

Stainless steel electrode

Classification

AWS A5.4-92 : E316L-16*
EN 1600-97 : E 19 12 3 L R 53

* Deviation: see remarks

Temperature Range

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

General description

A rutile-basic stainless steel electrode for welding 316L or equivalent steels

Molybdenum level min. 2.7%

High recovery (130%) providing high welding speed

Excellent side wall fusion, no undercut

Only for down hand welding

Excellent for fillet welds and filling of V- and X-grooves

Weldable on AC and DC+ polarity

Only available in vacuum sealed Sahara ReadyPack® (SRP)

Welding positions



ISO/ASME PA/1G PB/2F

Current type

AC / DC electr. +

Approvals

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

C	Mn	Si	Cr	Ni	Mo	FN
0.020	0.65	1.0	18.0	11.5	2.8	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	-20°C	-105°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	40	70	60	40

Packaging, available sizes and identification

Diameter (mm)		3.2	4.0	5.0
Length (mm)		450	450	450
Unit: SRP	Pieces / unit (nominal)	29	23	19
	Net weight/unit (kg)	1.7	2.0	2.3

Identification Imprint: 316L-16/Limarosta 316L 130 Tip colour: pink

Limarosta® 316L 130: 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
3.2 x 450	90 - 120	DC+	68	227	1.9	60.4	28	1.67
4.0 x 450	120 - 160	DC+	78	376	2.5	91.0	18	1.67
5.0 x 450	160 - 200	DC+	81	577	3.7	143.7	12	1.72

* stub end 35mm

Welding parameters, optimum fill passes

Welding positions Diameter (mm)	PA/1G Current (A)	PB/2F
3.2	110	105
4.0	155	150
5.0	175	175

Remarks

Deviations: chemical composition:

Si = max. 1.2%

AWS: Si = max. 0.90%