

HAYNES[®] 625 alloy

Fabrication

Heat Treatment

HAYNES[®] 625 alloy is normally final annealed at 1925°F (1052°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 (1052°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		
%	-	ksi	MPa	ksi	MPa	%	HR C/BW
None	None	70	483	133	917	46	97 HRBW
10	None	113	779	151	1041	30	32 HRC
20		140	965	169	1165	16	37 HRC
30		162	1117	191	1317	11	40 HRC
40		178	1227	209	1441	8	42 HRC
50		184	1268	223	1538	5	45 HRC
10	1850°F (1010°C)	63	434	134	924	46	-
20		71	490	138	951	44	-
30		78	538	141	972	44	-
40		82	565	141	972	42	-
50		82	565	141	972	42	-
10	1950°F (1065°C)	61	421	133	915	46	-
20		71	490	137	945	45	-
30		77	531	140	965	44	-
40		83	572	142	979	42	-
50		82	565	141	972	42	-
10	2050°F (1120°C)	58	400	128	883	50	-
20		67	462	135	931	46	-
30		58	400	127	876	52	-
40		72	496	137	945	44	-
50		61	421	130	896	50	-
10	2150°F (1175°C)	52	359	122	841	55	-
20		54	372	124	855	55	-
30		53	365	122	841	56	-
40		52	359	122	841	55	-
50		51	352	119	820	58	-

*Tensile results are averages of two or more tests.

*Rapid Air Cool

HRC = Hardness Rockwell "C".

HRBW = Hardness Rockwell "B", Tungsten Indentor.