating parts specifications, the nature and scope of testing is an important issue.

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