

CHARACTERISTICS & APPLICATIONS

MAXFLUX ESF 1 is an agglomerated submerged arc flux specifically developed for strip cladding applications. It is ideally suited for surfacing with stainless steel strips of Cr, Cr-Ni, and Cr-Ni-Mo compositions. The flux provides excellent weldability, producing smooth and uniform bead overlap, along with easy and clean slag detachability, ensuring high-quality clad surfaces with minimal post-weld cleaning.



CLASSIFICATION FLUX

EN ISO 14174	SA AAS 2B 56 34 DC
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CHEMICAL COMPOSITION OF FLUX (%)

Al ₂ O ₃ +MnO	CaF ₂	CaO+MgO	SiO ₂ +TiO ₂
30	55	5	10

OTHER PROPERTIES

Alloy Transfer	No Silicon and No Manganese alloying
Basicity	nom: 1.5
Bulk Density	nom: 1.0 kg/dm ³
Grain Size	0.35-2.0 mm (10x44 mesh)

FLUX CONSUMPTION (KG FLUX / KG STRIP)

Arc Voltage	DCEP	Current: 800 A Travel Speed: 12 mm/min Dimension: 60 X 0.5 mm
28	0.5	

REDRYING

For hydrogen sensitive applications or when flux has picked up moisture: 300-350°C, 2 h.



MAXFLUX ESF-1

E308L WELD DEPOSIT AS PER ASME II C SFA 5.39

CLASSIFICATION

STRIP	STRIP EN ISO	WELD METAL AWS
AUTOTHERME EQ309L	EN ISO 14343-A: B 22 11 L	AWS A5.39: SACLAD2-308L
AUTOTHERME EQ308L	EN ISO 14343-A: B 19 9 L	

CHEMICAL COMPOSITION

E308L OVERLAY COMBINATION ON IS2062 STEEL | TYPICAL PARAMETERS: DCEP, 680 A, 28 V, 120 MM/M

	BUFFER LAYER		SUBSEQUENT LAYER	
Strip	AUTOTHERME EQ309L	1st layer	AUTOTHERME EQ308L	2nd layer
C	0.015	0.03	0.013	0.03
Mn	1.77	1.42	1.91	1.51
Si	0.45	0.85	0.39	0.85
P	0.012	0.024	0.018	0.022
S	<0.0005	0.003	<0.0005	0.003
Ni	13.2	11.3	10.6	11.0
Cr	24.2	19	20.79	20.4
Mo	0.06	0.04	0.024	0.03
Cu	0.05	0.03	0.07	0.03
N	0.035	0.041	0.041	0.04
Nb	0.013	0.007	0.004	0.008
O	-	-	-	-
Ferrite Number	-	FN 7	-	FN 8



MAXFLUX ESF-1

E316L WELD DEPOSIT AS PER ASME II C SFA 5.39

CLASSIFICATION

STRIP	STRIP EN ISO	WELD METAL AWS
AUTOTHERME EQ309L	EN ISO 14343-A: B 22 11 L	AWS A5.39: SACLAD2-316L
AUTOTHERME EQ316L	EN ISO 14343-A: B 19 12 8 L	

CHEMICAL COMPOSITION

E316L OVERLAY COMBINATION ON IS2062 STEEL | TYPICAL PARAMETERS: DCEP, 680 A, 28 V, 120 MM/M

	BUFFER LAYER		SUBSEQUENT LAYER	
Strip	AUTOTHERME EQ309L	1st layer	AUTOTHERME EQ316L	2nd layer
C	0.015	0.03	0.013	0.033
Mn	1.77	1.42	1.85	1.74
Si	0.45	0.85	0.41	0.64
P	0.012	0.024	0.018	0.017
S	<0.0005	0.003	<0.0005	0.009
Ni	13.2	11.3	12.9	12.5
Cr	24.2	19	19.18	18.8
Mo	0.06	0.04	2.74	2.14
Cu	0.05	0.03	0.05	0.04
N	0.035	0.04	0.04	0.03
Nb	0.013	0.007	0.005	0.004
O	-	-	-	-
Ferrite Number	-	FN 7	-	FN 8



