

Approximate Conversions for Hardness To Tensile

Rockwell						Rockwell Superficial				Brinell		Vickers	Shore	Approx Tensile Strength (psi)	MicroGroup Temper
A	B	C	D	E	F	15-N	30-N	45-N	30-T	3000 kg	500 kg	136	Sciencscope		
60kg Brale	100kg 1/16" Ball	150kg Brale	100kg Brale	100kg 1/8" Ball	60kg 1/16" Ball	15kg Brale	30kg Brale	45kg Brale	30 kg 1/16" Ball	10mm Ball Steel	10mm Ball Steel	Diamond Pyramid	Sciencscope		
86.5	---	70	78.5	---	---	94	86	77.6	---	---	---	1076	101	---	---
86	---	69	77.7	---	---	93.5	85	76.5	---	---	---	1044	99	---	---
85.6	---	68	76.9	---	---	93.2	84.4	75.4	---	---	---	940	97	---	---
85	---	67	76.1	---	---	92.9	83.6	74.2	---	---	---	900	95	---	---
84.5	---	66	75.4	---	---	92.5	82.8	73.2	---	---	---	865	92	---	---
83.9	---	65	74.5	---	---	92.2	81.9	72	---	739	---	832	91	---	---
83.4	---	64	73.8	---	---	91.8	81.1	71	---	722	---	800	88	---	---
82.8	---	63	73	---	---	91.4	80.1	69.9	---	705	---	772	87	---	---
82.3	---	62	72.2	---	---	91.1	79.3	68.8	---	688	---	746	85	---	---
81.8	---	61	71.5	---	---	90.7	78.4	67.7	---	670	---	720	83	---	---
81.2	---	60	70.7	---	---	90.2	77.5	66.6	---	654	---	697	81	320,000	Full Hard
80.7	---	59	69.9	---	---	89.8	76.6	65.5	---	634	---	674	80	310,000	Full Hard
80.1	---	58	69.2	---	---	89.3	75.7	64.3	---	615	---	653	78	300,000	Full Hard
79.6	---	57	68.5	---	---	88.9	74.8	63.2	---	595	---	633	76	290,000	Full Hard
79	---	56	67.7	---	---	88.3	73.9	62	---	577	---	613	75	282,000	Full Hard
78.5	120	55	66.9	---	---	87.9	73	60.9	---	560	---	595	74	274,000	Full Hard
78	120	54	66.1	---	---	87.4	72	59.8	---	543	---	577	72	266,000	Full Hard
77.4	119	53	65.4	---	---	86.9	71.2	58.6	---	525	---	560	71	257,000	Full Hard
76.8	119	52	64.6	---	---	86.4	70.2	57.4	---	500	---	544	69	245,000	Full Hard
76.3	118	51	63.8	---	---	85.9	69.4	56.1	---	487	---	528	68	239,000	Full Hard
75.9	117	50	63.1	---	---	85.5	68.5	55	---	475	---	513	67	233,000	Full Hard
75.2	117	49	62.1	---	---	85	67.6	53.8	---	464	---	498	66	227,000	Full Hard
74.7	116	48	61.4	---	---	84.5	66.7	52.5	---	451	---	484	64	221,000	Full Hard
74.1	116	47	60.8	---	---	83.9	65.8	51.4	---	442	---	471	63	217,000	Full Hard
73.6	115	46	60	---	---	83.5	64.8	50.3	---	432	---	458	62	212,000	Full Hard
73.1	115	45	59.2	---	---	83	64	49	---	421	---	446	60	206,000	Full Hard
72.5	114	44	58.5	---	---	82.5	63.1	47.8	---	409	---	434	58	200,000	Full Hard
72	113	43	57.7	---	---	82	62.2	46.7	---	400	---	423	57	196,000	Full Hard
71.5	113	42	56.9	---	---	81.5	61.3	45.5	---	390	---	412	56	191,000	Full Hard
70.9	112	41	56.2	---	---	80.9	60.4	44.3	---	381	---	402	55	187,000	Full Hard
70.4	112	40	55.4	---	---	80.4	59.5	43.1	---	371	---	392	54	182,000	Full Hard
69.9	111	39	54.6	---	---	79.9	58.6	41.9	---	362	---	382	52	177,000	Full Hard
69.4	110	38	53.8	---	---	79.4	57.7	40.8	---	353	---	372	51	173,000	Full Hard
68.9	110	37	53.1	---	---	78.8	56.8	39.6	---	344	---	363	50	169,000	Full Hard
