

Stainless steel electrode

Classification

AWS A5.4-92 : E316L-16
EN 1600-97 : E 19 12 3 L R 12

Temperature Range

pressure parts: -120.....+350°C
oxidation resistance: n.a.

General description

Rutile-basic all position stainless steel electrode for 316L or equivalent steels

Specially for welding stainless steel pipes with diameters of over 50 mm with wall thickness of about 2 mm

Welding on site in the pulp and paper industry

Easy welding in all positions, easy weld pool control, full penetration, good slag release

Molybdenum level min. 2.7 %

Welding positions



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

Current type

AC / DC electr. + / -

Approvals

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

C	Mn	Si	Cr	Ni	Mo	FN
0.02	0.7	0.85	18.1	11.5	2.85	4-10

Mechanical properties, all weld metal

Condition	0.2% Proof strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J) -20°C
Required: AWS A5.4-92	not required	min. 490	min. 30	not required
EN 1600-97	min. 320	min. 510	min. 25	not required
Typical values	AW 450	580	39	60

Packaging, available sizes and identification

	Diameter (mm)	2.0	2.5
	Length (mm)	250	250
Unit: Box	Pieces / unit (nominal)	215	150
	Net weight/unit (kg)	1.9	2.0

Identification

Imprint: 316L-16/Arosta 316LP

Tip colour: yellow

Arosta® 316LP: rev. EN 15

Materials to be welded

Steel grades	EN 10088-1/-2	EN 102 13-4	W.Nr.	ASTM/ACI A240/A312/A351	UNS
Extra low carbon C <0.03%	X2 CrNiMo 17-12-2		1.4404	(TP)316L CF-3M	S31603 J92800
	X2 CrNiMo 18-14-3		1.4435	(TP)316L	S31603
	X2 CrNiMoN 17-11-2		1.4406	(TP)316LN	S31653
	X2 CrNiMoN 17-13-3		1.4429		
Medium carbon C >0.03%	X4 CrNiMo 17-12-2		1.4401	(TP)316	S31600
	X4 CrNiMo 17-13-3		1.4436		
Ti-, Nb stabilized		GX5 CrNiMo 19-11	1.4408	CF 8M	J92900
	X6 CrNiMoTi 17-12-2		1.4571	316Ti	S31635
	X6 CrNiMoNb 17-12-2		1.4580	316Cb	S31640
	X6 CrNiNb 18-10		1.4550	(TP)347	S34700
		GX5 CrNiNb 19-10	1.4552	CF-8C	J92710

Calculation data

Sizes Diam. x length (mm)	Current range type (A)	Current	Arc time - per electrode at max. current - (s)*	Energy E(kJ)	Dep.rate H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
2.0 x 250	30 - 60	DC+						
2.5 x 250	30 - 70	DC+						

* stub end 35mm