



SLOVENSKI STANDARD SIST EN ISO 6507-4:2018

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Nadomešča:
SIST EN ISO 6507-4:2006

**Kovinski materiali - Preskus trdote po Vickersu - 4. del: Tabela za določanje trdote
(ISO 6507-4:2018)**

Metallic materials - Vickers hardness test - Part 4: Tables and hardness values (ISO 6507-4:2018)

Metallische Werkstoffe - Härteprüfung nach Vickers - Teil 4: Tabellen zur Bestimmung der Härtewerte (ISO 6507-4:2018)

Matériaux métalliques - Essai de dureté Vickers - Partie 4: Tableaux des valeurs de dureté (ISO 6507-4:2018)

Ta slovenski standard je istoveten z: EN ISO 6507-4:2018

ICS:

77.040.10 Mehansko preskušanje kovin Mechanical testing of metals

SIST EN ISO 6507-4:2018

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Metallic materials - Vickers hardness test - Part 4: Tables of hardness values (ISO 6507-4:2018)

Matériaux métalliques - Essai de dureté Vickers - Partie 4: Tableaux de valeurs de dureté (ISO 6507-4:2018)

Metallische Werkstoffe - Härteprüfung nach Vickers - Teil 4: Tabellen zur Bestimmung der Härtewerte (ISO 6507-4:2018)

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European foreword

This document (EN ISO 6507-4:2018) 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of an identical text or by endorsement, at the latest by September 2018, and conflicting national standards shall be withdrawn at the latest by September 2018.

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INTERNATIONAL
STANDARD

ISO
6507-4

Second edition
2018-02

**Metallic materials — Vickers hardness
test —**

**Part 4:
Tables of hardness values**

Matériaux métalliques — Essai de dureté Vickers —

Partie 4: Tableaux de valeurs de dureté

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ISO 6507-4:2018(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).

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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. (standards.iteh.ai)

This document was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 3, *Hardness testing*. [SIST EN ISO 6507-4:2018](https://standards.iteh.ai/catalog/standards/sist/3fe089be-0a81-4520-b55c-315211408111/iso-6507-4:2018)

This second edition cancels and replaces the first edition (ISO 6507-4:2005), which has been technically revised.

A list of all parts in the ISO 6507 series can be found on the ISO website.

Metallic materials — Vickers hardness test —

Part 4: Tables of hardness values

1 Scope

This document gives tables of Vickers hardness for use in tests carried out in accordance with ISO 6507-1.

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

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Tables of Vickers hardness values

The values given in [Tables 1, 2](#) and [3](#) were calculated from the Vickers hardness formula in accordance with ISO 6507-1.

See [Table 1](#) for range < HV 0,2.

See [Table 2](#) for range HV 0,2 to HV 3.

See [Table 3](#) for range HV 5 to HV 100.

