

硬度試驗各種硬度換算表

Steel (鋼 · 鐵)

Rockwell				Rockwell Superficial			Vickers	Brinell	Shore
HRA	HRB	HRC	HRD	15N	30N	45N	HV	HB	HS
60kgf	100kgf	150kgf	100kgf	15kgf	30kgf	45kgf	50kgf	3000kgf	JIS
85.6		68.0	76.9	93.2	84.4	75.4	940		97.6
85.3		67.5	76.5	93.0	84.0	74.3	920		96.4
85.0		67.0	76.1	92.9	83.6	74.2	900		95.2
84.7		66.4	75.7	92.7	83.1	73.6	880		94.0
84.4		65.9	75.3	92.5	82.7	73.1	860		92.8
84.1		65.3	74.8	92.3	82.2	72.2	840		91.5
83.8		64.7	74.3	92.1	81.7	71.8	820		90.2
83.4		64.0	73.8	91.8	81.1	71.0	800		88.9
83.0		63.3	73.3	91.5	80.4	70.2	780		87.5
82.6		62.5	72.6	91.2	79.7	69.4	760		86.2
82.2		61.8	72.1	91.0	79.1	68.6	740		84.8
81.8		61.0	71.5	90.7	78.4	67.7	720		83.3
81.3		60.1	70.8	90.3	77.6	66.7	700		81.8
81.1		59.7	70.5	90.1	77.2	66.2	690		81.1
80.8		59.2	70.1	89.8	76.8	65.7	680		80.3
80.6		58.8	69.8	89.7	76.4	65.3	670		79.6
80.3		58.3	69.4	89.5	75.9	64.7	660		78.8
80.0		57.8	69.0	89.2	75.5	64.1	650		78.0
79.8		57.3	68.7	89.0	75.1	63.5	640		77.2
79.5		56.8	68.3	88.8	74.6	63.0	630		76.4
79.2		56.3	67.9	88.5	74.2	62.4	620		75.6
78.9		55.7	67.5	88.2	73.6	61.7	610		74.7
78.6		55.2	67.0	88.0	73.2	61.2	600		73.9
78.4		54.7	66.7	87.8	72.7	60.5	590		73.1
78.0		54.1	66.2	87.5	72.1	59.9	580		72.2
77.8		53.6	65.8	87.2	71.7	59.3	570		71.3
77.4		53.0	65.4	86.9	71.2	58.6	560		70.4
77.0		52.3	64.8	86.6	70.5	57.8	550	505	69.6
76.7		51.7	64.4	86.3	70.0	57.0	540	496	68.7
76.4		51.1	63.9	86.0	69.5	56.2	530	488	67.7
76.1		50.5	63.5	85.7	69.0	55.6	520	480	66.8
75.7		49.8	62.9	85.4	68.3	54.7	510	473	65.9
75.3		49.1	62.2	85.0	67.7	53.9	500	465	64.9
74.9		48.4	61.6	84.7	67.1	53.1	490	456	64.0
74.5		47.7	61.3	84.3	66.4	52.2	480	448	63.0
74.1		46.9	60.7	83.9	65.7	51.3	470	441	62.0
73.6		46.1	60.1	83.6	64.9	50.4	460	433	61.0
73.3		45.3	59.4	83.2	64.3	49.4	450	425	60.0
72.8		44.5	58.8	82.8	63.5	48.4	440	415	59.0
72.3		43.6	58.2	82.3	62.7	47.4	430	405	58.0
71.8		42.7	57.5	81.8	61.9	46.4	420	397	56.9
71.4		41.8	56.8	81.4	61.1	45.3	410	388	55.9
70.8		40.8	56.0	81.0	60.2	44.1	400	379	54.8
70.3		39.8	55.2	80.3	59.3	42.9	390	369	53.7
69.8	110.0	38.8	54.4	79.8	58.4	41.7	380	360	52.6
69.2		37.7	53.6	79.2	57.4	40.4	370	350	51.5
68.7	109.0	36.6	52.8	78.6	56.4	39.1	360	341	50.4
68.1		35.5	51.9	78.0	55.4	37.8	350	331	49.3
67.6	108.0	34.4	51.1	77.4	54.4	36.5	340	322	48.1
67.0		33.3	50.2	76.8	53.6	35.2	330	313	47.0
66.4	107.0	32.2	49.4	76.2	52.3	33.9	320	303	45.8
65.8		31.0	48.4	75.6	51.3	32.5	310	294	44.6
65.2	105.5	29.8	47.5	74.9	50.2	31.1	300	284	43.4
64.8		29.2	47.1	74.6	49.7	30.4	295	280	42.8
64.5	104.5	28.5	46.5	74.2	49.0	29.5	290	275	42.2
64.2		27.8	46.0	73.8	48.4	28.7	285	270	41.6
63.8	103.5	27.1	45.3	73.4	47.8	27.9	280	265	40.9
63.5		26.4	44.9	73.0	47.2	27.1	275	261	40.3
63.1	102.0	25.6	44.3	72.6	46.4	26.2	270	256	39.7
62.7		24.8	43.7	72.1	45.7	25.2	265	252	39.1
62.4	101.0	24.0	43.1	71.6	45.0	24.3	260	247	38.4
62.0		23.1	42.2	71.1	44.2	23.2	255	243	37.8
61.6	99.5	22.2	41.7	70.6	43.4	22.2	250	238	37.2
61.2		21.3	41.1	70.1	42.5	21.1	245	233	36.5
60.7	98.1	20.3	40.3	69.6	41.7	19.9	240	228	35.9
	96.7	18.0					230	219	34.1
	95.0	15.7					220	209	33.2
	93.4	13.4					210	200	31.8
	91.5	11.0					200	190	30.4
	89.5	8.5					190	181	29.0
	87.1	6.0					180	171	27.7
	85.0	3.0					170	162	26.5
	81.7	0.0					160	152	25.0
	78.7						150	143	23.7
	75.0						140	133	22.1
	71.2						130	124	20.6
	66.7						120	114	19.1
	62.3						110	105	17.6
	56.2						100	95	16.1

