

ALLOY COMPOSITION, DESCRIPTION AND SPECIFICATION

ALLOY	NOMINAL CHEMICAL COMPOSITION					DESCRIPTION	SPECIFICATIONS
	Ni	Cr	Fe	Si	Other		
RA 330®	35	19	43	1.25	C:0.05	ASME approval to 1650°F. Austenitic alloy with excellent carburization/oxidation resistance. Withstands thermal fatigue. Good hot strength and ductility to 2200°F. "HC" has higher carbon for best shear strength.	AMS 5592, 5716 • ASTM B-511, B-512, B-535, B-536, B-546, B-710, B-739 • ASME SB-511, SB 535, SB-536 • UNS N08330, N08332
RA 85H	14.5	18.5	63.4	3.6	C:0.20 Al:1.0/Mn:0.8	A fully austenitic low cost high strength alloy modified with silicon for increased resistance to carburization. Aluminum addition provides excellent oxidation and sulfidation resistance.	
RA 253MA	11	21	66.3	1.7	C:0.08 Mn:0.30/N:0.17 Ce:0.04	An advanced micro-alloyed austenitic heat resistant alloy. Provides outstanding oxidation resistance and high temperature strength.	ASME SA-240, SA-312, SA-358, SA-479 ASTM A-276 • UNS S30815
RA 309	14	23	60	0.8	C:0.05	Austenitic alloy, oxidation resistant in 1500-2000°F service. High chromium, relatively low nickel, for use in moderately sulfidizing atmosphere.	AISI 309-S • AMS 5523, 5650 ASTM A-167, A-240, A-276, A-312, A-358, A479 • ASME SA-240 • UNS30900
RA 310	20	25	52	0.5	C:0.05	Austenitic alloy. Higher chromium and nickel for greater oxidation resistance to 2000°F. More resistant to cyclic temperature conditions, good sulfidation and hot corrosion resistance.	AISI 310-S, AMS 5521, 5651 ASTM A-176, A-240, A-276, A-312, A-358, A-479 • AMSE SA-240 • UNS31000
CARPENTER† 20Cb-3 STAINLESS	34	20	38	0.50	C:0.04 Cu:3.5/Mo:2.5 Cb-Ta:0.5	The stainless steel for acid corrosion environments. Resistant to intergranular corrosion (as welded). Resistant to chloride stress corrosion cracking.	ASTM B-463, B-464, B-473 ASME SB-463, SB-464, SB-473 UNS N08020
RA 200	99.5	–	0.20	0.20	C:0.08 S:0.005	A wrought commercially pure nickel. Excellent resistance to caustic corrosion, good thermal and electrical conductivity, large magnetostrictive effect.	ASTM B-162 ASME SB-162 UNS N02200
RA 600	76	15.5	8	0.20	C:0.08 S:0.008	A nickel-chromium alloy, resistant to corrosive environments at elevated temperatures. Good oxidation resistance to 2000°F.	AMS 5540, ASTM B-168 ASME SB-168 • UNS N06600
RA 601	60.5	23.0	14.1	0.20	C:0.05 Al:1.35	A high nickel, chromium alloy. High strength and thermal fatigue, excellent oxidation resistance to 2000°F.	AMS 5715, 5870

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