Table 1 — Range < HV 0,2

Mean diagonal of indentation	Test force, <i>F</i>							
	N							
	0,009 807	0,019 61	0,049 03	0,098 07	0,196 12	0,245 2	0,490 3	0,980 7
<i>d</i> mm	Vickers hardness							
	HV 0,001	HV 0,002	HV 0,005	HV 0,01	HV 0,02	HV 0,025	HV 0,05	HV 0,1
0,020 0	4,64	9,27	23,18	46,36	92,72	115,9	231,8	463,6
0,020 2	4,54	9,09	22,72	45,45	90,89	113,6	227,2	454,5
0,020 4	4,46	8,91	22,28	44,56	89,12	111,4	222,8	445,6
0,020 6	4,37	8,74	21,85	43,70	87,39	109,3	218,5	437,0
0,020 8	4,29	8,57	21,43	42,86	85,72	107,2	214,3	428,6
0,021 0	4,21	8,41	21,02	42,05	84,10	105,1	210,2	420,5
0,021 2	4,13	8,25	20,63	41,26	82,52	103,2	206,3	412,6
0,021 4	4,05	8,10	20,25	40,49	80,98	101,2	202,5	404,9
0,021 6	3,97	7,95	19,87	39,75	79,49	99,38	198,7	397,5
0,021 8	3,90	7,80	19,51	39,02	78,04	97,57	195,1	390,2
0,022 0	3,83	7,66	19,16	38,32	76,62	95,80	191,6	383,2
0,022 2	3,76	7,52	18,81	37,63	75,25	94,08	188,1	376,3
0,022 4	3,70	7,39	18,48	36,96	73,91	92,41	184,8	369,6
0,022 6	3,63	7,26	18,15	36,31	72,61	90,78	181,5	363,1
0,022 8	3,57	7,13	17,84	35,67	71,34	89,20	178,4	356,7
0,023 0	3,51	7,01	17,53	35,06	70,11	87,65	175,3	350,6
0,023 2	3,45	6,89	17,23	34,45	68,90	86,15	172,3	344,5
0,023 4	3,39	6,77	16,93	33,87	67,73	84,68	169,3	338,7
0,023 6	3,33	6,66	16,65	33,30	66,59	83,25	166,5	333,0
0,023 8	3,27	6,55	16,37	32,74	65,47	81,86	163,7	327,4
0,024 0	3,22	6,44	16,10	32,20	64,39	80,50	161,0	322,0
0,024 2	3,17	6,33	15,83	31,67	63,33	79,17	158,3	316,7
0,024 4	3,11	6,23	15,57	31,15	62,29	77,88	155,7	311,5
0,024 6	3,06	6,13	15,32	30,64	61,28	76,62	153,2	306,4
0,024 8	3,02	6,03	15,07	30,15	60,30	75,39	150,7	301,5
0,025 0	2,97	5,93	14,83	29,67	59,34	74,19	148,3	296,7
0,025 2	2,92	5,84	14,60	29,20	58,40	73,01	146,0	292,0
0,025 4	2,87	5,75	14,37	28,74	57,48	71,87	143,7	287,4
0,025 6	2,83	5,66	14,15	28,30	56,59	70,75	141,5	283,0
0,025 8	2,79	5,57	13,93	27,86	55,72	69,66	139,3	278,6
0,026 0	2,74	5,49	13,72	27,43	54,86	68,59	137,2	274,3
0,026 2	2,70	5,40	13,51	27,02	54,03	67,55	135,1	270,2
0,026 4	2,66	5,32	13,30	26,61	53,21	66,53	133,0	266,1
0,026 6	2,62	5,24	13,10	26,21	52,41	65,53	131,0	262,1
0,026 8	2,58	5,16	12,91	25,82	51,63	64,56	129,1	258,2

Table 1 (continued)

Mean diagonal of indentation	Test force, F							
	N							
	0,009 807	0,019 61	0,049 03	0,098 07	0,196 12	0,245 2	0,490 3	0,980 7
d mm	Vickers hardness							
	HV 0,001	HV 0,002	HV 0,005	HV 0,01	HV 0,02	HV 0,025	HV 0,05	HV 0,1
0,027 0	2,54	5,09	12,72	25,44	50,87	63,60	127,2	254,4
0,027 2	2,51	5,01	12,53	25,07	50,13	62,67	125,3	250,7
0,027 4	2,47	4,94	12,35	24,70	49,40	61,76	123,5	247,0
0,027 6	2,43	4,87	12,17	24,34	48,69	60,87	121,7	243,4
0,027 8	2,40	4,80	12,00	24,00	47,99	60,00	120,0	240,0
0,028 0	2,37	4,73	11,83	23,65	47,30	59,14	118,3	236,5
0,028 2	2,33	4,66	11,66	23,32	46,64	58,31	116,6	233,2
0,028 4	2,30	4,60	11,50	22,99	45,98	57,49	115,0	229,9
0,028 6	2,27	4,53	11,33	22,67	45,34	56,69	113,3	226,7
0,028 8	2,24	4,47	11,18	22,36	44,71	55,90	111,8	223,6
0,029 0	2,21	4,41	11,02	22,05	44,10	55,13	110,2	220,5
0,029 2	2,18	4,35	10,87	21,75	43,50	54,38	108,7	217,5
0,029 4	2,15	4,29	10,73	21,46	42,91	53,64	107,3	214,6
0,029 6	2,12	4,23	10,58	21,17	42,33	52,92	105,8	211,7
0,029 8	2,09	4,18	10,44	20,88	41,76	52,21	104,4	208,8
0,030 0	2,06	4,12	10,30	20,61	41,21	51,52	103,0	206,1
0,030 2	2,03	4,07	10,17	20,33	40,66	50,84	101,7	203,3
0,030 4	2,01	4,01	10,03	20,07	40,13	50,17	100,3	200,7
0,030 6	1,98	3,96	9,90	19,81	39,61	49,52	99,02	198,1
0,030 8	1,95	3,91	9,77	19,55	39,09	48,88	97,74	195,5
0,031 0	1,93	3,86	9,65	19,30	38,59	48,25	96,48	193,0
0,031 2	1,91	3,81	9,52	19,05	38,10	47,63	95,25	190,5
0,031 4	1,88	3,76	9,40	18,81	37,61	47,03	94,04	188,1
0,031 6	1,86	3,71	9,28	18,57	37,14	46,43	92,85	185,7
0,031 8	1,83	3,67	9,17	18,34	36,67	45,85	91,69	183,4
0,032 0	1,81	3,62	9,05	18,11	36,22	45,28	90,54	181,1
0,032 2	1,79	3,58	8,94	17,89	35,77	44,72	89,42	178,9
0,032 4	1,77	3,53	8,83	17,67	35,33	44,17	88,32	176,7
0,032 6	1,74	3,49	8,72	17,45	34,90	43,63	87,24	174,5
0,032 8	1,72	3,45	8,62	17,24	34,47	43,10	86,18	172,4
0,033 0	1,70	3,41	8,51	17,03	34,06	42,58	85,14	170,3
0,033 2	1,68	3,36	8,41	16,82	33,65	42,07	84,12	168,2
0,033 4	1,66	3,32	8,31	16,62	33,24	41,56	83,11	166,2
0,033 6	1,64	3,28	8,21	16,43	32,85	41,07	82,12	164,3
0,033 8	1,62	3,25	8,12	16,23	32,46	40,59	81,16	162,3

Table 1 (continued)

Mean diagonal of indentation	Test force, F							
	N							
	0,009 807	0,019 61	0,049 03	0,098 07	0,196 12	0,245 2	0,490 3	0,980 7
d mm	Vickers hardness							
	HV 0,001	HV 0,002	HV 0,005	HV 0,01	HV 0,02	HV 0,025	HV 0,05	HV 0,1
0,034 0	1,60	3,21	8,02	16,04	32,08	40,11	80,20	160,4
0,034 2	1,59	3,17	7,93	15,86	31,71	39,64	79,27	158,6
0,034 4	1,57	3,13	7,83	15,67	31,34	39,18	78,35	156,7
0,034 6	1,55	3,10	7,74	15,49	30,98	38,73	77,45	154,9
0,034 8	1,53	3,06	7,66	15,31	30,62	38,29	76,56	153,1
0,035 0	1,51	3,03	7,57	15,14	30,27	37,85	75,69	151,4
0,035 2	1,50	2,99	7,48	14,97	29,93	37,42	74,83	149,7
0,035 4	1,48	2,96	7,40	14,80	29,59	37,00	73,99	148,0
0,035 6	1,46	2,93	7,32	14,63	29,26	36,59	73,16	146,3
0,035 8	1,45	2,89	7,23	14,47	28,94	36,18	72,34	144,7
0,036 0	1,43	2,86	7,15	14,31	28,62	35,78	71,54	143,1
0,036 2	1,42	2,83	7,08	14,15	28,30	35,38	70,75	141,5
0,036 4	1,40	2,80	7,00	14,00	27,99	35,00	69,98	140,0
0,036 6	1,38	2,77	6,92	13,84	27,69	34,61	69,21	138,4
0,036 8	1,37	2,74	6,85	13,69	27,39	34,24	68,46	136,9
0,037 0	1,35	2,71	6,77	13,55	27,09	33,87	67,73	135,5
0,037 2	1,34	2,68	6,70	13,40	26,80	33,51	67,00	134,0
0,037 4	1,33	2,65	6,63	13,26	26,51	33,15	66,28	132,6
0,037 6	1,31	2,62	6,56	13,12	26,23	32,80	65,58	131,2
0,037 8	1,30	2,60	6,49	12,98	25,96	32,45	64,89	129,8
0,038 0	1,28	2,57	6,42	12,84	25,68	32,11	64,21	128,4
0,038 2	1,27	2,54	6,35	12,71	25,41	31,77	63,54	127,1
0,038 4	1,26	2,51	6,29	12,58	25,15	31,44	62,88	125,8
0,038 6	1,24	2,49	6,22	12,45	24,89	31,12	62,23	124,5
0,038 8	1,23	2,46	6,16	12,32	24,63	30,80	61,59	123,2
0,039 0	1,22	2,44	6,10	12,19	24,38	30,48	60,96	121,9
0,039 2	1,21	2,41	6,03	12,07	24,13	30,17	60,34	120,7
0,039 4	1,19	2,39	5,97	11,95	23,89	29,87	59,73	119,5
0,039 6	1,18	2,36	5,91	11,83	23,65	29,57	59,12	118,3
0,039 8	1,17	2,34	5,85	11,71	23,41	29,27	58,53	117,1
0,040 0	1,16	2,32	5,79	11,59	23,18	28,98	57,95	115,9
0,040 2	1,15	2,29	5,74	11,48	22,95	28,69	57,37	114,8
0,040 4	1,14	2,27	5,68	11,36	22,72	28,41	56,81	113,6
0,040 6	1,13	2,25	5,62	11,25	22,50	28,13	56,25	112,5
0,040 8	1,11	2,23	5,57	11,14	22,28	27,85	55,70	111,4

Table 1 (continued)

Mean diagonal of indentation	Test force, F							
	N							
	0,009 807	0,019 61	0,049 03	0,098 07	0,196 12	0,245 2	0,490 3	0,980 7
d mm	Vickers hardness							
	HV 0,001	HV 0,002	HV 0,005	HV 0,01	HV 0,02	HV 0,025	HV 0,05	HV 0,1
0,041 0	1,10	2,21	5,52	11,03	22,06	27,58	55,16	110,3
0,041 2	1,09	2,18	5,46	10,93	21,85	27,32	54,62	109,3
0,041 4	1,08	2,16	5,41	10,82	21,64	27,05	54,09	108,2
0,041 6	1,07	2,14	5,36	10,72	21,43	26,79	53,58	107,2
0,041 8	1,06	2,12	5,31	10,61	21,23	26,54	53,06	106,1
0,042 0	1,05	2,10	5,26	10,51	21,02	26,29	52,56	105,1
0,042 2	1,04	2,08	5,21	10,41	20,83	26,04	52,06	104,1
0,042 4	1,03	2,06	5,16	10,32	20,63	25,79	51,57	103,2
0,042 6	1,02	2,04	5,11	10,22	20,44	25,55	51,09	102,2
0,042 8	1,01	2,02	5,06	10,12	20,25	25,31	50,61	101,2
0,043 0	1,00	2,01	5,01	10,03	20,06	25,08	50,14	100,3
0,043 2	—	1,99	4,97	9,94	19,87	24,85	49,68	99,37
0,043 4	—	1,97	4,92	9,85	19,69	24,62	49,22	98,46
0,043 6	—	1,95	4,88	9,76	19,51	24,39	48,77	97,56
0,043 8	—	1,93	4,83	9,67	19,33	24,17	48,33	96,67
0,044 0	—	1,92	4,79	9,58	19,16	23,95	47,89	95,79
0,044 2	—	1,90	4,75	9,49	18,98	23,73	47,46	94,93
0,044 4	—	1,88	4,70	9,41	18,81	23,52	47,03	94,07
0,044 6	—	1,86	4,66	9,32	18,64	23,31	46,61	93,23
0,044 8	—	1,85	4,62	9,24	18,48	23,10	46,20	92,40
0,045 0	—	1,83	4,58	9,16	18,31	22,90	45,79	91,58
0,045 2	—	1,82	4,54	9,08	18,15	22,70	45,38	90,77
0,045 4	—	1,80	4,50	9,00	17,99	22,50	44,98	89,97
0,045 6	—	1,78	4,46	8,92	17,84	22,30	44,59	89,19
0,045 8	—	1,77	4,42	8,84	17,68	22,10	44,20	88,41
0,046 0	—	1,75	4,38	8,76	17,53	21,91	43,82	87,64
0,046 2	—	1,74	4,34	8,69	17,38	21,72	43,44	86,88
0,046 4	—	1,72	4,31	8,61	17,23	21,54	43,06	86,14
0,046 6	—	1,71	4,27	8,54	17,08	21,35	42,70	85,40
0,046 8	—	1,69	4,23	8,47	16,93	21,17	42,33	84,67
0,047 0	—	1,68	4,20	8,40	16,79	20,99	41,97	83,95
0,047 2	—	1,66	4,16	8,32	16,65	20,81	41,62	83,24
0,047 4	—	1,65	4,13	8,25	16,51	20,64	41,27	82,54
0,047 6	—	1,64	4,09	8,18	16,37	20,46	40,92	81,85
0,047 8	—	1,62	4,06	8,12	16,23	20,29	40,58	81,17