

Technical
ASTM F593 Abstract

Chemical Requirments											
Alloy Group	Alloy	Composition, percent maximum except as shown									
		C	Mn	P	S	Si	Cr	Ni	Cu	Mo	Other
Austenitic Alloys											
1	303	0.15	2.00	0.20	0.15min	1.00	17.0-	8.0-10.0	1.75-2.2	0.60	Se 0.15
	303Se	0.15	2.00	0.02	0.060	1.00	19.0	8.0-10.0	3.00-	max 4.0	
	304	0.08	2.00	0.045	0.030	1.00	17.0-	8.0-10.5			
	305	0.12	2.00	0.045	0.030	1.00	19.0	10.5-			
	384	0.08	2.00	0.045	0.030	1.00	18.0-	13.0			
	XM1	0.08	5.0-6.5	0.040	.18	1.00	20.0	1			
	XM7	0.				1.	17.0-	19.0			
Austenitic Alloys											
2	316	0.08	2.00	0.045	0.030	1.00	16.0- 18.0	10.0- 14.0		2.00-3.0	
Austenitic Alloys											
3	321	0.08	2.00	0.045	0.030	1.00	17.0- 19.0	9.0-12.0 9.0-			Ti 5 X C min Cb +Ta 10 X C min
	347	0.08	2.00	0.045	0.030	1.00	17.0- 19.0	13.0			
Ferritic Alloys											
4	430	0.12	1.00	0.040	0.030	1.00	16.0- 18.0			0.60max	
	430F	0.12	1.25	0.060	0.15 min	1.00	16.0- 18.0				
Martensitic Alloys											
5	410	0.15	1.00	0.040	0.030	1.00	11.5- 13.5			0.60max	Se 0.15
	416	0.15	1.25	0.060	0.15min	1.00	12.0- 14.0				
	416Se	0.15	1.25	0.060	0.060	1.00	12.0- 14.0				
6	431	0.20	1.00	0.040	0.030	1.00	15.0- 17.0	1.25- 2.50			
Precipitation Hardening Alloys											
7	630	0.07	1.00	0.040	0.030	1.00	15.5- 17.5	3.00- 5.00	3.00- 5.00		Cb + Ta 0.15- 0.4