



# SLOVENSKI STANDARD SIST EN ISO 52909:2024

01-junij-2024

Nadomešča:

SIST EN ISO/ASTM 52909:2023

---

**Dodajalna izdelava kovinskih izdelkov - Lastnosti končnih delov - Odvisnost mehanskih lastnosti kovinskih delov od načina izdelave glede na orientacijo in lokacijo (ISO/ASTM 52909:2024)**

Additive manufacturing of metals - Finished part properties - Orientation and location dependence of mechanical properties for metal parts (ISO/ASTM 52909:2024)

Additive Fertigung von Metallen - Eigenschaften von Fertigteilen - Ausrichtungs- und Lageabhängigkeit der mechanischen Eigenschaften bei Metall-Bauteilen (ISO/ASTM 52909:2024)

Fabrication additive de métaux - Propriétés des pièces finies - Dépendance de l'orientation et de l'emplacement sur les propriétés mécaniques pour les pièces métalliques (ISO/ASTM 52909:2024)

**Ta slovenski standard je istoveten z: EN ISO/ASTM 52909:2024**

**ICS:**

25.030

3D-tiskanje

Additive manufacturing

**SIST EN ISO 52909:2024**

**en,fr,de**



EUROPEAN STANDARD

EN ISO/ASTM 52909

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2024

ICS 25.030

Supersedes EN ISO/ASTM 52909:2022

English Version

Additive manufacturing of metals - Finished part  
properties - Orientation and location dependence of  
mechanical properties for metal parts (ISO/ASTM  
52909:2024)

Fabrication additive de métaux - Propriétés des pièces  
finies - Dépendance de l'orientation et de  
l'emplacement sur les propriétés mécaniques pour les  
pièces métalliques (ISO/ASTM 52909:2024)

Additive Fertigung von Metallen - Eigenschaften von  
Fertigteilen - Ausrichtungs- und Lageabhängigkeit der  
mechanischen Eigenschaften bei Metall-Bauteilen  
(ISO/ASTM 52909:2024)

This European Standard was approved by CEN on 1 March 2024.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword.....	3

**iTeh Standards**  
**(<https://standards.itih.ai>)**  
**Document Preview**

[SIST EN ISO 52909:2024](https://standards.itih.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024)

<https://standards.itih.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024>

## European foreword

This document (EN ISO/ASTM 52909:2024) has been prepared by Technical Committee ISO/TC 261 "Additive manufacturing" in collaboration with 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 September 2024, and conflicting national standards shall be withdrawn at the latest by September 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO/ASTM 52909:2022.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

(<https://standards.iteh.ai>)

## Endorsement notice

The text of ISO/ASTM 52909:2024 has been approved by CEN as EN ISO/ASTM 52909:2024 without any modification.

[SIST EN ISO 52909:2024](https://standards.iteh.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024)

<https://standards.iteh.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024>





# International Standard

**ISO/ASTM 52909**

## Additive manufacturing of metals — Finished part properties — Orientation and location dependence of mechanical properties for metal parts

*Fabrication additive de métaux — Propriétés des pièces finies  
— Dépendance de l'orientation et de l'emplacement sur les  
propriétés mécaniques pour les pièces métalliques*

**Second edition  
2024-02**

[SIST EN ISO 52909:2024](https://standards.iteh.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024)

<https://standards.iteh.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024>

**ISO/ASTM 52909:2024(en)**

# iTeh Standards (<https://standards.iteh.ai>) Document Preview

[SIST EN ISO 52909:2024](https://standards.iteh.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024)

<https://standards.iteh.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024>

**COPYRIGHT PROTECTED DOCUMENT**

© ISO/ASTM International 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester. In the United States, such requests should be sent to ASTM International.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11

Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

ASTM International  
100 Barr Harbor Drive, PO Box C700  
West Conshohocken, PA 19428-2959, USA  
Phone: +610 832 9634  
Fax: +610 832 9635  
Email: [khooper@astm.org](mailto:khooper@astm.org)  
Website: [www.astm.org](http://www.astm.org)

© ISO/ASTM International 2024 – All rights reserved



**ISO/ASTM 52909:2024(en)****Contents**

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
3.1 Definition.....	2
3.2 Abbreviations.....	2
3.3 Acronyms.....	2
<b>4 Summary of document</b> .....	<b>3</b>
<b>5 Significance and use</b> .....	<b>3</b>
<b>6 Procedure</b> .....	<b>4</b>
<b>7 Report</b> .....	<b>4</b>
7.1 General.....	4
7.2 Additional requirements.....	4
<b>Annex A (informative) Example raster (scan) strategies for reporting</b> .....	<b>5</b>
<b>Bibliography</b> .....	<b>12</b>

iTeh Standards  
 (https://standards.iteh.ai)  
 Document Preview

[SIST EN ISO 52909:2024](https://standards.iteh.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024)

<https://standards.iteh.ai/catalog/standards/sist/05fe36ce-ef17-402a-8aa3-d160d8d8a024/sist-en-iso-52909-2024>

# ISO/ASTM 52909:2024(en)

## 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 document 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)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

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](http://www.iso.org/iso/foreword.html).

The document was prepared by Technical Committee ISO/TC 261, *Additive manufacturing*, in cooperation with ASTM Committee F42, *Additive Manufacturing Technologies*, on the basis of a partnership agreement between ISO and ASTM International with the aim to create a common set of ISO/ASTM standards on Additive Manufacturing, and in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 438, *Additive manufacturing*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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](http://www.iso.org/members.html).

This second edition cancels and replaces the first edition (ISO/ASTM 52909:2022), of which it constitutes a minor revision.

The main changes are as follows:

- The third element of the title of the standard has been changed to “Orientation and location dependence of mechanical properties for metal parts”;
- The title for [Figure A.6 b](#)) has been corrected;
- Reference [\[12\]](#) in bibliography has been corrected.

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](http://www.iso.org/members.html).