

STN	Spekané karbidy Odber vzoriek a skúšanie (ISO 4489: 2019)	STN EN ISO 4489 42 0878
------------	--	---

Hardmetals - Sampling and testing (ISO 4489:2019)

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. 03/20

Obsahuje: EN ISO 4489:2019, ISO 4489:2019

Oznámením tejto normy sa ruší
STN EN 24489 (42 0892) z januára 2001

130379

EUROPEAN STANDARD

EN ISO 4489

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2019

ICS 77.160

Supersedes EN 24489:1993

English Version

Hardmetals - Sampling and testing (ISO 4489:2019)Métaux-durs - Échantillonnage et essais (ISO
4489:2019)Hartmetalle - Probenahme und Prüfung (ISO
4489:2019)

This European Standard was approved by CEN on 4 August 2018.

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, Turkey 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**

EN ISO 4489:2019 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 4489:2019) 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of an identical text or by endorsement, at the latest by April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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 24489:1993.

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, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 4489:2019 has been approved by CEN as EN ISO 4489:2019 without any modification.

INTERNATIONAL STANDARD

ISO
4489

Second edition
2019-09

Hardmetals — Sampling and testing

Métaux-durs — Échantillonnage et essais



Reference number
ISO 4489:2019(E)

© ISO 2019

ISO 4489:2019(E)**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

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.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Sampling	1
5 Testing	2
6 Test report	2
Bibliography	3

ISO 4489:2019(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).

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).

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 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 119, *Powder metallurgy*, Subcommittee SC 4, *Sampling and testing methods for hardmetals*.

This second edition cancels and replaces the first edition (ISO 4489:1978), which has been technically revised.

The main changes compared to the previous edition are as follows:

- the title has been changed to “*Hardmetals — Sampling and testing*”;
- [Clause 2](#) has been revised;
- in [Table 1](#), second row: the reference to ISO 3326 has been replaced;
- in [Table 1](#), fourth row: the reference has been replaced by ISO 3738-1 and ISO 3738-2;
- in [Table 1](#), fifth row: the reference to ISO 3878 has been replaced by ISO 6507-1, ISO 6507-2, ISO 6507-3 and ISO 6507-4;
- in [Table 2](#), a new second row has been added;
- in [Table 2](#), third row: the reference has been replaced by ISO 4499-1, ISO 4499-2 and ISO 4499-3;
- in [Table 2](#), fourth row: the reference has been replaced by ISO 4499-4;
- in [Table 2](#), a new fifth row has been added;
- the Bibliography has been added.

Hardmetals — Sampling and testing

1 Scope

This document specifies procedures for sampling and testing of hardmetals for the determination of their physical and mechanical characteristics.

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 3369, *Impermeable sintered metal materials and hardmetals — Determination of density*

ISO 3738-1, *Hardmetals — Rockwell hardness test (scale A) — Part 1: Test method*

ISO 3738-2, *Hardmetals — Rockwell hardness test (scale A) — Part 2: Preparation and calibration of standard test blocks*

ISO 6507-1, *Metallic materials — Vickers hardness test — Part 1: Test method*

ISO 6507-2, *Metallic materials — Vickers hardness test — Part 2: Verification and calibration of testing machines*

ISO 6507-3, *Metallic materials — Vickers hardness test — Part 3: Calibration of reference blocks*

ISO 6507-4, *Metallic materials — Vickers hardness test — Part 4: Tables of hardness values*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN