

Sertlik Kıyaslama / Karşılaştırma Tablosu Rockwell ve Brinell
Hardness Conversion Chart * Comparison of Hardness Scales approx. and Tensile Stress**
Equivalents approx. (maximum value) in imperial and metric units.

Rockwell 'C' Scale	Diamond Pyramid Scale HV10 HV30	Brinell			Tensile Stress Equivalents				Scler Scope Hardness Number	Rockwell		Diamond Pyramid Scale HV10 HV30
		Dia. Imp. for 10mm Ball	Carbide Ball	Standard Ball	Tons/in ²	1000lb/in ²	kg/mm ²	MPa {N/mm ² }				
67.7	900								96	85.6	67.7	900
67.0	880								95	85.0	67.0	880
66.3	860								93	84.7	66.3	860
65.5	840								92	84.2	65.5	840
64.8	820								90	83.8	64.8	820
64.0	800								88	83.4	64.0	800
63.3	780								87	83.0	63.3	780
62.5	760								86	82.6	62.5	760
61.7	740								84	82.2	61.7	740
61.0	725	2.44	630	-	-	-	-	-	82	81.8	61.0	725
60.5	710	2.45	627	-	-	-	-	-	-	81.5	60.5	710
60.0	698	2.50	601	-	132	295	208	2039	81	81.2	60.0	698
58.9	670	2.55	578	-	127	284	200	1961	78	80.6	58.9	670
57.1	630	2.60	555	-	122	273	192	1884	75	79.6	57.1	630
56.1	609	2.65	534	-	117	262	184	1807	73	79.0	56.1	609
54.4	572	2.70	514	-	112	250	176	1729	71	78.2	54.4	572
51.9	532	2.75	495	495	108	241	170	1668	68	76.9	51.9	532
50.7	517	2.80	477	477	105	235	165	1621	66	76.3	50.7	517
49.5	497	2.85	461	461	101	226	160	1559	64	75.5	49.5	497
47.5	470	2.90	444	444	98	219	155	1513	62	74.2	47.5	470
46.0	452	2.95	429	429	95	212	150	1467	60	73.5	46.0	452
44.8	437	3.00	415	415	92	206	145	1420	58	73.0	44.8	437
43.7	422	3.05	401	401	88	197	139	1359	56	72.5	43.7	422
42.4	408	3.10	388	388	85	190	134	1312	54	71.5	42.4	408
41.3	395	3.15	375	375	82	183	129	1266	52	71.0	41.3	395
39.9	381	3.20	363	363	80	179	126	1235	51	70.3	39.9	381
38.8	370	3.25	352	352	77	172	121	1189	49	69.8	38.8	370
37.7	359	3.30	341	341	75	168	118	1158	48	69.2	37.7	359
36.7	349	3.35	331	331	73	163	114	1127	46	68.8	36.7	349
35.0	337	3.40	321	321	71	159	111	1096	45	68.0	35.0	337
34.0	327	3.45	311	311	68	152	107	1050	43	67.5	34.0	327
33.0	318	3.50	302	302	66	147	104	1019	42	66.8	33.0	318
32.0	308	3.55	293	293	64	143	101	988	41	66.2	32.0	308
30.9	300	3.60	285	285	63	141	99	973	40	65.7	30.9	300
29.8	292	3.65	277	277	61	136	96	942	38	65.2	29.8	292
29.0	284	3.70	269	269	59	132	93	911	37	64.6	29.0	284
27.5	275	3.75	262	262	58	130	91	895	36	64.0	27.5	275
26.6	269	3.80	255	255	56	125	89	865	35	63.6	26.6	269
25.2	261	3.85	248	248	55	123	87	849	34	62.9	25.2	261
24.3	255	3.90	241	241	53	118	84	818	33	62.6	24.3	255
23.0	247	3.95	235	235	51	114	81	787	32	62.0	23.0	247
22.0	241	4.00	229	229	50	112	79	772	31	61.6	22.0	241

