



800-219-9095
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 Web: www.labtesting.com
 2331 Topaz Drive, Hatfield, PA 19440

Rockwell B Hardness Conversion

Approximate Conversion Numbers for Non-austenitic Steels

Rockwell			Superficial Rockwell			Brinell	Vickers	Knoop	Tensile Strength
1/16" Ball	Diamond Indenter	1/16" Ball	1/16" Ball			10 mm Ball	Diamond Pyramid	Diamond Indenter	Steel
B Scale 100 kgf	A Scale 60 kgf	F Scale 60 kgf	15T Scale 15 kgf	30T Scale 30 kgf	45T Scale 45 kgf	3000 kgf Hardness	10 kgf	500 gf & over	Equiv. 1000 lb sq in
100	62		93	83	73	240	240	251	116
99	61		93	83	72	234	234	246	112
98	60		93	82	71	228	228	241	109
97	60		92	81	70	222	222	236	106
96	59		92	80	69	216	216	231	103
95	58		92	80	68	210	210	226	101
94	58		91	79	67	205	205	221	98
93	57		91	78	66	200	200	216	96
92	56		91	78	65	195	195	211	93
91	56		90	77	64	190	190	206	91
90	55		90	76	63	185	185	201	89
89	55		90	76	62	180	180	196	87
88	54		89	75	61	176	176	192	85
87	53		89	74	60	172	172	188	83
86	53		89	74	59	169	169	184	81
85	52		88	73	58	165	165	180	80
84	52		88	72	57	162	162	176	78
83	51		88	72	56	159	159	173	77
82	51		87	71	55	156	156	170	75
81	50		87	70	54	153	153	167	74
80	50		87	70	53	150	150	164	72
79	49		86	69	52	147	147	161	
78	48		86	68	51	144	144	158	
77	48		86	68	50	141	141	155	
76	47		85	67	49	139	139	152	
75	47	100	85	66	48	137	137	150	
74	46	99	85	66	47	135	135	147	
73	46	99	84	65	46	132	132	145	
72	45	98	84	64	45	130	130	143	
71	45	97	84	64	44	127	127	141	
70	44	97	83	63	43	125	125	139	
69	44	96	83	62	42	123	123	137	



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68	43	96	83	62	41	121	121	135	
67	43	95	82	61	40	119	119	133	
66	42	95	82	60	39	117	117	131	
65	42	94	82	60	38	116	116	129	
64	41	93	81	59	37	114	114	127	
63	41	93	81	58	36	112	112	125	
62	40	92	81	58	35	110	110	124	
61	40	92	81	57	34	108	108	122	
60	40	91	80	56	33	107	107	120	
59	39	91	80	56	32	106	106	118	
58	39	90	80	55	31	104	104	117	
57	38	90	79	54	30	103	103	115	
56	38	89	79	54	29	101	101	114	
55	37	88	79	53	28	100	100	112	
54	37	88	78	52	27			111	
53	36	87	78	52	26			110	
52	36	87	78	51	25			109	
51	35	86	77	50	24			108	
50	35	85	77	50	23			107	
49	35	85	77	49	22			106	
48	34	84	76	48	21			105	
47	34	84	76	48	20			104	
46	33	83	76	47	19			103	
45	33	83	75	46	18			102	
44	32	82	75	46	17			101	
43	32	81	75	45	16			100	
42	32	81	74	44	15			99	
41	31	80	74	44	14			98	
40	31	80	74	43	13			97	
39	30	79	73	42	12			96	
38	30	79	73	42	11			95	
37	30	78	73	41	10			94	



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36	29	77	72	40	9			93	
35	29	77	72	40	8			92	
34	28	76	72	39	7			91	
33	28	76	71	38	6			90	
32	27	75	71	38	5			89	
31	27	75	71	37	4			88	
30	27	74	70	36	3			87	

NOTE: For a more accurate comparison, see ASTM E 140