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Third edition
2023-09

**Sintered metal materials, excluding
hardmetals — Unnotched impact test
piece**

*Matériaux métalliques frittés, à l'exclusion des métaux-durs —
Éprouvette non entaillée pour essai de résilience*

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Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Dimensions of test piece	1

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Foreword

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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).

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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*, Subcommittee SC 3, *Sampling and testing methods for sintered metal materials (excluding hardmetals)*, 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 third edition cancels and replaces the second edition (ISO 5754:2017), of which it constitutes a minor revision. The changes are as follows:

- Scope, NOTE, revised;
- [Figure 1](#), NOTE 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.

Sintered metal materials, excluding hardmetals — Unnotched impact test piece

1 Scope

This document specifies the dimensions of an unnotched impact test piece of sintered metal materials. The test piece may be obtained directly by pressing and sintering or by machining a sintered part.

This document applies to all sintered metals and alloys, with the exception of hardmetals. However, for certain materials (for example, materials with low porosity or materials with high ductility), it may be more appropriate to use a notched test piece which, in this case, will give results with less scatter. (In this case, refer to ISO 148-1.)

NOTE For porous sintered materials, the results obtained from impact tests on unnotched specimens according to this standard are not fully comparable with results obtained from tests on solid metals tested on notched specimens.

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 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

3 Terms and definitions

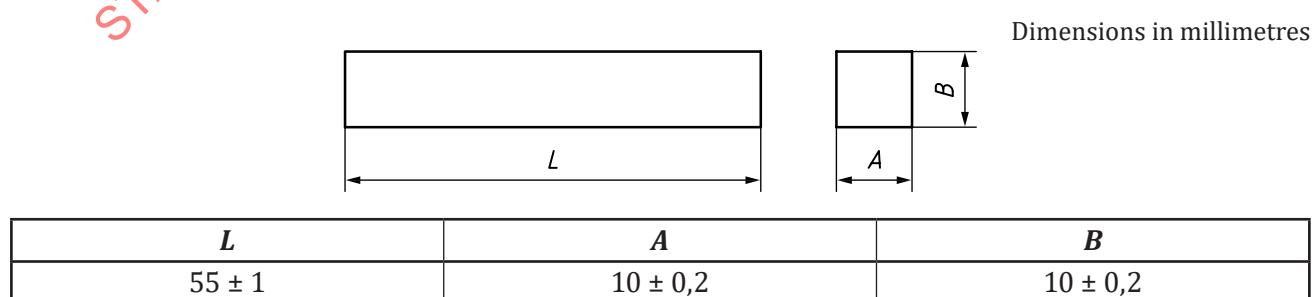
No terms and definitions are listed in this document.

ISO and IEC maintain terminology 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/>

4 Dimensions of test piece

The dimensions of the test piece shall be those shown in [Figure 1](#).



NOTE In order to have a robust tool design, a radius of up to 1 mm can be applied in the corners of the tool die and punches.

Figure 1 — Dimensions of the test piece

The test piece shall be marked in such a way that the direction of pressing may be identified.

The impact test shall be carried out on a Charpy impact testing machine, in accordance with ISO 148-1.

Unless otherwise specified, the direction of impact shall be normal to the pressing direction.

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