

Steel Hardness Conversion Chart

Reference Table: Steel hardness conversion chart - all values approximate.

Brinell Hardness HB	Rockwell HRC	Rockwell HRB	Vickers HV	N/mm ²
800	72			
780	71			
760	70			
752	69			
745	68			
746	67			
735	66			
711	65			
695	64			
681	63			
658	62			
642	61			
627	60			
613	59			
601	58		746	
592	57		727	
572	56		694	
552	55		649	
534	54	120	589	
513	53	119	567	
504	52	118	549	
486	51	118	531	
469	50	117	505	
468	49	117	497	
456	48	116	490	1569
445	47	115	474	1520
430	46	115	458	1471
419	45	114	448	1447
415	44	114	438	1422
402	43	114	424	1390
388	42	113	406	1363
375	41	112	393	1314
373	40	111	388	1265
360	39	111	376	1236
348	38	110	361	1187
341	37	109	351	1157
331	36	109	342	1118
322	35	108	332	1089
314	34	108	320	1049
308	33	107	311	1035
300	32	107	303	1020
290	31	106	292	990
277	30	105	285	971
271	29	104	277	941
264	28	103	271	892
262	27	103	262	880
255	26	102	258	870
250	25	101	255	853
245	24	100	252	838

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240	23	100	247	824
233	22	99	241	794
229	21	98	235	775
223	20	97	227	755
216	19	96	222	716
212	18	95	218	706
208	17	95	210	696
203	16	94	201	680
199	15	93	199	667
191	14	92	197	657
190	13	92	186	648
186	12	91	184	637
183	11	90	183	617
180	10	89	180	608
175	9	88	178	685
170	7	87	175	559
167	6	86	172	555
166	5	86	168	549
163	4	85	162	539
160	3	84	160	535
156	2	83	158	530
154	1	82	152	515
149		81	149	500
147		80	147	490
143		79	146	482
141		78	144	481
139		77	142	480
137		76	140	475
135		75	137	467
131		74	134	461
127		72	129	451
121		70	127	431
116		68	124	422
114		67	121	412
111		66	118	402
107		64	115	382
105		62	112	378
103		61	108	373
95		56	104	
90		52	95	
81		41	85	
76		37	80	

Brinell HB	Rockwell HRC	Rockwell HRB	Vickers HV Diamond Pyramid 120kg	N/mm ² Tensile strength (Approx)
3000kg 10mm Ball	150kg Brale	100kg 1/16" Ball		

Reference table: Steel Hardness conversion chart

Since the various types of hardness tests do not all measure the same combination of material properties, conversion from one hardness scale to another is only an approximate process. Because of the wide range of variation among different materials, it is not possible to state confidence limits for the errors in using a conversion chart.