



## HARDNESS CONVERSION TABLE

### ASTM E140 – ROCKWELL C RANGE (NON-AUSTENITIC STEELS)

Rockwell C 150 Kgf Diamond	Rockwell A 60 Kgf Diamond	Rockwell D 100 Kgf Diamond	Superficial Rockwell 15 Kgf Diamond"	Superficial Rockwell 30 Kgf Diamond"	Superficial Rockwell 45 Kgf Diamond	Brinell Hardness* 3000 Kgf 10mm Carbide Ball	Vickers Hardness	Knoop Hardness ≥500 g
C	A	D	15N	30N	45N	HB	HV	HK
68	85.6	76.9	93.2	84.4	75.4	—	940	920
67	85.0	76.1	92.9	83.6	74.2	—	900	895
66	84.5	75.4	92.5	82.8	73.3	—	865	870
65	83.9	74.5	92.2	81.9	72.0	(739)	832	846
64	83.4	73.8	91.8	81.1	71.0	(722)	800	822
63	82.8	73.0	91.4	80.1	69.9	(705)	772	799
62	82.3	72.2	91.1	79.3	68.8	(688)	746	776
61	81.8	71.5	90.7	78.4	67.7	(670)	720	754
60	81.2	70.7	90.2	77.5	66.6	(654)	697	732
59	80.7	69.9	89.8	76.6	65.5	634	674	710
58	80.1	69.2	89.3	75.7	64.3	615	653	690
57	79.6	68.5	88.9	74.8	63.2	595	633	670
56	79.0	67.7	88.3	73.9	62.0	577	613	650
55	78.5	66.9	87.9	73.0	60.9	560	595	630
54	78.0	66.1	87.4	72.0	59.8	543	577	612
53	77.4	65.4	86.9	71.2	58.6	525	560	594
52	76.8	64.6	86.4	70.2	57.4	512	544	576
51	76.3	63.8	85.9	69.4	56.1	496	528	558
50	75.9	63.1	85.5	68.5	55.0	481	513	542
49	75.2	62.1	85.0	67.6	53.8	469	498	526
48	74.7	61.4	84.5	66.7	52.5	455	484	510
47	74.1	60.8	83.9	65.8	51.4	443	471	495
46	73.6	60.0	83.5	64.8	50.3	432	458	480
45	73.1	59.2	83.0	64.0	49.0	421	446	466
44	72.5	58.5	82.5	63.1	47.8	409	434	452
43	72.0	57.7	82.0	62.2	46.7	400	423	438
42	71.5	56.9	81.5	61.3	45.5	390	412	426
41	70.9	56.2	80.9	60.4	44.3	381	402	414
40	70.4	55.4	80.4	59.5	43.1	371	392	402
39	69.9	54.6	79.9	58.6	41.9	362	382	391
38	69.4	53.8	79.4	57.7	40.8	353	372	380
37	68.9	53.1	78.8	56.8	39.6	344	363	370
36	68.4	52.3	78.3	55.9	38.4	336	354	360
35	67.9	51.5	77.7	55.0	37.2	327	345	351
34	67.4	50.8	77.2	54.2	36.1	319	336	342
33	66.8	50.0	76.6	53.3	34.9	311	327	334
32	66.3	49.2	76.1	52.1	33.7	301	318	326
31	65.8	48.4	75.6	51.3	32.5	294	310	318
30	65.3	47.7	75.0	50.4	31.3	286	302	311
29	64.8	47.0	74.5	49.5	30.1	279	294	304
28	64.3	46.1	73.9	48.6	28.9	271	286	297
27	63.8	45.2	73.3	47.7	27.8	264	279	290
26	63.3	44.6	72.8	46.8	26.7	258	272	284
25	62.8	43.8	72.2	45.9	25.5	253	266	278
24	62.4	43.1	71.6	45.0	24.3	247	260	272
23	62.0	42.1	71.0	44.0	23.1	243	254	266
22	61.5	41.6	70.5	43.2	22.0	237	248	261
21	61.0	40.9	69.9	42.3	20.7	231	243	256
20	60.5	40.1	69.4	41.5	19.6	226	238	251

These values are approximate and this chart is intended primarily as a guide.

\* Numbers above BHN 634 are outside recommended range for Brinell Testing ASTM Method E10.