SLOVENSKI STANDARD
SIST EN ISO 3252:2023

01-maj-2023

Metalurgija prahov - Slovar (ISO 3252:2023)

Powder metallurgy - Vocabulary (ISO 3252:2023)

Pulvermetallurgie - Begriffe (ISO 3252:2023)

Métallurgie des poudres - Vocabulaire (ISO 3252:2023)

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77.160	Metalurgija prahov	Powder metallurgy

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 3252

March 2023

ICS 01.040.77; 77.160

Supersedes EN ISO 3252:2019

English Version

Powder metallurgy - Vocabulary (ISO 3252:2023)

Métallurgie des poudres - Vocabulaire (ISO 3252:2023)

Pulvermetallurgie - Begriffe (ISO 3252:2023)

This European Standard was approved by CEN on 3 March 2023.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN ISO 3252:2023) has been prepared by Technical Committee ISO/TC 119 "Powder metallurgy" in collaboration with CCMC.

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of an identical text or by endorsement, at the latest by September 2023, and conflicting national standards shall be withdrawn at the latest by September 2023.

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 3252:2019.

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Endorsement notice

The text of ISO 3252:2023 has been approved by CEN as EN ISO 3252:2023 without any modification.

INTERNATIONAL STANDARD

ISO 3252

Sixth edition
2023-02

Powder metallurgy — Vocabulary

Métallurgie des poudres — Vocabulaire

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

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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).

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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.

This document was prepared by Technical Committee ISO/TC 119, *Powder metallurgy,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/SS M11, *Powder metallurgy,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This sixth edition cancels and replaces the fifth edition (ISO 3252:2019), which has been technically revised.

The main changes are as follows:

— several new definitions and figures related to forming (3.2) have been added.

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.

Introduction

The terms are classified alphabetically under the following categories:

— powders;

— forming;

— sintering and characteristics of sintered materials;

— post-sintering treatments;

— powder metallurgy materials.

NOTE Additional information on certain terms defined can be found in the standards given in Notes to entry. These are listed in the Bibliography.

Powder metallurgy — Vocabulary

1 Scope

This document defines terms related to powder metallurgy.

Powder metallurgy is the branch of metallurgy which relates to the manufacture of metallic powders, or of articles made from such powders with or without the addition of non-metallic powders, by the application of forming and sintering processes.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 Terms related to powders

3.1.1
acicular, adj.
needle-like particle form

Note 1 to entry: See Figure 1.

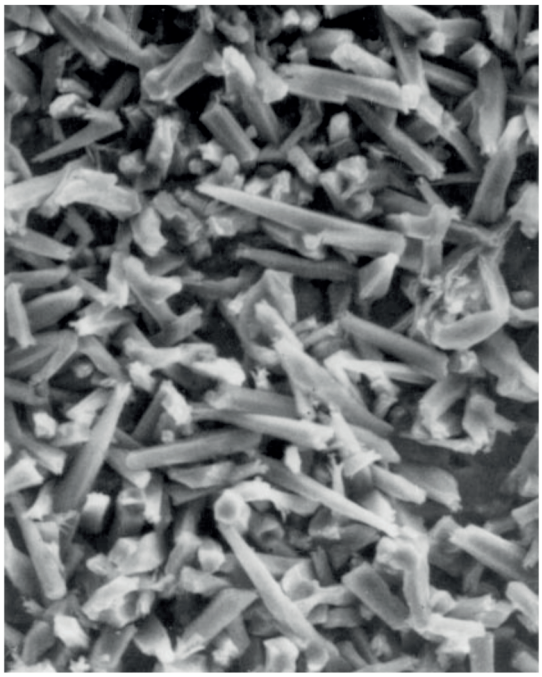
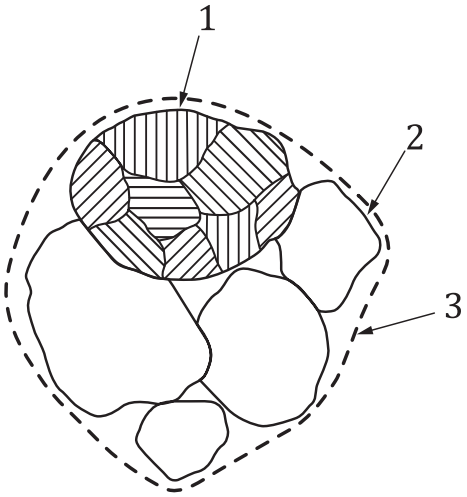


Figure 1 — Acicular

3.1.2
agglomerate
several particles adhering together

Note 1 to entry: See Figure 2.



Key

1 grain
2 particle
3 agglomerate

Figure 2 — Diagramatic representation of grain, particle and agglomerate

3.1.3
alloyed powder
metal powder consisting of at least two constituents that are partially or completely alloyed with each other

3.1.4
angle of repose
basal angle of a pile formed by a powder when freely poured under specified conditions on to a horizontal surface

3.1.5
angular, adj.
sharp-edged or roughly polyhedral

Note 1 to entry: See Figure 3.

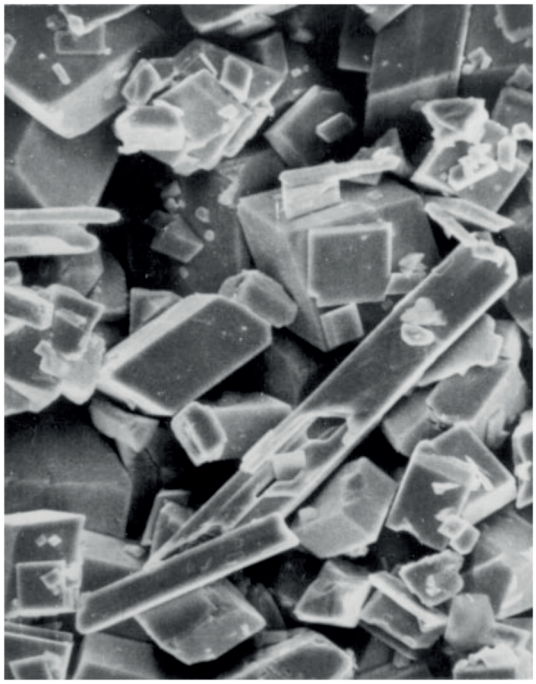


Figure 3 — Angular

3.1.6
apparent density
mass per unit volume of a powder obtained following specific methods

Note 1 to entry: For example, ISO 3923-1 related to free-flowing powders and ISO 3923-2 related to non-free-flowing powders.

3.1.7
atomization
dispersion of a molten metal into particles by a rapidly moving gas or liquid stream or by mechanical means

[SOURCE: ASTM B243-17]

3.1.8
atomized metal powder
metal powder produced by *atomization* (3.1.7)

3.1.9
binder
material added to the powder mix to increase the *green strength* (3.2.48) of the compact or to counteract dusting and *segregation* (3.1.75) of fine particulate mix constituents, and which is expelled during sintering

Note 1 to entry: In hard metals, it is also used for material (binder metal, usually of lower melting point) added to a powder mixture for the specific purpose of cementing together powder particles which alone would not sinter into a strong body.

Note 2 to entry: Cementing medium is also used in the field of hard metals.

3.1.10
blended powder
powder made by *blending* (3.1.11)