

# HAYNES<sup>®</sup> 625 alloy

## Fabrication

### Heat Treatment

HAYNES<sup>®</sup> 625 alloy is normally final annealed at 1925°F (1050°C) for a time commensurate with section thickness. Annealing during fabrication can be performed at even lower temperatures, but a final subsequent anneal at 1925°F (1050°C) is usually required to produce optimum structure and properties. Please see Haynes International publication H-3159 for further information.

#### Effect of Cold Reduction Upon Room-Temperature Properties

Cold Reduction	Subsequent Anneal Temperature	0.2% Yield Strength		Ultimate Tensile Strength		Elongation	Hardness
		ksi	MPa	ksi	MPa		
%	-					%	HR B/C
None	None	70	480	133	915	46	97 HRB
10	None	113	780	151	1040	30	32 HRC
20		140	965	169	1165	16	37 HRC
30		162	1115	191	1315	11	40 HRC
40		178	1230	209	1440	8	42 HRC
50		184	1270	223	1540	5	45 HRC
10		1850°F (1010°C)	63	435	134	925	46
20	71		490	138	950	44	-
30	78		535	141	970	44	-
40	82		565	141	970	42	-
50	82		560	141	975	42	-
10	1950°F (1065°C)	61	425	133	915	46	-
20		71	485	137	950	45	-
30		77	530	140	965	44	-
40		83	575	142	975	42	-
50		82	570	141	975	42	-
10	2050°F (1120°C)	58	405	128	880	50	-
20		67	460	135	930	46	-
30		58	400	127	875	52	-
40		72	500	137	945	44	-
50		61	420	130	900	50	-
10	2150°F (1175°C)	52	360	122	840	55	-
20		54	370	124	850	55	-
30		53	365	122	840	56	-
40		52	360	122	840	55	-
50		51	350	119	825	58	-

\*Tensile results are averages of two or more tests.

\*Rapid Air Cool

HRB = Hardness Rockwell "B".

HRC = Hardness Rockwell "C".