



InternationalTube

HARDNESS CONVERSION TABLE APPROXIMATE RELATION OF BRINELL AND ROCKWELL HARDNESS TO TENSILE STRENGTH FOR CARBON AND ALLOY STEEL

Brinell Indent Dia. mm.	Brinell 10-mm. Ball, 3,000-kg. Load Hardness Number	Rockwell Hardness Number		Tensile Strength (Approx.) 1000 psi	Brinell Indent Dia. mm.	Brinell 10-mm. Ball, 3,000-kg. Load Hardness Number	Rockwell Hardness Number		Tensile Strength (Approx.) 1000 psi
		B-Scale 100-kg. Load 1/16" Diam. Ball	C-Scale 150-Kg. Load Brale Penetrator				B-Scale 100-kg. Load 1/16" Diam. Ball	C-Scale 150-Kg. Load Brale Penetrator	
-	-	-	68.0	-	3.00	415	-	44.5	210
-	-	-	67.5	-	3.05	401	-	43.1	202
-	-	-	67.0	-	3.10	388	-	41.8	195
-	767	-	66.4	-	3.15	375	-	40.4	188
-	757	-	65.9	-	3.20	363	-	39.1	182
2.25	745	-	65.3	-	3.25	352	(110.0)	37.9	176
-	733	-	64.7	-	3.30	341	(109.0)	36.6	170
-	722	-	64.0	-	3.35	331	(108.5)	35.5	166
2.30	712	-	-	-	3.40	321	(108.0)	34.3	160
-	710	-	63.3	-	3.45	311	(107.5)	33.1	155
-	698	-	62.5	-	3.50	302	(107.0)	32.1	150
-	684	-	61.8	-	3.55	293	(106.0)	30.9	145
2.35	682	-	61.7	-	3.60	285	(105.5)	29.9	141
-	670	-	61.0	-	3.65	277	(105.5)	28.8	137
-	656	-	60.1	-	3.70	269	(104.0)	27.6	133
2.40	653	-	60.0	-	3.75	262	(103.0)	26.6	129
-	647	-	59.7	-	3.80	255	(102.0)	25.4	126
-	638	-	59.2	329	3.85	248	(101.0)	24.2	122
-	630	-	58.8	324	3.90	241	100.0	22.8	118
2.45	627	-	58.7	323	3.95	235	99.0	21.7	115
2.50	601	-	59.1	328	4.00	229	98.2	20.5	111
2.50	601	-	57.3	309	4.05	223	97.3	(18.8)	-
2.55	578	-	57.3	309	4.10	217	96.4	(17.5)	105
2.55	578	-	56.0	297	4.15	212	95.5	(16.0)	102
2.60	555	-	55.6	293	4.20	207	94.6	(15.2)	100
2.60	555	-	54.7	285	4.25	201	93.8	(13.8)	98
2.65	534	-	54.0	279	4.30	197	92.8	(12.7)	95
2.65	534	-	53.5	274	4.35	192	91.9	(11.5)	93
2.70	514	-	52.5	266	4.40	187	90.7	(10.0)	90
2.70	514	-	52.1	263	4.45	183	90.0	(9.0)	89
2.75	495	-	51.6	259	4.50	179	89.0	(8.0)	87
2.75	495	-	51.1	254	4.55	174	87.8	(6.4)	85
2.75	495	-	51.0	253	4.60	170	86.8	(5.4)	83
2.80	477	-	50.3	247	4.65	167	86.0	(4.4)	81
2.80	477	-	49.6	243	4.70	163	85.0	(3.3)	79
2.80	477	-	49.6	243	4.80	156	82.9	(0.9)	76
2.85	461	-	48.8	237	4.90	149	80.8	-	73
2.85	461	-	48.5	235	5.00	143	78.7	-	71
2.85	461	-	48.5	235	5.10	137	76.4	-	67
2.90	444	-	47.2	226	5.20	131	74.0	-	65
2.90	444	-	47.1	225	5.30	126	72.0	-	63
2.90	444	-	47.1	225	5.40	121	69.8	-	60
2.95	429	-	45.7	217	5.50	116	67.6	-	58
					5.60	111	65.7	-	56

Values for Rockwell hardness in parentheses are beyond normal range and are given for information only.
Brinell hardness No's 767 through 514 based on tests taken with tungsten carbide ball.