

2011 Stainless Steel Grades



		NOMINAL CHEMICAL COMPOSITION, WT. PCT.*				OTHER DESIGNATION SYSTEMS									
		Steel Name	ASTM	UNS No.	C	N	Cr	Ni	Mo	Other	EN	DIN	SS	BS	WELDING
General Service and Wet Corrosion	Austenitic	201	201	S20100	0.05	0.15	17	5	—	Mn	1.4372	—	—	284S16	—
		204 Cu	204-Cu	S20430	0.15	0.25	15.5-17.5	1.5-3.5	—	Mn, Cu	~1.4597	—	—	—	—
		XM-19	S20910	S20910	0.05	0.30	22	13	2	Mn, Cb, V	—	—	—	—	P12
		301	301	S30100	0.10	0.04	17	7	—	—	1.4310	1.4310	2331	301S21	308
		302	302	S30200	0.07	0.06	17	8	—	—	1.4319	1.4319	2332	302S31	—
		303, 303 HST	303	S30300	0.06	0.05	17.5	8.1	—	S	1.4305	1.4305	2346	303S31	—
		304	304	S30400	0.04	0.06	18.2	8.1	—	—	1.4301	1.4301	2333	304S31	308
		304L	304L	S30403	0.02	0.06	18.2	8.2	—	—	1.4306	1.4306	2352	304S11	308L
		304LN	304LN	S30453	0.02	0.14	18.2	8.5	—	—	1.4311	1.4311	2371	304S61	308L, 2304
		305	305	S30500	0.02	0.02	18	11.5	—	—	1.4303	1.4303	—	305S19	309L, 312
		307	AWS ER 307	—	0.08	0.05	19	8.5	—	Mn	1.4370	1.4370	—	G18 8Mn	—
		308	S30880	S30880	0.08	—	19.5-22.0	9.0-11.0	0.75	0.30-0.65Si	1.4303	1.4303	—	—	—
		308L	308L	S30883	0.02	0.05	20	11	—	—	19 9 L	—	—	—	NA
		308LSi	S30880	S30880	0.03	—	19.5-22.0	9.0-11.0	0.50	0.65-1.00Si	19 9 LSi	—	—	—	NA
		316	316	S31600	0.04	0.04	16.8	10.7	2	—	1.4401	1.4401	2347	316S31	316L
		316	316	S31600	0.04	0.06	17	11	2.8	—	1.4436	1.4436	2343	316S33	316L
		316H	S31609	S31609	0.04-0.10	—	16.0-18.0	10.0-14.0	2.0-3.0	—	1.4401/1.4919	—	—	—	—
		316L	316L	S31603	0.02	0.06	16.2	10.2	2	—	1.4404	1.4404	2348	316S11	316L
		316L	316L	S31603	0.02	0.06	16.2	10.2	2.8	—	1.4432	1.4432	2353	316S13	316L
		316LN	316LN	S31653	0.02	0.14	16.2	10.2	2	—	1.4406	1.4406	—	316S61	316L
		316Ti	316Ti	S31635	0.04	0.01	17	11	2	Ti	1.4571	1.4571	2350	320S31	318, 316L
		317L	317L	S31703	0.02	0.08	18.3	11.5	3	—	1.4438	1.4438	2367	317S12	317L
		317LMN	317LMN	S31726	0.02	0.14	19.3	13.7	4.3	—	1.4439	1.4439	—	—	P12
		330	330	N08330	0.08	—	17-20	34-37	—	Cu	1.4864	1.4864	—	NA 17	—
		321	321	S32100	0.04	0.01	17.3	9.2	—	Ti	1.4541	1.4541	2337	321S31	347
		347	347	S34700	0.04	0.04	17.3	9.1	—	Cb	1.4550	—	2338	347S31	347
		Alloy 20	N08020	N08020	0.01	0.06	20	33	2	Cu, Cb, Nb	—	—	—	—	320/320LR
