

Trade Name	C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Fe	Co	V	W	Other
Alloy B	.12	1.00	.030	.030	1.00	Bal.	1.00	26.00 30.00	---	4.00 6.00	2.50	.20 .60		
Alloy C (CV-6M)	.07	1.00	.04	.03	1.00	Bal.	17.0 20.0	17.0 20.0		3.00	---	---	---	
Alloy C (CW-12MW)	.12	1.0	.03	.03	1.0	+ Co Bal.	15.5 17.5	16.0 18.0	---	4.5 7.0	2.5	.20 .40	3.75 5.25	
Alloy X	.20	1.00	.04	.03	1.00	Bal.	20.50 23.00	8.00 10.00	---	17.00 20.00	.50 2.50	---	.20 1.00	
Invar	.12	.20 .50	.04	.03	.40	35.0 37.0	---	---	---	Bal.	---	---	---	
In 600 ①	.15	1.0	.03	.015	.50	72 min.	14.0 17.0	---	.50	6.0 10.0	---	---	---	
In 625 ②	.10	.50	.015	.015	.50	Bal.	20.0 23.0	8.0 10.0	.30	5.0	1.0	---	---	0.4Ti, 0.4Al, 3.15-4.15 Cb + Ta
Monel 410	.35	1.5	---	---	2.0	62.0 68.0	---	---	26.0 33.0	2.5	*	---	---	.50 Al
S Monel	.25	1.5	---	---	3.5 4.5	60	---	---	27.0 31.0	2.5	*	---	---	.50 Al
RH Monel	.40 .70	1.5	---	---	2.3 3.0	Bal.	---	---	29.0 34.0	.5	1.0	---	---	.50 Al
E Monel	.30	1.5	---	---	1.0 2.0	60.0 min.	---	---	26.0 33.0	3.5	*	---	---	.50 Al 1.0- 3.0Cb + Ta
M-35 Monel	.35	1.5	.03	.03	1.25	Bal.	---	---	26.0 33.0	3.5				0.5 Max Cb
47-50	.05	.60	.02	.02	.60	47.0 50.0	---	---	---	Bal.				

Cobalt included in % Nickel. Maximum unless range is shown.

① Also see International Nickel's Inconel 600.

② Also see International Nickel's Inconel 625.

TABLE XIV - PROPERTIES OF SEPARATELY CAST TEST BARS  
OF NICKEL BASE ALLOYS

Alloy	Condition	Tensile Strength MPa (psi) Range	0.2% Yield Strength MPa (psi) Range	% Elongation Range (in 2.5 cm)	Hardness Range
Alloy B	Annealed	517-586 (75-85,000)	345-414 (50-60,000)	8-12	90-100 Rb
Alloy C	As Cast	552-655 (80-95,000)	310-379 (45-55,000)	8-12	90-100 Rb
	Annealed	517-655 (75-95,000)	310-379 (45-55,000)	8-12	90 Rb - 25 Rc
Alloy X	A.C. 24° C	434-483 (63-70,000)	283-310 (41-45,000)	10-15	85-96 Rb
	A.C. 816° C	241-310 (35-45,000)	---	12-20	---
Invar	As Cast	345-414 (50-60,000)	172-207 (25-30,000)	30-40	50-60 Rb
In 600 ①	As Cast	448-517 (65-75,000)	241-276 (35-40,000)	10-20	80-90 Rb
In 625 ②	Annealed	552-758 (80-100,000)	276-379 (40-55,000)	15-30	10-20 Rc
Monel 410	As Cast	448-517 (65-75,000)	221-262 (32-38,000)	25-35	65-75 Rb
S Monel	Annealed	690-758 (100-110,000)	379-448 (55-65,000)	5-10	20-28 Rc
	Hardened	827-965 (120-140,000)	586-690 (85-100,000)	0	32-38 Rc
RH Monel	As Cast	690-758 (100-110,000)	414-552 (60-80,000)	10-20	20-30 Rc
Monel E	As Cast	448-552 (65-80,000)	227-276 (33-40,000)	25-35	67-78 Rb
M-35 Monel	As Cast	448-552 (65-80,000)	172-241 (25-35,000)	25-40	65-85 Rb
47-50	Annealed	414-483 (60-70,000)	138-207 (20-30,000)	25-35	55-60 Rb

NOTE: The above mechanical property values are for information only. They do not necessarily apply to casting. Any requirements for mechanical properties are beyond this standard and must be negotiated with the foundry.

① Also see International Nickel's Inconel 600.

② Also see International Nickel's Inconel 625.