EMR SAHARA®

Arosta® 347

Stainless steel electrode

SMAW

Classification

AWS A5.4-92 : E347-16
EN 1600-97 : E 19 9 Nb R 12

Temperature Range

pressure parts: -120…+400°C
oxidation resistance: to 800°C

General description

Rutile-basic all position stainless steel electrode
For Ti or Nb stabilized 304 or equivalent steels
Excellent resistance in oxidizing environments such as nitric acid
High resistance to intergranular corrosion
Easy slag release and smooth bead appearance
Strong electrode coating
Weldable on AC and DC
Also available in vacuum sealed Sahara ReadyPack® (SRP)

Welding positions

ISO/ASME PA/1G PB/2F PC/2G PF/3G up PE/4G PF/5G up

Current type

AC / DC electr. + / -

Approvals

CTL	DB	TÜV
+	+	+

Chemical composition (w%), typical, all weld metal

C	Mn	Si	Cr	Ni	Nb	FN
0.030	0.8	0.8	19.5	9.8	0.35	6-12

Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) +20°C	-20°C	-60°C
Required: AWS A5.4-92		not required	min. 550	min. 25	not required		
EN 1600-97		min. 350	min. 550	min. 25	not required		
Typical values	AW	500	630	35	70	50	35

Packaging, available sizes and identification

	Diameter (mm)	2.5	3.2	4.0
	Length (mm)	350	350	350
Unit: Box	Pieces / unit (nominal)	120	130	90
	Net weight/unit (kg)	2.6	4.7	4.9
Unit: SRP	Pieces / unit (nominal)	69	52	28
	Net weight/unit (kg)	1.4	1.8	1.4

Identification Imprint: 347-16/Arosta 347 Tip colour: gold

Arosta® 347: rev. EN 15

LINCOLN® ELECTRIC

Arosta® 347

Materials to be welded

Steel grades	EN 10088-1/-2	EN 102 13-4	W.Nr.	ASTM/ACI A240/A312/A351	UNS
Ti-, Nb stabilized	X6CrNiTi 18-10		1.4541	(TP)321	S32100
				(TP)321H	S32109
	X6CrNiNb 18-10		1.4550	(TP)347	S34700
				(TP)347H	S34709
		GX5CrNiNb 19-10	1.4552	CF-8C	J92710
Non stabilized	X4CrNi 18-10		1.4301	302	
	X2CrNi 19-11		1.4306	(TP)304	S30400
				(TP)304L	S30403
		GX5CrNi 19-10	1.4308	CF-8	J92600
			1.4312		
				(TP)304H	S30409

Calculation data

Sizes Diam. x length	Current range type	Current	Arc time - per electrode at max. current -	Energy - per electrode at max. current -	Dep.rate - per electrode at max. current -	Weight/ 1000 pcs.	Electrodes/ kg weldmetal	kg Electrodes/ kg weldmetal
(mm)	(A)		(s)*	E(kJ)	H(kg/h)	(kg)	B	1/N
2.5 x 350	40 - 75	DC+	52	78	0.87	20.7	80	1.66
3.2 x 350	60 - 110	DC+	54	119	1.4	34.9	48	1.67
4.0 x 350	80 - 150	DC+	64	210	1.7	49.0	33	1.61

* stub end 35mm

Welding parameters, optimum fill passes

Welding positions Diameter (mm)	PA/1G Current (A)	PB/2F	PC/2G	PF/3G up	PE/4G	PF/5G up
2.5	70	70	70	60	60	60
3.2	100	100	100	70	70	70
4.0	140	140	140	80		

For root passes DC- is recommended.

LINCOLN® ELECTRIC