		904L	904L	N08904	0.01	0.06	20	25	4.5	Cu	1.4539	1.4539	2562	904S13	P12, 904L
		254 SMO	S31254	S31254	0.01	0.20	20	18	6.1	Cu	1.4547	—	2378	—	P12, P16
		Outokumpu 4565	S34565	S34565	0.02	0.45	24	17	4.5	Mn	1.4565	1.4565	—	—	P16
	Duplex	LDX 2101	S32101	S32101	0.03	0.22	21.5	1.5	0.3	Mn	1.4162	—	—	—	LDX 2101, 2209
		LDX 2404	S82441	S82441	0.02	0.27	24	3.6	1.6	3Mn	1.4662	—	—	—	2209
		Outokumpu 2304	2304	S32304	0.02	0.10	23	4.8	0.3	—	1.4362	1.4362	2327	—	2209, 2304
		2205 Code Plus Two	2205	S32205/S31803	0.02	0.17	22	5.5	3	—	1.4462	1.4462	2377	318S13	2209
		Outokumpu 2507	2507	S32750	0.02	0.27	25	7	4	—	1.4410	—	2328	—	P100
	Other	410	410	S41000	0.12	—	12	—	—	—	1.4006	1.4006	2302	410S21	410, 309L
		41003		S41003	0.03	0.03	10.5-12.5	1.5	—	—	1.4003	—	—	—	309
		410S	410S	S41008	0.06	—	12	—	—	—	1.4000	1.4000	2301	403S17	410, 309L
		416	416	S41600	0.12	—	12	—	—	S	1.4005	1.4005	2380	416S21	—
		420	420	S42000	0.35	.04	12.3	0.10	—	Mn, P, S, Si, Co, Cu	1.4028/1.4031	—	—	—	—
430		430	S43000	0.04	—	16.5	—	—	—	1.4016	1.4016	2320	430S17	308L, 309L	
430F		S43020	S43020	0.12 max	—	16.0-18.0	—	—	0.15min	1.4104	1.4104	2383	—	—	
15-5		XM-12	S15500	0.07	—	14-15.5	3.5-5.5	—	Cu, Cb, Ta	—	—	—	—	—	
434		434	S43400	0.06	—	17	—	1	—	1.4113	—	—	—	312	
441		441	S44100	0.012	—	18	—	—	Nb, Ti	1.4509	1.4509	—	—	441	
444		444	S44400	0.02	0.02	17.8	—	2.1	Ti	1.4521	1.4521	2326	—	444	
17-4		630	S17400	0.04	—	15.3	4.8	—	Cu, Cb, Nb	1.4542	1.4542	—	—	630, 309L	
17-7		631	S17700	0.05	—	16.3	7.0	—	Al	1.4568	1.4568	2388	—	—	
N60			S21800	0.10	0.18	16-18	8-9	—	Mn	—	—	—	—	—	
XM-25		XM-25	S45000	0.05	—	14-16	5-7	0.5-1	Cu, Cb	—	—	—	—	—	
Heat Resisting	Austenitic	304H	304H	S30409	0.05	0.06	18.2	8.1	—	—	1.4948	1.4948	2333	304S51	308H
		321H	321H	S32109	0.05	0.01	17.3	9.2	—	Ti	1.4878	1.4878	2337	321S51	347H
		347H	S34709	S34709	0.04-0.10	—	17.0-20.0	9.0-13.0	—	Cb, Nb	1.4961	1.4961	2347	316 Sxx	—
		309H	S30909	S30909	0.04-0.10	—	22.0-24.0	12.0-16.0	—	—	—	—	—	—	
		309S	309S	S30908	0.06	0.08	22.2	12.2	—	—	1.4833	1.4833	—	309S16	309
		310H	S31009	S31009	0.04-0.10	—	24.0-26.0	19.0-22.0	—	—	—	—	—	—	—
		310S	310S	S31008	0.05	0.06	25.2	19.2	—	—	1.4845	1.4845	2361	310S16	310
		253 MA	S30815	S30815	0.09	0.17	21	11	—	Si, Ce	1.4835	—	2368	—	253 MA

