ICS 19.060, 77.040.10 SLOVENSKÁ TECHNICKÁ NORMA September 2018

STN	**Kovové materiály Knoopova skúška tvrdosti Časť 3: Kalibrácia tvrdomerných doštičiek (ISO 4545-3: 2017)**	**STN EN ISO 4545-3 42 0376**

Metallic materials - Knoop hardness test - Part 3: Calibration of reference blocks (ISO 4545-3:2017)

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. 08/18

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Oznámením tejto normy sa ruší
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 4545-3

March 2018

ICS 19.060; 77.040.10 Supersedes EN ISO 4545-3:2005

English Version

Metallic materials - Knoop hardness test - Part 3: Calibration of reference blocks (ISO 4545-3:2017)

Matériaux métalliques - Essai de dureté Knoop - Partie 3: Étalonnage des blocs de référence (ISO 4545-3:2017)

Metallische Werkstoffe - Härteprüfung nach Knoop - Teil 3: Kalibrierung von Härtevergleichsplatten (ISO 4545-3:2017

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European foreword

This document (EN ISO 4545-3:2018) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 101 "Test methods for steel (other than chemical analysis)" 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of an identical text or by endorsement, at the latest by September 2018, and conflicting national standards shall be withdrawn at the latest by September 2018.

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.

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Endorsement notice

The text of ISO 4545-3:2017 has been approved by CEN as EN ISO 4545-3:2018 without any modification.

INTERNATIONAL STANDARD

ISO 4545-3

Second edition
2017-12

Metallic materials — Knoop hardness test —

Part 3: Calibration of reference blocks

Matériaux métalliques — Essai de dureté Knoop —

Partie 3: Étalonnage des blocs de référence

Reference number
ISO 4545-3:2017(E)

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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 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 164, *Mechanical testing of metals*, Subcommittee SC 3, *Hardness testing*.

This second edition cancels and replaces the third edition (ISO 4545-3:2005), which has been technically revised.

Significant technical changes from the previous edition of this document include:

— the requirements for the maximum test surface area of the reference block have been added;

— the requirements for the maximum uncertainty of the line intervals on the stage micrometer have been revised;

— the requirements for the calibration and verification of the measuring system have been revised, as per ISO 4545-2;

— the requirements for the uniformity of the reference block hardness have been revised to account for different numbers of calibration indentations;

— the timing requirements for the approach velocity and the time duration at maximum test force have been revised to indicate a target time value;

— Annex B has been revised

A list of all parts in the ISO 4545 series can be found on the ISO website.

INTERNATIONAL STANDARD **ISO 4545-3:2017(E)**

Metallic materials — Knoop hardness test —

Part 3: Calibration of reference blocks

1 Scope

This document specifies the method for the calibration of reference blocks to be used for the indirect verification of Knoop hardness testing machines as specified in ISO 4545-2.

The method is applicable only for indentations with long diagonals ≥0,020 mm.

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 376:2011, *Metallic materials — Calibration of force-proving instruments used for the verification of uniaxial testing machines*

ISO 4545-1, *Metallic materials — Knoop hardness test — Part 1: Test method*

ISO 4545-2, *Metallic materials — Knoop hardness test — Part 2: Verification and calibration of testing machines*

