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Additive manufacturing of metals - Powder bed fusion - Presentation of material properties in material data sheets (ISO/ASTM 52929:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/26

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EUROPEAN STANDARD

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October 2025

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English Version

Additive manufacturing of metals - Powder bed fusion -
Presentation of material properties in material data sheets
(ISO/ASTM 52929:2025)

Fabrication additive de métaux - Fusion sur lit de
poudre - Présentation des propriétés des matériaux
dans les fiches de données de matériaux (ISO/ASTM
52929:2025)

Additive Fertigung von Metallen - Pulverbettbasiertes
Schmelzen - Darstellung von Werkstoffkennwerten in
Materialdatenblättern (ISO/ASTM 52929:2025)

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EN ISO/ASTM 52929:2025 (E)

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European foreword

This document (EN ISO/ASTM 52929:2025) 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.

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Endorsement notice

The text of ISO/ASTM 52929:2025 has been approved by CEN as EN ISO/ASTM 52929:2025 without any modification.



International Standard

ISO/ASTM 52929

Additive manufacturing of metals — Powder bed fusion — Presentation of material properties in material data sheets

*Fabrication additive de métaux — Fusion sur lit de poudre —
Présentation des propriétés des matériaux dans les fiches de
données de matériaux*

**First edition
2025-10**

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ISO/ASTM 52929:2025(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.

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This 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).

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ISO/ASTM 52929:2025(en)**Introduction**

Equipment manufacturers and service providers publish material properties for additively manufactured components or specimens produced by powder bed fusion of metals using laser or electron beams.

Such published material properties are not always comparable, due to missing specifications on how associated measurements were conducted. For example, the number of specimens tested, the number of build jobs used, the specimen's geometry and variations due to orientation are individually determined and usually not published.

The objective of this document is to specify the minimum requirements for the determination and reporting of material properties to support transparency and uniformity of material data sheets.

Additive manufacturing of metals — Powder bed fusion — Presentation of material properties in material data sheets

1 Scope

This document specifies minimum content to be reported in material data sheets to justify the published material property values. This document does neither aim to define compulsory test quantities nor to define any basis for qualification purposes. Individual additions and extensions are permissible. This document is intended for use by organisations throughout the additive manufacturing supply-chain, e.g., manufacturers of PBF-LB/M or PBF-EB/M machines or comparable metal-powder-bed equipment, powder suppliers, service providers and users of the additively manufactured components.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 3534-1, *Statistics — Vocabulary and symbols — Part 1: General statistical terms and terms used in probability*

ISO 17295:2023¹⁾, *Additive manufacturing — General principles — Part positioning, coordinates and orientation*

ISO/ASTM 52900, *Additive manufacturing — General principles — Fundamentals and vocabulary*

ISO/ASTM 52927, *Additive manufacturing — General principles — Main characteristics and corresponding test methods*

ASTM E2586, *Standard Practice for Calculating and Using Basic Statistics*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

1) ISO 17295 cancels and replaces ISO/ASTM 52921:2013 which is still available at <https://www.astm.org/f2921-13r19.html>