

Metallic materials - Brinell hardness test - Part 4: Table of hardness values (ISO 6506-4:2014)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 6506-4:2014 sisaldab Euroopa standardi EN ISO 6506-4:2014 inglisekeelset teksti.	This Estonian standard EVS-EN ISO 6506-4:2014 consists of the English text of the European standard EN ISO 6506-4:2014.
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ICS 77.040.10

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English Version

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hardness values (ISO 6506-4:2014)**

Matériaux métalliques - Essai de dureté Brinell - Partie 4:
Tableau des valeurs de dureté (ISO 6506-4:2014)

Metallische Werkstoffe - Härteprüfung nach Brinell - Teil 4:
Tabelle zur Bestimmung der Härte (ISO 6506-4:2014)

This European Standard was approved by CEN on 30 August 2014.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 6506-4:2014) 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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.

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Endorsement notice

The text of ISO 6506-4:2014 has been approved by CEN as EN ISO 6506-4:2014 without any modification.

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Metallic materials — Brinell hardness test —

Part 4: Table of hardness values

1 Scope

This part of ISO 6506 gives a table of the Brinell hardness values for use in tests on flat surfaces.

2 Determination of the Brinell hardness for testing on flat surfaces

See [Tables 1](#) and [2](#). Where the measured indentation diameter value is not given in the table, a linear interpolation between the two adjacent values and between the two corresponding hardness values should be carried out. Each hardness value is quoted to three significant figures, but is calculated from the nominal force-diameter index rather than from the specified force value, in order to avoid variations in the hardness values calculated at a specific force-diameter index. In some cases, this calculation method leads to an error of one digit in the least significant figure.

Table 1

Ball indenter <i>D</i> mm	Force-diameter index $0,102 \times F/D^2$					
	30	15	10	5	2,5	1
	Test force <i>F</i>					
10	29,42 kN	14,71 kN	9,807 kN	4,903 kN	2,452 kN	980,7 N
5	7,355 kN	--	2,452 kN	1,226 kN	612,9 N	245,2 N
2,5	1,839 kN	--	612,9 N	306,5 N	153,2 N	61,29 N
1	294,2 N	--	98,07 N	49,03 N	24,52 N	9,807 N

Table 2

Ball indenter <i>D</i> mm				Force-diameter index $0,102 \times F/D^2$					
10	5	2,5	1	30	15	10	5	2,5	1
Mean diameter of the indentation <i>d</i> mm				Brinell hardness HBW					
2,40	1,200	0,600 0	0,240	653	327	218	109	54,5	21,8
2,41	1,205	0,602 5	0,241	648	324	216	108	54,0	21,6
2,42	1,210	0,605 0	0,242	643	321	214	107	53,5	21,4
2,43	1,215	0,607 5	0,243	637	319	212	106	53,1	21,2
2,44	1,220	0,610 0	0,244	632	316	211	105	52,7	21,1
2,45	1,225	0,612 5	0,245	627	313	209	104	52,2	20,9
2,46	1,230	0,615 0	0,246	621	311	207	104	51,8	20,7