

ALLOY SPECIFICATION GUIDE

STAINLESS STEEL

PSM CHEMISTRY SPECIFICATIONS*

AISI	C	Mn	P	S	Si	Cr	Ni	Mo	Cu	Ti	Cb + Ta	N	Al
201	0.08-0.12	5.50-7.50	0.035	0.010	0.50	16.00-18.00	4.25-5.50	0.50	0.50			0.12	
301	0.08-0.12	1.20	0.035	0.010	0.65	17.00-17.50	7.00-7.40	0.50	0.40			0.05	
301HW	0.09-0.13	1.20	0.035	0.010	0.65	16.20-17.00	6.20-7.00	0.50	0.50			0.05	
304	0.04-0.08	2.00	0.035	0.010	0.70	18.00-19.00	8.00-10.00	0.50	0.40			0.07	
304DDQ	0.04-0.08	2.00	0.035	0.010	0.70	18.00-19.00	8.50-9.00	0.50	0.40			0.07	
304EDQ	0.04-0.08	2.00	0.035	0.010	0.70	18.00-19.00	9.00-10.00	0.50	0.40			0.07	
304L	0.030	2.00	0.035	0.010	0.70	18.00-19.00	8.00-10.50	0.50	0.40			0.09	
305	0.04-0.06	1.00	0.040	0.010	0.75	17.20-18.00	12.00-12.90	0.50	0.50			0.04	
316	0.04-0.07	2.00	0.035	0.015	0.75	16.00-18.00	10.00-14.00	2.00-3.00	0.50			0.075	
316L	0.030	2.00	0.035	0.015	0.75	16.00-18.00	10.00-14.00	2.00-3.00	0.50			0.075	
317L	0.030	2.00	0.035	0.015	0.75	18.00-20.00	11.00-15.00	3.00-4.00				0.09	
321	0.080	2.00	0.035	0.015	0.75	17.10-17.90	9.00-11.00	0.50	0.50	5(C+N) Min		0.08	
347	0.080	2.00	0.035	0.015	0.75	17.00-19.00	9.00-11.00	0.50	0.50		10(C) Min	0.08	
409	0.080	1.00	0.035	0.015	0.55	10.50-11.75	0.50	0.30	0.30	6(C+N) Min		0.05	
430	0.04-0.08	0.60	0.025	0.015	0.70	16.00-18.00	0.50	0.50	0.40			0.05	
434	0.04-0.08	0.60	0.025	0.015	0.70	16.00-17.00	0.50	0.75-1.25	0.50			0.05	
17-7	0.090	1.00	0.040	0.010	1.00	16.00-17.00	7.00-7.50						1.00-1.25

SPECIFICATIONS

Grade	ANNEALED			2D	1/4 H	1/2 H	3/4 H	FH
		2D/2B		2D				
301	ASTM-A-240	ASTM-A-666		AMS-5901	AMS-5517 ASTM-A-666	AMS-5518 ASTM-A-666	AMS-5902 ASTM-A-666	AMS-5519 ASTM-A-666
302	ASTM-A-240	ASTM-A-666	ASME-SA-240	AMS-5516	AMS-5903 ASTM-A-666	AMS-5904 ASTM-A-666	AMS-5905 ASTM-A-666	AMS-5906 ASTM-A-666
302				AMS-5515				
304	ASTM-A-240	ASTM-A-666	ASME-SA-240	AMS-5513	AMS-5910 ASTM-A-666	AMS-5911 ASTM-A-666	AMS-5912	AMS-5913
304L	ASTM-A-240	ASTM-A-666	ASME-SA-240	AMS-5511	ASTM-A-666	ASTM-A-666		
305	ASTM-A-240	ASME-SA-240		AMS-5514				
316	ASTM-A-240	ASTM-A-666	ASME-SA-240	AMS-5524	AMS-5907 ASTM-A-666	ASTM-A-666		
316L	ASTM-A-240	ASTM-A-666	ASME-SA-240	AMS-5507	ASTM-A-666	ASTM-A-666		
321	ASTM-A-240		ASME-SA-240	AMS-5510				
347	ASTM-A-240		ASME-SA-240	AMS-5512				
430	ASTM-A-240			AMS-5503				
17-7	ASTM-A-693	MIL-S-25043		AMS-5528				AMS-5529 MIL-S-25043

HIGH PERFORMANCE ALLOYS

BASIC ELEMENTS

SPECIFICATIONS

Alloy	Ni	Cr	Fe	Mo	Other Elements	Grade	UNS	ASTM	AMS	Other Specs
600	75.0	16.0	8.0			600	N06600	B-168	5540	
617	52.0	22.0	1.5	9.0	Co-12.5	617	N06617		5889	
625	60.0	21.0	5.0	9.0	Cb-3.6	625	N06625	B-443	5599	
718	53.0	19.0	17.0	3.1	Cb-5.1	718	N07718		5596	GE B50TF14
C-276	57.0	15.5	5.6	16.0	W-3.7 Co-2	C-276	N10276	B-575		
A-286	25.0	15.0	55.0	1.5	Ti-2.0	A-286			5525	