

Table F.1 — Nickel and High-Nickel Alloys (ASTM E 140-97, Table 3)

镍及高镍合金硬度换算表

HV	HB		Rockwell Hardness Number														HK
	HV1, HV5, HV10, HV30	HBS 10/3000	HRA	HRB	HRC	HRD	HRE	HRF	HRG	HRK	HR15N	HR30N	HR45N	HR15T	HR30T	HR45T		HK0,5, HK1
513		(479)	75,5	...	50,0	63,0	...	...	...	...	85,5	68,0	54,5	...	...	...	...
481		450	74,5	...	48,0	61,5	...	...	...	...	84,5	66,5	52,5	...	...	...	...
452		425	73,5	...	46,0	60,0	...	...	...	...	83,5	64,5	50,0	...	...	...	...
427		403	72,5	...	44,0	58,5	...	...	...	...	82,5	63,0	47,5	...	...	...	...
404		382	71,5	...	42,0	57,0	...	...	...	...	81,5	61,0	45,5	...	...	...	...
382		363	70,5	...	40,0	55,5	...	...	...	...	80,5	59,5	43,0	...	...	...	436
362		346	69,5	...	38,0	54,0	...	...	...	...	79,5	58,0	41,0	...	...	...	413
344		329	68,5	...	36,0	52,0	...	...	...	...	78,5	56,0	38,5	...	...	...	392
326		313	67,5	...	34,0	50,5	...	...	...	...	77,5	54,5	36,0	...	...	...	372
309		298	66,5	(106)	32,0	49,5	...	(116,5)	94,0	76,5	94,5	52,0	34,0	94,0	85,5	77,0	352
285		275	64,5	(104)	28,5	46,5	...	(115,5)	91,0	75,0	94,0	50,5	30,0	94,0	84,5	75,0	325
266		258	63,0	(102)	25,5	44,5	...	(114,5)	87,5	73,5	93,0	49,0	26,5	93,0	83,0	73,0	304
248		241	61,5	100	22,5	42,0	...	(113,0)	84,5	72,0	92,5	47,5	23,0	92,5	81,5	71,0	283
234		228	60,5	98	20,0	40,0	...	(112,0)	81,5	70,5	92,0	46,0	20,0	92,0	80,5	69,0	267
220		215	59,0	96	(17,0)	38,0	...	(111,0)	79,5	69,0	91,0	44,5	17,0	91,0	79,0	67,0	251
209		204	57,5	94	(14,5)	36,0	...	(110,0)	77,5	68,0	90,5	43,0	14,0	90,5	77,5	65,0	239
198		194	56,5	92	(12,0)	34,0	...	(109,5)	75,5	66,5	89,5	41,5	11,0	89,5	76,0	63,0	226
188		184	55,0	90	(9,0)	32,0	...	(108,5)	72,0	65,0	89,0	40,0	7,5	89,0	75,0	61,0	215
179		176	53,5	88	(6,5)	30,0	...	(107,0)	69,0	64,0	88,0	38,5	5,0	88,0	73,5	59,5	204
171		168	52,5	86	(4,0)	28,0	...	(106,0)	65,5	62,5	87,5	37,0	2,0	87,5	72,0	57,5	195
164		161	51,5	84	(2,0)	26,5	...	(104,0)	62,5	61,5	87,0	35,5	(-0,5)	87,0	70,5	55,5	187
157		155	50,0	82	...	24,5	...	(103,0)	59,5	60,0	86,0	34,0	...	86,0	69,5	53,5	179
151		149	49,0	80	...	22,5	...	(101,5)	56,5	58,5	85,5	32,5	...	85,5	68,0	51,5	173
145		144	47,5	78	...	21,0	...	(100,5) a	53,0	57,0	84,5	31,0	...	84,5	66,5	49,5	166
140		139	46,5	76	...	(19,0)	...	99,5	50,0	56,0	83,5	30,0	...	84,0	65,5	47,5	160
135		134	45,5	74	...	(17,5)	...	98,5	47,0	54,5	82,0	29,0	...	83,0	64,0	45,5	154

^aRecalculated in 2012 by interpolation

The use of the hardness scales for the hardness values shown in parentheses is not recommended since they are beyond the ranges recommended for accuracy. Such values are shown for comparative purposes only, where comparisons may be desired and the recommended machine and scale are not available.

Table F.1 (continued)

HV	HB	Rockwell Hardness Number														HK	
		HV1, HV5, HV10, HV30	HBS 10/3000	HRA	HRB	HRC	HRD	HRE	HRF	HRG	HRK	HR15N	HR30N	HR45N	HR15T		HR30T	HR45T	HK0,5, HK1
130	129		44,0	72	...	(16,0)	97,0	92,0	40,0	78,0	...	...	...	82,5	62,5	43,5	149
126	125		43,0	70	...	(14,5)	95,5	90,0	37,5	76,5	...	...	...	82,0	61,0	41,5	144
122	121		42,0	68	...	(13,0)	94,5	89,0	34,5	74,5	...	...	...	81,0	60,0	39,5	140
119	118		41,0	66	...	(11,5)	93,0	87,5	31,0	72,5	...	...	...	80,5	58,5	37,5	136
115	114		40,0	64	...	(10,0)	91,5	86,0	27,5	71,0	...	...	...	79,5	57,0	35,5	...
112	111		39,0	62	...	(8,0)	90,5	84,5	24,0	69,0	...	...	...	79,0	56,0	33,5	...
108	108		...	60	...	...	89,0	83,0	20,5	67,5	...	...	...	78,5	54,5	31,5	...
106	106		...	58	...	...	88,0	81,5	17,0	66,0	...	...	...	77,5	53,0	29,5	...
103	103		...	56	...	...	86,5	80,0	13,5	64,5	...	...	...	77,0	51,5	27,5	...
100	100		...	54	...	...	85,5	79,0	10,0	63,0	...	...	...	76,0	50,5	25,5	...
98	98		...	52	...	...	84,0	78,0	6,5	61,5	...	...	...	75,5	49,0	23,5	...
95	95		...	50	...	...	83,0	77,0	3,0	60,0	...	...	...	74,5	47,5	21,5	...
93	93		...	48	...	...	81,5	76,0	0,0	58,5	...	...	...	74,0	46,5	19,5	...
91	91		...	46	...	...	80,5	75,0	0,0	57,0	...	...	...	73,5	45,0	17,0	...
89	89		...	44	...	...	79,0	74,0	0,0	55,5	...	...	...	72,5	43,5	14,5	...
87	87		...	42	...	...	78,0	73,0	0,0	54,0	...	...	...	72,0	42,0	12,5	...
85	85		...	40	...	...	76,5	72,0	0,0	52,5	...	...	...	71,0	41,0	10,0	...
83	83		...	38	...	...	75,0	71,0	0,0	51,0	...	...	...	70,5	39,5	7,5	...
81	81		...	36	...	...	74,0	70,0	0,0	49,0	...	...	...	70,0	38,0	5,5	...
79	79		...	34	...	...	72,5	69,0	0,0	47,5	...	...	...	69,0	36,5	3,0	...
78	78		...	32	...	...	71,5	68,0	0,0	46,0	...	...	...	68,5	35,5	1,0	...
77	77		...	30	...	...	70,0	67,0	0,0	44,5	...	...	...	67,5	34,0	...	...

^aRecalculated in 2012 by interpolation

The use of the hardness scales for the hardness values shown in parentheses is not recommended since they are beyond the ranges recommended for accuracy. Such values are shown for comparative purposes only, where comparisons may be desired and the recommended machine and scale are not available.