68.4	109	36	52.3	---	---	78.3	55.9	38.4	---	336	---	354	49	165,000	Full Hard
67.9	109	35	51.5	---	---	77.7	55	37.2	---	327	---	345	48	160,000	Full Hard
67.4	108	34	50.8	---	---	77.2	54.2	36.1	---	319	---	336	47	156,000	Full Hard
66.8	108	33	50	---	---	76.6	53.3	34.9	---	311	---	327	46	152,000	Full Hard
66.3	107	32	49.2	---	---	76.1	52.1	33.7	---	301	---	318	44	147,000	Full, 3/4 Hard
65.8	106	31	48.4	---	---	75.6	51.3	32.5	---	294	---	310	43	144,000	Full, 3/4 Hard
65.3	105	30	47.7	---	---	75	50.4	31.3	---	286	---	302	42	140,000	Full, 3/4, 1/2 Hard
64.7	104	29	47	---	---	74.5	49.5	30.1	---	279	---	294	41	137,000	3/4, 1/2 Hard
64.3	104	28	46.1	---	---	73.9	48.6	28.9	---	271	---	286	41	133,000	3/4, 1/2 Hard
63.8	103	27	45.2	---	---	73.3	47.7	27.8	---	264	---	279	40	129,000	3/4, 1/2, 1/4 Hard
63.3	103	26	44.6	---	---	72.8	46.8	26.7	---	258	---	272	39	126,000	3/4, 1/2, 1/4 Hard
62.8	102	25	43.8	---	---	72.2	45.9	25.5	---	253	---	266	38	124,000	3/4, 1/2, 1/4 Hard
62.4	101	24	43.1	---	---	71.6	45	24.3	---	247	---	260	37	121,000	3/4, 1/2, 1/4 Hard
62	100	23	42.1	---	---	71	44	23.1	82	240	201	254	36	118,000	1/2, 1/4, 1/8 Hard
61.5	99	22	41.6	---	---	70.5	43.2	22	81.5	234	195	248	35	115,000	1/2, 1/4, 1/8 Hard
61	98	21	40.9	---	---	69.9	42.3	20.7	81	228	189	243	35	112,000	1/2, 1/4, 1/8 Hard
60.5	97	20	40.1	---	---	69.4	41.5	19.6	80.5	222	184	238	34	109,000	1/4, 1/8 Hard, Annealed
59	96	18	---	---	---	---	---	---	80	216	179	230	33	106,000	1/4, 1/8 Hard, Annealed
58	95	16	---	---	---	---	---	---	79	210	175	222	32	103,000	1/4, 1/8 Hard, Annealed
57.5	94	15	---	---	---	---	---	---	78.5	205	171	213	31	100,000	1/4, 1/8 Hard, Annealed
57	93	13	---	---	---	---	---	---	78	200	167	208	30	98,000	1/8 Hard, Annealed
56.5	92	12	---	---	---	---	---	---	77.5	195	163	204	29	96,000	1/8 Hard, Annealed
56	91	10	---	---	---	---	---	---	77	190	160	196	28	93,000	1/8 Hard, Annealed
55.5	90	9	---	---	---	---	---	---	76	185	157	192	27	91,000	1/8 Hard, Annealed
55	89	8	---	---	---	---	---	---	75.5	180	154	188	26	88,000	Annealed
54	88	7	---	---	---	---	---	---	75	176	151	184	26	86,000	Annealed
53.5	87	6	---	---	---	---	---	---	74.5	172	148	180	26	84,000	Annealed
53	86	5	---	---	---	---	---	---	74	169	145	176	25	83,000	Annealed
52.5	85	4	---	---	---	---	---	---	73.5	165	142	173	25	81,000	Annealed
52	84	3	---	---	---	---	---	---	73	162	140	170	25	79,000	Annealed
51	83	2	---	---	---	---	---	---	72	159	137	166	24	78,000	Annealed
50.5	82	1	---	---	---	---	---	---	71.5	156	135	163	24	76,000	Annealed
50	81	0	---	---	---	---	---	---	71	153	133	160	24	75,000	Annealed
49.5	80	---	---	---	---	---	---	---	70	150	130	---	---	73,000	Annealed
49	79	---	---	---	---	---	---	---	69.5	147	128	---	---	---	---
48.5	78	---	---	---	---	---	---	---	69	144	126	---	---	---	---
48	77	---	---	---	---	---	---	---	68	141	124	---	---	---	---
47	76	---	---	---	---	---	---	---	67.5	139	122	---	---	---	---