20.8	234	4.05	223	223	49	110	77	756	30	60.7	20.8	234
	228	4.10	217	217	48	107	76	741	-	-	-	228
Hardness 'B' Scale											Hardness 'B' Scale	
98	222	4.15	212	212	46	103	73	710	29	-	98	222
97	218	4.20	207	207	45	101	71	695	28	-	97	218
96	212	4.30	197	197	43	97	68	664	27	-	96	212
93	196	4.40	187	187	41	92	65	632	25	-	93	196
91	188	4.50	179	179	39	88	62	602	-	-	91	188
88.5	178	4.60	170	170	36	81	57	556	24	-	88.5	178
86	171	4.70	163	163	35	78	55	540	-	-	86	171
84.2	163	4.80	156	156	34	76	54	525	23	-	84.2	163
82	156	4.90	149	149	32	72	51	494	-	-	82	156
80	150	5.00	143	143	31	69	49	479	22	-	80	150
77	143	5.10	137	137	30	67	48	463	21	-	77	143
75	137	5.20	131	131	29.5	66	47	455	20.5	-	75	137
72.5	132	5.30	126	126	29	65	46	448	20	-	72.5	132
70	127	5.40	121	121	28	63	44	432	-	-	70	127
67	122	5.50	116	116	26	58	42	401	15	-	67	122

*These charts were prepared using information contained in B.S.860/1967. This standard differs significantly from the superseded standard B.S. 860/1939, and differs slightly from the conversion scales adopted by SAE and ASTM sources.

** Where hardness acceptance values are specified and a conversion from one scale to another is necessary the source of the conversion data should be stated and understood by the parties involved.

Hardness Conversion Chart: Brinell vs Rockwell									
Brinell Hardness	Rockwell Hardness			Tensile Strength	Brinell Hardness	Rockwell Hardness			Tensile Strength
Tungsten Carbide Ball 3000 kg	A Scale 60 kg	B Scale 100 kg	C Scale 150 kg	(Approx. psi)	Tungsten Carbide Ball 3000 kg	A Scale 60 kg	B Scale 100 kg	C Scale 150 kg	(Approx. psi)
-	85.6	-	68.0	-	331	68.1	-	35.5	166,000
-	85.3	-	67.5	-	321	67.5	-	34.3	160,000
-	85.0	-	67.0	-	311	66.9	-	33.1	155,000
767	84.7	-	66.4	-	302	66.3	-	32.1	150,000
757	84.4	-	65.9	-	293	65.7	-	30.9	145,000
745	84.1	-	65.3	-	285	65.3	-	29.9	141,000
733	83.8	-	64.7	-	277	64.6	-	28.8	137,000
722	83.4	-	64.0	-	269	64.1	-	27.6	133,000
712	-	-	-	-	262	63.6	-	26.6	129,000
710	83.0	-	63.3	-	255	63.0	-	25.4	126,000
698	82.6	-	62.5	-	248	62.5	-	24.2	122,000
684	82.2	-	61.8	-	241	61.8	100.0	22.8	118,000
682	82.2	-	61.7	-	235	61.4	99.0	21.7	115,000
670	81.8	-	61.0	-	229	60.8	98.2	20.5	111,000

656	81.3	-	60.1	-	223	-	97.3	20.0	-
653	81.2	-	60.0	-	217	-	96.4	18.0	105,000
647	81.1	-	59.7	-	212	-	95.5	17.0	102,000
638	80.8	-	59.2	329,000	207	-	94.6	16.0	100,000
630	80.6	-	58.8	324,000	201	-	93.8	15.0	98,000
627	80.5	-	58.7	323,000	197	-	92.8	-	95,000
601	79.8	-	57.3	309,000	192	-	91.9	-	93,000
578	79.1	-	56.0	297,000	187	-	90.7	-	90,000
555	78.4	-	54.7	285,000	183	-	90.0	-	89,000
534	77.8	-	53.5	274,000	179	-	89.0	-	87,000
514	76.9	-	52.1	263,000	174	-	87.8	-	85,000
495	76.3	-	51.0	253,000	170	-	86.8	-	83,000
477	75.6	-	49.6	243,000	167	-	86.0	-	81,000
461	74.9	-	48.5	235,000	163	-	85.0	-	79,000
444	74.2	-	47.1	225,000	156	-	82.9	-	76,000
429	73.4	-	45.7	217,000	149	-	80.8	-	73,000
415	72.8	-	44.5	210,000	143	-	78.7	-	71,000
401	72.0	-	43.1	202,000	137	-	76.4	-	67,000
388	71.4	-	41.8	195,000	131	-	74.0	-	65,000
375	70.6	-	40.4	188,000	126	-	72.0	-	63,000
363	70.0	-	39.1	182,000	121	-	69.8	-	60,000
352	69.3	-	37.9	176,000	116	-	67.6	-	58,000
341	68.7	-	36.6	170,000	111	-	65.7	-	56,000

psi = pounds per square inch -- kg = kilogram