1243EN, Schainburg, USA, October 2010.

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2205 Code Plus Two is a trademark of Outokumpu Stainless, Inc.

Outokumpu Stainless products are also available in special conditions:
PRODEC—Providing improved machinability

*The chemical composition of specific stainless steel grades may vary according to the national standards to which they are ordered.

2011 Outokumpu Stainless Products and ASTM/ASME Coverage

	Steel Name	UNS No.	Flat-Rolled					Long Products										Pipe and		Fittings		Testing Specifications									
			A 480/M (SA) General Req.	A 240/M (SA) Plate	A 240/M (SA) Sheet	A 167 Plate Sheet	A 895 Plate	A 484/M (SA) General Req.	A 276 (SA) Bar, Shapes	A 479/M (SA) Bar, Shapes	A 564/M Bar, Shapes	A 582/M FM Bar	A 555/M General Req.	A 580/M Wire Rod	A 581/M Wire Rod	A 955 Rebar	A 999/M (SA) General Req.	A 312/M (SA) Pipe, Seamless & Welded w/o Filler	A 358/M (SA) Welded w/Filler	A 774	A 778 Welded Unannealed	A 790/M (SA)Pipe, Seamless & Welded w/o Filler	A/SA 815	A 928/M Welded w/Filler	A 961/M General Req.	A 403 WP-W(X)	A 262 Carbides/ Aus SS	A 923 Inter metallics	E112 Grain size		
Corrosion Resistant Austenitic	201	S20100	✓		✓																										
	204 Cu	S20430											✓ A311																		
	XM-19	S20910					✓		✓		✓																				
	301	S30100	✓		✓																										
	302	S30200	✓	✓	✓		✓		✓		✓	✓																			
	303	S30300	✓				✓				✓	✓		✓													✓			✓	
	304	S30400	✓	✓	✓			✓	✓	✓		✓	✓			✓	✓	✓							✓	✓	✓		✓	✓	
	304L	S30403	✓	✓	✓			✓	✓	✓		✓	✓		✓	✓	✓	✓	✓						✓	✓	✓		✓	✓	
	304LN	S30453	✓	✓				✓	✓	✓					✓	✓	✓	✓							✓	✓	✓		✓	✓	
	307										✓																				
	316	S31600	✓	✓	✓			✓	✓	✓		✓	✓			✓	✓	✓							✓	✓	✓		✓	✓	
	316L	S31603	✓	✓	✓			✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓					✓	✓	✓		✓	✓	
	316LN	S31653	✓	✓				✓	✓	✓					✓	✓	✓	✓		✓	✓				✓	✓	✓		✓	✓	
	316Ti	S31635	✓	✓	✓			✓	✓	✓						✓	✓								✓	✓	✓		✓	✓	
	317L	S31703	✓	✓	✓			✓				✓	✓			✓	✓	✓	✓	✓					✓	✓	✓		✓	✓	
	317LMN	S31726	✓	✓	✓			✓	✓	✓						✓	✓	✓							✓	✓	✓		✓	✓	
	330	N08330						✓ B511																							
	904L**	N08904	✓	✓	✓			✓				✓	✓			✓	✓										✓	✓		✓	✓
	254 SMO	S31254	✓	✓	✓				✓	✓		✓	✓			✓	✓	✓							✓	✓	✓		✓	✓	
	Outokumpu 4565	S34565	✓	✓	✓			✓	✓	✓		✓	✓			✓	✓	✓							✓	✓	✓		✓	✓	
Heat Resistant Austenitic	304H	S30409	✓	✓	✓			✓		✓			✓	✓			✓	✓							✓	✓	✓		✓	✓	
	321	S32100	✓	✓	✓			✓	✓	✓			✓	✓			✓	✓	✓	✓					✓	✓	✓		✓	✓	
	321H	S32109	✓	✓	✓			✓					✓	✓			✓	✓		✓	✓				✓	✓	✓		✓	✓	
	347	S34700	✓	✓	✓			✓	✓	✓			✓	✓			✓	✓	✓	✓					✓	✓	✓		✓	✓	
	347H	S34709	✓	✓	✓			✓								✓	✓	✓							✓	✓	✓		✓	✓	
	309	S30900	✓			✓		✓	✓			✓	✓												✓	✓	✓		✓	✓	
	309S	S30908	✓	✓	✓			✓	✓	✓			✓	✓			✓	✓								✓	✓		✓	✓	
	309H	S30909	✓	✓	✓			✓		✓						✓	✓									✓	✓		✓	✓	
	310	S31000	✓			✓		✓	✓			✓	✓												✓	✓	✓		✓	✓	
	310S	S31008	✓	✓	✓			✓	✓	✓			✓	✓			✓	✓								✓	✓		✓	✓	
	310H	S31009	✓	✓	✓			✓		✓						✓	✓									✓	✓		✓	✓	
	253 MA	S30815	✓	✓	✓			✓	✓	✓			✓	✓			✓	✓	✓						✓	✓	✓		✓	✓	
Duplex	LDX 2101	S32101	✓	✓	✓			✓	✓	✓					✓	✓							✓	✓	✓	✓	✓				
	LDX 2404	S82441																													
	Outokumpu 2304	S32304	✓	✓	✓			✓	✓						✓	✓							✓	✓	✓	✓	✓				
	2205 Code Plus Two	S32205	✓	✓	✓			✓	✓			✓	✓		✓	✓							✓	✓	✓	✓	✓			✓	
	Outokumpu 2507	S32750	✓	✓	✓			✓	✓							✓							✓	✓	✓	✓	✓			✓	
Other	405	S40500	✓	✓																											
	409	S40900	✓	✓							✓	✓																		✓	
	410	S41000	✓	✓				✓	✓	✓															✓						
	41003	S41003			✓																										
	410S	S41008	✓	✓				✓																							
	416	S41600								✓		✓	✓	✓																	
	420	S42000	✓	✓																											
	430S	43000	✓					✓	✓	✓			✓	✓												✓				✓	
	15-5	S15500									✓																				
	17-4	S17400									✓			✓																	
	17-7	S17700									✓																				
	N60	S21800							✓				✓																		
	434	S43400	✓	✓																											
	441	S44100																													
	444	S44400	✓		✓			✓	✓	✓																					
	XM-25	S45000									✓																				

Wire rod and billet also available in 302, 302HQ, 305, 17-7, 308L/LSi, 309L/LSi, and 316L/LSi

✓ = Outokumpu product covered in listed specification.
**= 904L bar also available as per B649 and 904L pipe also available per B673 and B674.

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Information given herein may be subject to alteration without notice. Consult the company web site — www.outokumpu.com/stainless/na — for more updated information.

