







TABLA DE COMPARACIÓN DE DUREZA

HR 150kg	Rockwell		Vickers HV kg/mm ²	Dureza Brinell kg/mm ²	Shore	Resistencia a la tracción kg/mm ²	
	HR 62,5	HR 60 kg				acero de carbon =0,36 HB	aceroaleado =0,34 HB
67	84		900	775	106	267	264
66	-	83.9	870	752	101	275	256
65	83	83.4	840	735	99	264	249
64	-	82.8	815	710	96	255	241
63	82	82.3	790	690	93	248	235
62	-	81.8	760	670	91	240	228
61	81	81.2	730	652	88	234	221
60	-	80.7	700	635	85	227	214
59	80	80.2	690	620	83	220	208
57	79	79.1	650	580	78	210	196
56	-	78.6	630	571	75	205	194
55	78	78.1	610	555	73	200	188
54	-	77.5	590	540	72	195	184
53	77	77.0	575	530	71	186	180
52	-	76.5	560	515	69	178	175
51	76	76.0	540	500	68	174	170
50	-	75.4	525	487	67	170	165
49	75	74.9	510	475	65.5	165	160
48	-	74.4	490	462	64	161	156
47	74	73.8	480	447	62	157	152
46	-	73.3	465	436	60	153	148
45	73	72.8	450	424	59	149	144
44	72	72.3	440	413	57	145	141
43	-	71.7	425	406	55	141	137
42	-	71.2	415	398	54	137	133
41	-	70.7	400	382	53	134	130
40	70	70.2	390	377	52	131	127
39	-	69.7	380	369	50	127	125
38	69	69.1	370	353	49	125	120
37	-	68.6	360	345	48	122	118
36	68	68.1	350	339	47	119	115
35	-	67.6	345	331	46	116	113
34	67	67.0	330	323	45	114	110
33	-	66.5	320	316	45.5	111	108
32	-	66.0	315	310	44	109	105
31	65	65.6	310	305	43	107	103
30	-	65.0	305	299	42	103.5	100
29			295	290	41	101.5	98
28			285	282	40	99	96
27			280	276	39	96.5	93.5
26			270	268	38	94	91
25		HR b	265	262	37	92.5	89
24			260	257	36.5	90.5	87
23		100 kg	255	252	36	87.5	85.5
22			245	245	35.5	86.5	83
21		100	240	240	35	84.5	81.5
20		99	235	234	34	82.5	79.5
19		98	230	229	33.5	80.5	78
18		97	225	223	33	78.5	76
17		96	220	218	32	76.5	74
16		95	215	213	31	75	72.5
15		94	210	209	30.5	73.5	71
14		93.5	205	204	30	71.5	69.5
13		93	200	199	29.5	70	67.5
12		92	195	195	29	69	66
11		91	191	191	29	67.5	65
10		90	187.5	187	28.5	66	63.5
9		89.5	185	184	28	65	62
8		89	180	181	27.5	64	61.5
7		88	177.5	178	27		60.5

PESO TEÓRICO BARRAS DE ACERO

DIÁMETROS					DIÁMETROS				
MILIMETROS	PULGADAS				MILIMETROS	PULGADAS			
3.17	1/8	0,06	0,07	0,06	228,59	9	322,	410,	355,
6.35	1/4	0,24	0,31	0,27	241,29	9½	358,	457,	395,
7.93	5/16	0,38	0,49	0,42	250		385,	490,	424,
9.52	3/8	0,55	0,71	0,61	253,99	10	397,	506,	438,
10		0,61	0,78	0,68	266,69	10½	438,	558,	483,
12.69	1/2	0,99	1,26	1,09	279,39	11	481,	612,	530,
15.87	5/8	1,55	1,97	1,71	292,09	11½	526,	669,	580,
19.05	3/4	2,23	2,84	2,46	300		554,	706,	611,
20		2,46	3,14	2,71	300,79	12	572,	729,	631,
22.22	7/8	3,04	3,87	3,35	317,49	12 ½	621,	791,	631,
25.40	1	3,97	5,06	4,35	330,19	13	672,	855,	741,
28.57	1 1/8	5,03	6,41	5,55	342,89	13 ½	724,	923,	799,
30		5,54	7,06	6,11	350	13 ½	755,	961,	832,
31.74	1 1/4	6,21	7,91	6,85	355,59	14	779,	992,	859,
38.09	1 1/2	8,95	11,33	9,86	368,29	14½	836,	1064,	922,
40		9,86	12,56	10,87	380,99	15	894,	1139,	986,
44.44	1 3/4	12,18	15,51	13,43	393,69	15½	955,	1216,	1053,
50		15,41	19,62	16,99	400		986,	1256,	1087,
50.79	2	15,91	20,25	17,54	406,39	16	1018,	1296,	1122,
57.14	2 1/4	20,13	25,63	22,20	419,09	16½	1082,	1378,	1194,
60		22,19	28,26	24,47	431,79	17	1149,	1463,	1267,
63.49	2 1/2	24,86	31,65	27,41	444,49	17½	1220,	1550,	1343,
70		30,21	38,46	33,31	450		1248,	1589,	1376,
76.19	3	35,79	45,58	39,47	457,19	18	1288,	1640,	1421,
85.54	3 1/4	42,01	53,49	45,20	469,89	18½	1361,	1733,	1501,
88.89	3 1/2	48,72	62,04	53,72	482,59	19	1435,	1828,	1583,
100		61,65	78,50	67,98	495,29	19½	1512,	1925,	1667,
101.59	4	63,64	81,03	70,17	500	19½	1541,	1962,	1699,
114.29	4 1/2	84,54	102,55	88,81	507,99	20	1591,	2025,	1754,
126.99	5	99,44	126,61	108,64	520,69	20½	1671,	2128,	1843,
139.69	5 1/2	120,32	153,20	132,67	533,39	21	1754,	2233,	1934,
152.29	6	143,19	182,32	157,89	546,09	21½	1838,	2341,	2027,
165.09	6 1/2	168,05	213,97	185,30	550		1865,	2374,	2056,
177.79	7	194,90	248,16	214,91	558,79	22	1925,	2451,	2122,
190.49	7 1/2	223,74	284,79	246,71	571,49	22½	2013,	2563,	2220,
200		246,61	314,00	271,93	584,19	23	2104,	2679,	2320,
203.19	8	254,50	324,12	271,93	584,19	23½	2196,	2796,	2483,
215.89	8 1/2	287,38	365,90	316,88	600		2219,	2826,	2447,