Soft Metal (軟鐵 · 銅)

Rockwell		Rockwell Superficial			Vickers
HRB	HRF	15T	30T	45T	HV
100kgf	60kgf	15kgf	30kgf	45kgf	50kgf
93.5	110.0	90.0	77.5	66.0	196
	109.5			65.5	194
93.0			77.0	65.0	192
92.5	109.0		76.5	64.5	190
92.0		89.5		64.0	188
91.5	108.5		76.0	63.5	186
91.0			75.5	63.0	184
90.5	108.0	89.0		62.5	182
90.0	107.5		75.0	62.0	180
89.0			74.5	61.5	178
88.5	107.0			61.0	176
88.0		88.5	74.0	60.5	174
87.5	106.5		73.5	60.0	172
87.0				59.5	170
86.0	106.0	88.0	73.0	59.0	168
85.5			72.5	58.5	166
85.0	105.5		72.0	58.0	164
84.0	105.0	87.5		57.5	162
83.5			71.5	56.5	160
83.0	104.5		71.0	56.0	158
82.0	104.0	87.0	70.5	55.5	156
81.5	103.5		70.0	54.5	154
80.5	103.0			54.0	152
80.0		86.5	69.5	53.5	150
79.0	102.5		69.0	53.0	148
78.0	102.0		68.5	52.5	146
77.5	101.5	86.0	68.0	51.5	144
77.0	101.0		67.5	51.0	142
76.0	100.5	85.5	67.0	50.0	140
75.0	100.0		66.5	49.0	138
74.5	99.5	85.0	66.0	48.0	136
73.5	99.0		65.5	47.5	134
73.0	98.5	84.5	65.0	46.5	132
72.0	98.0	84.0	64.5	45.5	130
71.0	97.5		63.5	45.0	128
70.0	97.0	83.5	63.0	44.0	126
69.0	96.5		62.5	43.0	124
68.0	96.0	83.0	62.0	42.0	122
67.0	95.5		61.0	41.0	120
66.0	95.0	82.5	60.5	40.0	118
65.0	94.5	82.0	60.0	39.0	116
64.0	94.0	81.5	59.5	38.0	114
63.0	93.0	81.0	58.5	37.0	112
62.0	92.6	80.5	58.0	35.5	110
61.0	92.0		57.0	34.5	108
59.5	91.2	80.0	56.0	33.0	106
58.0	90.5	79.5	55.0	32.0	104
57.0	89.8	79.0	54.5	30.5	102
56.0	89.0	78.5	53.5	29.5	100
54.0	88.0	78.0	52.5	28.0	98
53.0	87.2	77.5	51.5	26.5	96
51.0	86.3	77.0	50.5	24.5	94
49.5	85.4	76.5	49.0	23.0	92
47.5	84.4	75.5	48.0	21.0	90
46.0	83.5	75.0	47.0	19.0	88
44.0	82.3	74.5	45.5	17.0	86
42.0	81.2	73.5	44.0	14.5	84
40.0	80.0	73.0	43.0	12.5	82
37.5	78.6	72.0	41.0	10.0	80
35.0	77.4	71.5	39.5	7.5	78
32.5	76.0	70.5	38.0	4.5	76
32.0	74.8	70.0	36.0	1.0	74
30.0	73.2	69.0	34.0		72
27.5	71.6	68.0	32.0		70
24.5	70.0	67.0	30.0		68
21.5	68.5	66.0	28.0		66
18.5	66.8	65.0	25.5		64
15.5	65.0	63.5	23.0		62
12.5	63.0	62.5	20.5		60
10.0	61.0	61.0	18.0		58
	58.8	60.0	15.0		56
	56.6	58.5	12.0		54
	53.5	57.0			52
	50.5	55.5			50
	49.0	54.5			49
	47.0	53.5			48
	45.0				47
	43.0				46
	40.0				45