

Newage® Hardness Conversions

Product Data Sheet
PDS-CNVL-2010
March 2010

Hardness Conversion for Rockwell B scale or Low Hardness Range

B 30 kgf 1/16 Ball	A 60 kgf Diamond	E 100 kgf 1/8 Ball	15T 15 kgf 1/16 Ball	30T 30 kgf 1/16 Ball	45T 45 kgf 1/16 Ball	HV Vickers Scale	HK Knoop >500 gf	HB Brinell 10/3000	HB Brinell 10/500
100	61.5	-	93.1	83.1	72.9	240	251	240	201
99	60.9	-	92.8	82.5	71.9	234	246	234	195
98	60.2	-	92.5	81.8	70.9	228	241	228	189
97	59.5	-	92.1	81.1	69.9	222	236	222	184
96	58.9	-	91.8	80.4	68.9	216	231	216	179
95	58.3	-	91.5	79.8	67.9	210	226	210	175
94	57.6	-	91.2	79.1	66.9	205	221	205	171
93	57.0	-	90.8	78.4	65.9	200	216	200	167
92	56.4	-	90.5	77.8	64.8	195	211	195	163
91	55.8	-	90.2	77.1	63.8	190	206	190	160
90	55.2	-	89.9	76.4	62.8	185	201	185	157
89	54.6	-	89.5	75.8	61.8	180	196	180	154
88	54.0	-	89.2	75.1	60.8	176	192	176	151
87	53.4	-	88.9	74.4	59.8	172	188	172	148
86	52.8	-	88.6	73.8	58.8	169	184	169	145
85	52.3	-	88.2	73.1	57.8	165	180	165	142
84	51.7	-	87.9	72.4	56.8	162	176	162	140
83	51.1	-	87.6	71.8	55.8	159	173	159	137
82	50.6	-	87.3	71.1	54.8	156	170	156	135
81	50.0	-	86.9	70.4	53.8	153	167	153	133
80	49.5	-	86.6	69.7	52.8	150	164	150	130
79	48.9	-	86.3	69.1	51.8	147	161	147	128
78	48.4	-	86.0	68.4	50.8	144	158	144	126
77	47.9	-	85.6	67.7	49.8	141	155	141	124
76	47.3	-	85.3	67.1	48.8	139	152	139	122
75	46.8	-	85.0	66.4	47.8	137	150	137	120
74	46.3	-	84.7	65.7	46.8	135	147	135	118
73	45.8	-	84.3	65.1	45.8	132	145	132	116
72	45.3	-	84.0	64.4	44.8	130	143	130	114
71	44.8	100	83.7	63.7	43.8	127	141	127	112
70	44.3	99.5	83.4	63.1	42.8	125	139	125	110
69	43.8	99.0	83.0	62.4	41.8	123	137	123	109
68	43.3	98.0	82.7	61.7	40.8	121	135	121	108
67	42.8	97.5	82.4	61.0	39.8	119	133	119	106
66	42.3	97.0	82.1	60.4	38.7	117	131	117	104
65	41.8	96.0	81.8	59.7	37.7	116	129	116	102
64	41.4	95.5	81.4	59.0	36.7	114	127	114	100
63	40.9	95.1	81.1	58.4	35.7	112	125	112	99
62	40.4	94.5	80.8	57.7	34.7	110	124	110	98
61	40.0	93.5	80.5	57.0	33.7	108	122	108	96
60	39.5	93.0	80.1	56.4	32.7	107	120	107	95
59	39.0	92.5	79.8	55.7	31.7	106	117	106	94
58	38.6	92.0	79.5	55.0	30.7	104	117	104	92
57	38.1	91.0	79.2	54.4	29.7	103	115	103	91
56	37.7	90.5	78.8	53.7	28.7	101	114	101	90
55	37.2	90.0	78.5	53.0	27.7	100	112	100	89
54	36.8	89.5	78.2	52.4	26.7	-	111	-	87
53	36.3	89.0	77.9	51.7	25.7	-	110	-	86
52	35.9	88.0	77.5	51.0	24.7	-	109	-	85
51	35.5	87.5	77.2	50.3	23.7	-	108	-	84

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Hardness Testing

Hardness Conversion for Rockwell B scale or Low Hardness Range

B	A	E	15T	30T	45T	HV	HK	HB	HB
30 kgf 1/16 Ball	60 kgf Diamond	100 kgf 1/8 Ball	15 kgf 1/16 Ball	30 kgf 1/16 Ball	45 kgf 1/16 Ball	Vickers Scale	Knoop >500 gf	Brinell 10/3000	Brinell 10/500
50	35.0	87.0	76.9	49.7	22.7	-	107	-	83
49	34.6	86.5	76.6	49.0	21.7	-	106	-	82
48	34.1	85.5	76.2	48.3	20.7	-	105	-	81
47	33.7	85.0	75.9	47.7	19.7	-	104	-	80
46	33.3	84.5	75.6	47.0	18.7	-	103	-	80
45	32.9	84.0	75.3	46.3	17.7	-	102	-	79
44	32.4	83.5	74.9	45.7	16.7	-	101	-	78
43	32.0	82.5	74.6	45.0	15.7	-	100	-	77
42	31.6	82.0	74.3	44.3	14.7	-	99	-	76
41	31.2	81.5	74.0	43.7	13.6	-	98	-	75
40	30.7	81.0	73.6	43.0	12.6	-	97	-	75
39	30.3	80.0	73.3	42.3	11.6	-	96	-	74
38	29.9	79.5	73.0	41.6	10.6	-	95	-	73
37	29.5	79.0	72.7	41.0	9.6	-	94	-	72
36	29.1	78.5	72.3	40.3	8.6	-	93	-	72
35	28.7	78.0	72.0	39.6	7.6	-	92	-	71
34	28.2	77.0	71.7	39.0	6.6	-	91	-	70
33	27.8	76.5	71.4	38.3	5.6	-	90	-	69
32	27.4	76.0	71.0	37.6	4.6	-	89	-	69
31	27.0	75.5	70.7	37.0	3.6	-	88	-	68
30	26.6	75.0	70.4	36.3	2.6	-	87	-	67



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