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Metallmaterjalid. Vickersi kõvadusteim. Osa 1: Teimimeetod

Metallic materials - Vickers hardness test - Part 1: Test method

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 6507-1:2006 sisaldab Euroopa standardi EN ISO 6507-1:2005 ingliskeelset teksti. Käesolev dokument on jõustatud 27.02.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 6507-1:2006 consists of the English text of the European standard EN ISO 6507-1:2005. This document is endorsed on 27.02.2006 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: See ISO 6507 osa määrab kindlaks metallmaterjalide Vickersi kõvadusteimi meetodi teimimisjõu kolme diapasooniga.	**Scope:** This part of ISO 6507 specifies the Vickers hardness test method, for the three different ranges of test force for metallic materials.

ICS 77.040.10

Võtmesõnad: katsed, kõvadusteim, metallurgiatooted, proovikeha sissesurumisele avaldatava vastupanu (i, proovikehad, tähistamine, vickersi kõvadusteim

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Metallic materials - Vickers hardness test - Part 1: Test method (ISO 6507-1:2005)

Matériaux métalliques - Essai de dureté Vickers - Partie 1: Méthode d'essai (ISO 6507-1:2005)

Metallische Werkstoffe - Härteprüfung nach Vickers - Teil 1: Prüfverfahren (ISO 6507-1:2005)

This European Standard was approved by CEN on 14 December 2005.

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Foreword

This document (EN ISO 6507-1:2005) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 1 "Steel - Mechanical testing", 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of an identical text or by endorsement, at the latest by June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

This document supersedes EN ISO 6507-1:1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 6507-1:2005 has been approved by CEN as EN ISO 6507-1:2005 without any modifications.

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INTERNATIONAL STANDARD

ISO 6507-1

Third edition
2005-12-15

Metallic materials — Vickers hardness test —

Part 1: Test method

Matériaux métalliques — Essai de dureté Vickers —

Partie 1: Méthode d'essai

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Case postale 56 • CH-1211 Geneva 20
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 6507-1 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 3, *Hardness testing*.

This third edition, together with ISO 6507-4, cancels and replaces the second edition (ISO 6507-1:1997) which has been technically revised.

ISO 6507 consists of the following parts, under the general title *Metallic materials — Vickers hardness test*:

— *Part 1: Test method*

— *Part 2: Verification and calibration of testing machines*

— *Part 3: Calibration of reference blocks*

— *Part 4: Tables of hardness values*

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Introduction

The periodic checking of the testing machine described in informative Annex C is good metrological practice. It is intended to make the annex normative in the next revision of this part of ISO 6507 Standard.

For automated measuring systems this standard should be applied accordingly.

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Metallic materials — Vickers hardness test —

Part 1: Test method

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1 Scope

This part of ISO 6507 specifies the Vickers hardness test method, for the three different ranges of test force for metallic materials (see Table 1).

Table 1 — Ranges of test force

Ranges of test force, F N	Hardness symbol	Designation
$F \geqslant 49{,}03$	$\geqslant$ HV 5	Vickers hardness test
$1{,}961 \leqslant F < 49{,}03$	HV 0,2 to < HV 5	Low-force Vickers hardness test
$0{,}098\ 07 \leqslant F < 1{,}961$	HV 0,01 to < HV 0,2	Vickers microhardness test

The Vickers hardness test is specified in this part of ISO 6507 for lengths of indentation diagonals between 0,020 mm and 1,400 mm.

NOTE 1 For indentation diagonals less than 0,020 mm, the increase of the uncertainty has to be considered.

NOTE 2 In general, decreasing the test force increases the scatter of results of the measurements. This is particularly true for low-force Vickers hardness tests and Vickers microhardness tests, where the principal limitation will arise in the measurement of the diagonals of the indentation. For Vickers microhardness, the accuracy of determination of the mean diagonal length is unlikely to be better than $\pm$ 0,001 mm (see Bibliography [2]-[5]).

For specific materials and/or products, particular International Standards exist.

2 Normative references

The following referenced documents are indispensable for the application 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 6507-2:2005, *Metallic materials — Vickers hardness test — Part 2: Verification and calibration of testing machines*

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

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