



EXATON™

AN ESAB® BRAND

THE ONE NAME YOU NEED FOR
STAINLESS AND NICKEL ALLOYS.



	AWS ^b	ISO 14343	MIG/TIG/SAW	SAW Wire Flux	Strip Electrode		
	ER	G/W/P/S ^a	Exaton Global		Exaton Global	AWS	Weld Clad Deposit
Stainless Grades	308/308L	19 9 L	19.9.L	35WF, 15W, 10SW	19.9L	EQ308L	304L (Multi layer)
	308L	19 9 L	19.9.L Cryo	35WF, 15W, 10SW	-	-	-
	308LSi	19 9 L Si	19.9.LSi	-	-	-	-
	AXT	18 8 Mn	AXT	-	-	-	-
	309L	23 12 L	24.13.L	35WF, 15W, 10SW	24.13.L	EQ309L	304 304L
					22.11.L	"309L"	304 304L
	309L	23 12 L	24.13.LHF	35WF, 15W, 10SW	23.12.L	"309L"	304 304L
	309LSi	23 12 L Si	24.13.LSi	-	-	-	-
	"309LNb"	23 12 Nb	24.13.LNb	35WF, 15W, 10SW	21.11.LNb	"309LNb"	347
					23.11.LNb	"309LNb"	
					24.13.LNb	EQ309LNb	
	309LMo	23 12 2 L	22.15.3.L	35WF, 15W, 10SW	21.13.3.L	"309LMo"	316 316L
	310	25 20	25.20.C	35WF, 15W, 10SW	-	-	-
	316L	19 12 3 L	19.12.3.L	35WF, 15W, 10SW	19.12.3.L	EQ316L	316L (Multi layer)
	316LSi	19 12 3 L Si	19.12.3.LSi	-	-	-	-
	316L	19 12 3 L	19.12.3.L Cryo	35WF, 15W, 10SW	-	-	-
317L	19 13 4 L	19.13.4.L	35WF, 15W, 10SW	19.13.4.L	EQ317L	317 (Multi layer)	
347	19 9 Nb	19.9.LNb	35WF, 15W, 10SW	19.9.LNb	EQ347	347 (Multi layer)	
Duplex Grades	2209	22 9 3 N L	22.8.3.L	35WF, 15W	22.8.3.L	EQ2209	2205 (Multi layer)
	2209	22 9 3 N L Si	22.8.3.LSi	-	-	-	-
	2594	25 9 4 N L	25.10.4.L	35WF, 15W	25.10.4.L	EQ2594	2507 (Multi layer)
	-	-	27.7.5.L	-	-	-	-
	-	-	29.8.2.L	35WF 15W	29.8.2.L	-	2906 (Multi layer)
Special Grades	-	-	22.12.HT	35WF, 15W	-	-	-
	"310L"	-	25.20.L	35WF, 15W	-	-	-
	-	-	SX	-	-	-	-
	"310LMo"	25 22 2 N L	25.22.2.LMn	35WF, 15W	25.22.2.LMn	"310LMo"	310LMo (Multi layer)
	385	20 25 5 Cu L	20.25.5.LCu	35WF, 15W	-	-	-
	383	27 31 4 Cu L	27.31.4.LCu	35WF, 15W	-	-	-
Nickel Grades	NiFeCr-1	SNi 8055	Ni 41 Cu	50SW	Ni 41Cu	EQNiFeCr-1	Alloy 825
	NiCr-3	SNi 6082	Ni 72 HP	50SW	Ni 72HP	EQNiCr-3	Alloy 82
	NiCrFe-7	SNi 6052	Ni 68 HP	50SW	Ni 69HP	EQNiCrFe-14	Alloy 690
	NiCrCoMo-1	SNi 6617	Ni 53	50SW	-	-	Alloy 617
	NiCrMo-3	SNi 6625	Ni 60	50SW	Ni 60	EQNiCrMo-3	Alloy 625
	NiCrMo-4	SNi 6276	Ni 56	50SW	-	-	Alloy 276
	NiCrMo-10	SNi 6022	Ni 54	50SW	-	-	Alloy 22
	NiCrMo-13	SNi 6059	Ni 59	50SW	-	-	Alloy 59
	NiCrMo-14	SNi 6686	Ni 55	50SW	-	-	Alloy 686

a) **G** = Gas Metal Arc Welding, **W** = Gas Tungsten Arc Welding, **P** = Plasma Arc Welding, **S** = Submerged Arc Welding

b) **Stainless Wire/Strip:** AWS A5.9, ASME SFA5.9, MIL 19933, ISO 14343, **Nickel Wire & Strip:** AWS A5.14, ASME SFA5.14, MIL 21562,

