

CHARACTERISTICS & APPLICATIONS

MAXFLUX ESF 2 is an agglomerated flux specifically engineered for electrosag strip cladding (ESSC) applications, where controlled dilution and consistent deposit chemistry are critical. The flux is formulated to provide stable electrical conductivity through the molten slag, ensuring uniform heat distribution and smooth metal transfer during strip surfacing. It is optimized for stainless steel strip electrodes covering Cr, Cr-Ni, and Cr-Ni-Mo alloy systems, including both Nb-stabilized and non-stabilized grades. The flux chemistry is designed to promote low dilution, controlled silicon and oxygen pickup, and refined weld metal cleanliness. It also ensures a flat, well-wetted bead profile with minimal surface irregularities, along with self-detaching, fluid slag that facilitates high productivity and ease of operation.



CLASSIFICATION FLUX

EN ISO 14174	ES A FB 2B 56 44 DC
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CHEMICAL COMPOSITION OF FLUX (%)

Al ₂ O ₃ +MnO	CaF ₂	CaO+MgO	SiO ₂ +TiO ₂
20	55	15	10

OTHER PROPERTIES

Alloy Transfer	No Silicon and No Manganese alloying
Basicity	nom: 2.3
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: 1250 A Travel Speed: 130 mm/min Dimension: 60 X 0.5 mm
25	0.5	

REDRYING

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



MAXFLUX ESF-2

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: ESCLAD1- 308L

CHEMICAL COMPOSITION

E308L OVERLAY COMBINATION ON IS2062 STEEL TYPICAL PARAMETERS: DCEP, 1150 A, 24.5 V, 120 MM/M		
Strip	AUTOTHERME EQ309L	AUTOTHERME EQ309L
Layer	1	2
C	0.024	0.023
Mn	1.61	1.60
Si	0.71	0.66
P	0.002	0.002
S	0.005	0.005
Ni	10.2	11.1
Cr	19.2	20.3
Mo	0.2	0.2
Cu	0.1	0.1
N	0.04	0.04
Nb	-	-
O	-	-
Ferrite Number	5	7



MAXFLUX ESF-2

E316L WELD DEPOSIT AS PER ASME II C SFA 5.39

CLASSIFICATION

STRIP	STRIP EN ISO	WELD METAL AWS
AUTOTHERME EQ309LMO	EN ISO 14343-A: B 21 13 3 L	AWS A5.39: ESCLAD1- 316L

CHEMICAL COMPOSITION

E316L OVERLAY COMBINATION ON IS2062 STEEL | TYPICAL PARAMETERS: DCEP, 1150 A, 24.5 V, 120 MM/M

Strip	AUTOTHERME EQ309Mo	AUTOTHERME EQ309Mo
Layer	1	2
C	0.024	0.025
Mn	1.55	1.53
Si	0.60	0.59
P	0.008	0.008
S	0.005	0.005
Ni	12.5	13.1
Cr	18.2	19.1
Mo	2.8	3.1
Cu	0.1	0.1
N	0.04	0.04
Nb	-	-
O	-	-
Ferrite Number	7	8



MAXFLUX ESF-2

E347 WELD DEPOSIT AS PER ASME II C SFA 5.39

CLASSIFICATION

STRIP	STRIP EN ISO	WELD METAL AWS
AUTOTHERME EQ309LNB	EN ISO 14343-A: B 22 12 L NB	AWS A5.39: ESCLAD1- 347

CHEMICAL COMPOSITION

E347 OVERLAY COMBINATION ON IS2062 STEEL TYPICAL PARAMETERS: DCEP, 1150 A, 24.5 V, 120 MM/M		
Strip	AUTOTHERME EQ309Nb	AUTOTHERME EQ309Nb
Layer	1	2
C	0.029	0.028
Mn	1.42	1.46
Si	0.51	0.52
P	0.008	0.008
S	0.005	0.005
Ni	10.2	10.9
Cr	19.2	19.8
Mo	0.1	0.1
Cu	0.1	-
N	0.05	0.05
Nb	0.4	0.4
O	-	-
Ferrite Number	6	7



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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: ESCLAD1- 2209

CHEMICAL COMPOSITION

E2209 OVERLAY COMBINATION ON IS2062 STEEL TYPICAL PARAMETERS: DCEP, 1150 A, 24.5 V, 120 MM/M		
Strip	AUTOTHERME EQ309Nb	AUTOTHERME EQ309Nb
Layer	1	2
C	0.02	0.02
Mn	1.48	1.27
Si	0.67	0.78
P	0.01	0.02
S	0.008	0.003
Ni	7.5	7.86
Cr	22.10	22.67
Mo	2.80	3.02
Cu	0.01	0.01
N	0.16	0.21
Nb	0.01	0.02
O	-	-
Ferrite Number (as per ASTM 562E)	35	34