

# CHEMICAL COMPOSITION CHART



## Nickel & High Temperature Alloys

Grade	Al	B	C	Co	Cr	Cu	Fe	Mn	Mo	Nb	Ni	P	S	Si	Ti	V	W	Other
Alloy 20 Carpenter®20 Incoloy® 20			0.06 max		19.0-21.0	3.0-4.0	bal	2% max	2.0-3.0		32.5-38.0			1.0 max				Cb 1.0 max
Alloy 22 Hastelloy® C-22 Inconel® 22	0.2 max		.015 max	2.5 max	20.00-22.5		2.0-6.0	.50 max	12.5-14.5	1.0 max	bal	.02 max	.02 max	.08 max	0.6-1.2	.35 max	2.5-3.5	Cb 2.5 max
Alloy 36 Invar® 36 Nilo® 36	.03 max		0.008	.35 max			63.0	0.3	.02 max		36.0		0.001	0.15				
Alloy 41 Rene® 41	1.40-1.60	.003-.010	.05-.12	10.0-12.0	18.0-20.0		5.0 max	0.10 max	9.0-10.5		bal	.015 max		0.5	3.0-3.30			
Alloy 188 Haynes® 188 Udimet® 188		.015 max	.05-.15	bal	21.0-23.0		3.0 max	1.25 max			20.00-24.0	.020 max	.015 max	.20-.50			13.0-15.0	La .03-.15
Alloy 400 Monel® 400			.3 max			28-34 max	2.5 max	2.0 max			63.0 min		.024 max	.5 max				
Alloy 600 Inconel® 600			0.15 max		14.7-17.0	0.5 max	6.00-10.00	1.0 max			72.0		0.015 max	0.5 max				
Alloy 601 Inconel® 601	1.0-1.7		.1 max	1	21.0-25.0		bal	1.0 max			58.0-63.0		.015 max	.5 max				
Alloy 617 Inconel® 617	.8-1.5	.006 max	.05-.15	10.0-15.0	20.0-24.0	.5 max	3.0 max	1.0 max	8.0-10.0		44.5 min		.015 max	1.0 max	0.6 max			
Alloy 625 Inconel® 625	0.40 max		.10 max	1.0 max	20.0-23.0		5.0 max	.50 max	5.0-10.0	3.15-4.15	58.0 min	.015 max	.015 max	.50 max	0.40 max			Nb+Ta 3.15-4.15
Alloy 718 Inconel® 718	0.20-0.80	0.006 max	0.08 max	1.0 max	17.0-21.0	0.30 max	bal	0.35 max	2.8-3.3	4.75-5.5	50.0-55.0	0.015 max	0.015 max	0.35 max	0.65-1.15			Nb+Ta 4.75-5.50
Alloy 800H Incoloy® 800H	0.30-1.20		0.05-0.10		19.0-23.0		39.5 min				30.0-35.0				0.15-0.60			Al+Ti 0.30-1.20
Alloy 800HT® Incoloy® 800HT®	0.25-0.60		0.06-0.10		19.0-23.0		39.5 min				30.0-35.0				0.25-0.60			Al+Ti 0.85-1.20
Alloy 825 Incoloy® 825	0.2 max		.05 max		19.5-23.5	1.5-3.0	22.0 min	2.5-3.5			38.0-46.0		.03 max	.5 max	06-1.2			
Alloy A-286 A-286 Incoloy® A-286	.35 max	.003-.010	.08 max		13.5-16.0		bal	2.0 max	1.00-1.75		24.0-27.0			1.0 max	1.90-2.30	.10-.50		
Alloy C-263 Hastelloy® C-263	0.60 max		0.06 max	20.0	20.0				5.85		51.0				2.15			
Alloy C-276 Hastelloy® C-276			.01 max	2.5 max	14.5-16.5		4.0-7.0	1.00 max	15.0-17.0		bal	.04 max	.03 max	.08 max		.35 max	3.0-4.5	
Alloy K-500 Monel® K-500	2.30-3.15		.25 max			27-33 max	2.0 max	1.5 max			63.0 min		.01 max	.5 max	.35-.85			
Alloy L-605 Cobalt® L-605 Haynes® L-605			.05-.15	bal	19.0-21.0		3.0 max	1.0-2.0			9.0-11.0	0.4 max	0.03 max	0.4 max			14.0-16.0	
Alloy X Hastelloy® x			.05-.15	0.5-2.5	20.5-23.0		17.0-20.0	1.0 max	8.0-10.0		bal	0.04 max	0.03 max	1.0 max			0.2-1.0	
Alloy X-750 Inconel® X-750	0.40-1.0		.08 max	1.00 max	14.0-17.0	0.50 max	5.0-9.0	1.00 max		0.70-1.20	70.0 min		.01 max	.50 max	2.25-2.75			