Stainless Electrodes: AWS A5.4, ASME SFA5.4, **Nickel Electrodes:** AWS A5.11, ASME SFA5.11, **Stainless Flux Cored Wire:** AWS A5.22, ASME SFA 5.22

Strip Welding Flux	Covered Electrode			Flux Cored Wire	Approvals
SAW / ESW Flux	AWS	Exaton Global	ISO	AWS	
10SW / 47S, 49S	E308/308L-16	19.9.LR-16	E 19 9 L	E308LT1-1/T1-4	CWB MIL
	E308/308L-17	19.9.LR	E 19 9 L		
-	E308L-16 Cryo	19.9.LR-16 Cryo	E19 9 L	-	CWB
-	-	-	-	-	CWB
-	-	-	-	-	CWB
10SW / 49S, 47S	E309/309L-16	24.13.LR-16 24.13.LR	E 23 12 L R	E309LT1-1/T1-4	CWB MIL
	E309/309L-17				
10SW / 47S, 49S	-	-	-	-	CWB
-	-	-	-	-	CWB
10SW / 47S, 49S	E309Nb-16	309Nb-16	-	-	-
10SW / 47S, 49S	E309LMo-17	23.12.2.LR	E 23 12 2 L R	E309LMo-T1/T1-4	-
-	E310-16	25.20.R-16	E 25 20	-	-
10SW / 47S, 49S	E316L-17	19.12.3.LR	E 19 12 3 L R	E316LT1-1/T1-4	CWB MIL
	E316L-16	19.12.3.LR-16	E 19 12 3 L R		
-	-	-	-	-	CWB
-	E316L-16 Cryo	19.12.3LR-16 Cryo	E 19 12 3 L R	-	CWB
10SW / 47S, 49S	-	-	-	E317LT1-1/T1-4	CWB
10SW / 47S, 49S	E347-16	19.9NbR-16	E 19 9 Nb R	-	CWB
	E347-17	19.9NbR			
47S	E2209-17	22.9.3.LR	E 22 9 3 N L R	E2209-T1-1/T1-4	CWB
	E2209-15	22.9.3.LB	E 22 9 3 N L B		
-	-	-	-	-	CWB
47S	E2594-16	25.10.4.LR	E 25 9 4 N L R	E2594-T1-1/T1-4	-
	E2594-15	25.10.4.LB	E 25 9 4 N L B		
-	-	-	-	-	-
47S	-	-	-	-	-
-	-	22.12.HTR	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
31S, 47S	"310LMo-15"	25.22.2.LMnB	E 25 22 2 N L B	-	-
-	E385-16	20.25.5.LCuR	E 20 25 5 Cu N L R	-	-
-	E383-16	27.31.4.LCuR	E 27 31 4 Cu L R	-	-
50SW 69S	-	-	-	-	-
50SW, 69S	ENiCrFe-3	Ni 71	E NiCrFe-3	Refer to Stoody	MIL
50SW, 69S	ENiCrFe-7	Ni 69	E NiCrFe-7	-	-
-	ENiCrCoMo-1	Ni 53	E NiCrCoMo-1	-	-
50SW, 69S	ENiCrMo-3	Ni 60	E NiCrMo-3	Refer to Stoody	MIL
-	ENiCrMo-4	Ni 56	E NiCrMo-4	Refer to Stoody	-
-	ENiCrMo-10	Ni 54	E NiCrMo-10	Refer to Stoody	-
-	ENiCrMo-13	Ni 59	E NiCrMo-13	-	-
-	-	-	-	-	-

WELDING FLUXES

	Flux	Description	Bonizewski Basicity Index
Wire Flux	10SW	For 300 series wire or strip submerged arc welding. Chrome compensating.	1.9
	35WF/15W	For 300 series, duplex, and superaustenitic SAW wire. High basicity and neutral.	1.0
	50SW	For Nickel base wire or strip submerged arc welding.	2.4
Strip Flux	10SW	For 300 series wire or strip submerged arc welding. Chrome compensating.	1.0
	31S	For Urea grade 25.22.2.LMn wire or strip submerged arc welding.	1.0
	47S	For 300 series and superaustenitic electroslag strip welding.	4.0
	49S	For 300 series high speed electroslag strip welding.	4.4
	50SW	For Nickel base wire or strip submerged arc welding.	2.4
	69S	For Nickel base electroslag strip flux.	5.4

