

Hardness Conversion Tables Based on Brinell (Approximate)

The Brinell Hardness values in this table correspond to the values shown in the corresponding joint SAE-ASM-ASTM Committee on Hardness Conversions as printed in ASTM E140-58, Table 3.

Values in () are beyond normal range and are given for information only.

The Brinell values in this table are based on the use of a 10 mm tungsten carbide ball; at hardness levels of 429 Brinell and below, the values obtained with the tungsten carbide ball, the Hultgren ball, and the standard ball are the same.

BRINELL HARDNESS		ROCKWELL HARDNESS
Diameter mm 3000 Kg	Tungsten Carbide 10 mm Ball	C—Scale 150 Kg Brale
—	—	70.0
—	—	69.0
—	—	68.0
—	—	67.0
—	757	65.9
2.25	745	65.3
—	722	64.0
—	710	63.3
2.35	682	61.7
2.40	653	60.0
2.45	627	58.7
2.50	601	57.3
2.55	578	56.0
2.60	555	54.7
2.65	534	53.5
2.70	514	52.1
2.75	495	51.0
2.80	477	49.6
2.85	461	48.5
2.90	444	47.1
2.95	429	45.7
3.00	415	44.5
3.05	401	43.1
3.10	388	41.8
3.15	375	40.4
3.20	363	39.1
3.25	352	37.9
3.30	341	36.6
3.35	331	35.5
3.40	321	34.3
3.45	311	33.1
3.50	302	32.1
3.55	293	30.9
3.60	285	29.9
3.65	277	28.8

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BRINELL HARDNESS		ROCKWELL HARDNESS
Diameter mm 3000 K _a	Tungsten Carbide 10 mm Ball	C—Scale 150 Kg Brale
3.70	269	27.6
3.75	262	26.6
3.80	255	25.4
3.85	248	24.2
3.90	241	22.8
3.95	235	21.7
4.00	229	20.5
4.05	223	(18.8)
4.10	217	(17.5)
4.15	212	(16.0)
4.20	207	(15.2)
4.25	201	(13.8)
4.30	197	(12.7)
4.35	192	(11.5)
4.40	187	(10.0)
4.45	183	(9.0)
4.50	179	(8.0)
4.55	174	(6.4)
4.60	170	(5.4)
4.65	167	(4.4)
4.70	163	(3.3)
4.80	156	(.9)
4.90	149	---
5.00	143	---
5.10	137	---
5.20	131	---
5.30	126	---
5.40	121	---
5.50	116	---
5.60	111	---