MAXFLUX ESF-1

E347 WELD DEPOSIT AS PER ASME II C SFA 5.39

CLASSIFICATION

STRIP	STRIP EN ISO	WELD METAL AWS
AUTOTHERME EQ309L	EN ISO 14343-A: B 22 11 L	AWS A5.39: SACLAD2- 347
AUTOTHERME EQ347	EN ISO 14343-A: B 19 9 NB	

CHEMICAL COMPOSITION

E316L OVERLAY COMBINATION ON IS2062 STEEL | TYPICAL PARAMETERS: DCEP, 680 A, 28 V, 120 MM/M

	BUFFER LAYER		SUBSEQUENT LAYER	
Strip	AUTOTHERME EQ309L	1st layer	AUTOTHERME EQ347	2nd layer
C	0.015	0.03	0.19	0.035
Mn	1.77	1.42	1.73	1.52
Si	0.45	0.85	0.45	0.78
P	0.012	0.024	0.013	0.026
S	<0.0005	0.003	<0.0005	0.003
Ni	13.2	11.3	10.4	10.2
Cr	24.2	19	20.3	20.1
Mo	0.06	0.04	0.12	0.08
Cu	0.05	0.03	0.07	0.03
N	0.035	0.04	0.028	0.04
Nb	0.013	0.007	0.624	0.512
O	-	-	-	-
Ferrite Number	-	FN 7	-	FN 7



MAXFLUX ESF-1

E2209 WELD DEPOSIT AS PER ASME II C SFA 5.39

CLASSIFICATION

STRIP	STRIP EN ISO	WELD METAL AWS
AUTOTHERME EQ2209	EN ISO 14343: S 22 9 3 N L	AWS A5.39: SACLAD2- 2209

CHEMICAL COMPOSITION

E2209 OVERLAY COMBINATION ON IS2062 STEEL TYPICAL PARAMETERS: DCEP, 680 A, 28 V, 120 MM/M				
	BUFFER LAYER		SUBSEQUENT LAYER	
Strip	AUTOTHERME EQ209	1st layer	AUTOTHERME EQ209	2nd layer
C	0.03	0.02	0.03	0.02
Mn	0.50-2.0	1.47	0.50-2.0	1.27
Si	0.90	0.66	0.90	0.78
P	0.03	0.01	0.03	0.01
S	0.02	0.008	0.02	0.003
Ni	7.5-9.5	7.53	7.5-9.5	7.86
Cr	21.5-23.5	22.16	21.5-23.5	22.67
Mo	2.5-3.5	2.8	2.5-3.5	3.02
Cu	0.3	0.01	0.3	0.01
N	0.035	0.16	0.035	0.21
Nb	0.10-0.20	0.01	0.10-0.20	0.02
O	-	-	-	-
Ferrite Number (as per ASTM 562E)	-	36	-	34



MAXFLUX ESF-1

E2209 WELD DEPOSIT AS PER ASME II C SFA 5.39

CLASSIFICATION

STRIP	STRIP EN ISO	WELD METAL AWS
AUTOTHERME EQ2209	EN ISO 14343: S 22 9 3 N L	AWS A5.39: SACLAD2- 2209
AUTOTHERME EQ309LMO	EN ISO 14343-A: B 21 13 3 L	AWS A5.39: ESCLAD1- 316L

CHEMICAL COMPOSITION

E2209 OVERLAY COMBINATION ON IS2062 STEEL | TYPICAL PARAMETERS: DCEP, 680 A, 28 V, 120 MM/M

	BUFFER LAYER		SUBSEQUENT LAYER	
Strip	AUTOTHERME EQ309Mo	1st layer	AUTOTHERME EQ2209	2nd layer
C	0.03	0.03	0.03	0.02
Mn	1.0-2.5	1.53	0.50-2.0	1.28
Si	0.30-0.65	0.59	0.90	0.80
P	0.03	0.02	0.03	0.01
S	0.03	0.008	0.02	0.003
Ni	12.0-14.0	12.8	7.5-9.5	8.4
Cr	23-25	20.7	21.5-23.5	22.44
Mo	2.0-3.0	2.4	2.5-3.5	2.98
Cu	0.75	0.1	0.3	0.01
N	-	0.04	0.035	0.21
Nb	-	0.04	0.10-0.20	0.02
O	-	-	-	-
Ferrite Number (as per ASTM 562E)		8.5	-	33