STANDARD FORMS OF SUPPLY: Other forms available upon request

Bare Wire	Spools: 2, 10, 33, 50, 600 lbs. (.023-3/32 in. diameter)
	Drums: 300, 600 lbs (.035, .039, .045, 1/6 diameter) 750, 1000 lbs (3/32 and 1/8 in. diameter)
	Coils: 60 lb. coils (1/16-3/16 in. diameter)
	Cut Lengths: 36 in. length (.035-3/16 in. diameter) (10 lb. unit, 30 lb. case, 1 lb. unit, 15 lb. case) <i>The filler rods can be supplied stamped or unmarked (Stamping with grade and heat # both ends)</i>
Covered Electrodes	3/32 x 14 in., 1/8 x 14 in., 5/32 x 14 in., 3/16 x 14 in. (10 lb. unit, 30 lb. case)
Flux Cored Electrodes	33 lb. Plastic Spools (.035-.045 in. diameter)
Strip Electrodes	60 lb. (30, 60 and 90 x .5 mm) <i>Large Coils available upon request</i>
Welding Fluxes	55 lb. sealed pails

FILLER METAL SELECTION CHART

BASE METAL	304	304L	309	309L	310	316	316L	321/347	400 SERIES	Duplex	NICKEL	CARBON STEEL	LOW ALLOY
304	308 AXT	308L AXT	309 AXT	309L AXT	310 AXT	316 AXT	316L AXT	321 AXT	309 AXT	MATCHING DUPLEX	NiCr-3	309 AXT	309 AXT
304L	308L AXT	308L	309L	309L	310	316L AXT	316L	308L	309L	MATCHING DUPLEX	NiCr-3	309L AXT	309L AXT
309	309L AXT	309L	309	309L	310	316	316L	309	309	MATCHING DUPLEX	NiCr-3	309 AXT	309 AXT
309L	309L AXT	309L	309L	309L	310	316L	316L	309L	309L	MATCHING DUPLEX	NiCr-3	309L AXT	309L AXT
310	310 AXT	310	310	310	310	316	316L	310	309L	MATCHING DUPLEX	NiCr-3	309 AXT	309 AXT
316	316 AXT	316L	316	316L	316	316	316L	316	309	MATCHING DUPLEX	NiCr-3	309 AXT	309 AXT
316L	316L AXT	316L	316L	316L	316L	316L	316L	316L	309L	MATCHING DUPLEX	NiCr-3	309L AXT	309L AXT
321/347	308 AXT	308L	309L	309L	310	316	316L	347	309	MATCHING DUPLEX	NiCr-3	309 AXT	309 AXT
400 Series	309 AXT	309L	309L	309L	310	309L	309L	309L	309 OR MATCHING FILLER METAL	MATCHING DUPLEX	NiCr-3	309 AXT	309 AXT
Duplex	MATCHING DUPLEX	MATCHING DUPLEX	MATCHING DUPLEX	MATCHING DUPLEX	MATCHING DUPLEX	MATCHING DUPLEX	MATCHING DUPLEX	MATCHING DUPLEX	MATCHING DUPLEX	MATCHING DUPLEX	CONTACT EXATON	MATCHING DUPLEX	MATCHING DUPLEX
Nickel	NiCr-3	NiCr-3	NiCr-3	NiCr-3	NiCr-3	NiCr-3	NiCr-3	NiCr-3	NiCr-3	CONTACT EXATON	USE MATCHING FILLER METAL	NiCr-3	NiCr-3
Carbon Steel	309 AXT	309L AXT	309 AXT	309L AXT	309 AXT	309 AXT	309L AXT	309 AXT	309 AXT	MATCHING DUPLEX	NiCr-3		
Low Alloy	309 AXT	309L AXT	309 AXT	309L AXT	309 AXT	309 AXT	309L AXT	309 AXT	309 AXT	MATCHING DUPLEX	NiCr-3		

- AXT = EN14343 18 8 Mn
- Low carbon versions can often be substituted (e.g. 308L versus 308), except for service at elevated temperatures.
- When joining two different Stainless Steels it is generally recommended to use the higher alloyed of the two.
- Always use over alloyed filler for joining stainless to carbon steel or low alloy.
- Always use nickel filler when joining nickel to any other alloy.
- For high temperature transition joints, carbon diffusion has to be considered. In such cases, use 310 or NiCr-3.
- If the working conditions require heat treatment, the filler metal choice may have to be reconsidered.

CONTACT INFORMATION

Warehouses

1200 Biglerville Rd, Gettysburg, PA 17325
 7310 West Rd, Houston, TX 77086-3240
 1861 S 4800 W, Salt Lake City, UT 84104-5329
 794 Golf Ln, Bensenville IL 60106-1511
 6200 Cantay Rd Unit 20 / Mississauga ON L5R 3Y9

Sales and Customer Service

East Coast 800-359-9444
 Southwest/West 800-359-9445
 Midwest 800-359-9446

Technical Service

Welding Hotline 800-781-9449

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