

## Stainless steel electrode

## Classification

AWS A5.4-92 : E308L-16\*  
EN 1600-97 : E 19 9 L R 12

\* Deviation: see remarks

## Temperature Range

pressure parts: -196...+350°C  
oxidation resistance: to 800°C

## General description

A rutile-basic all position stainless steel electrode for 304L or equivalent steels

Mirror like bead appearance

Self releasing slag

Excellent side wall wetting, no undercut

Highly resistant to porosity

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	DNV	GL	LR	RMRS	TÜV
+	+	308LH10	4550	304L	304L	+

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

C	Mn	Si	Cr	Ni	FN
0.025	0.75	0.95	19.0	9.7	4-10

## Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)	
					+20°C	-20°C
Required: AWS A5.4-92		not required	min. 520	min. 35	not required	
EN 1600-97		min. 320	min. 510	min. 30	not required	
Typical values	AW	440	600	45	75	60

## Packaging, available sizes and identification

	Diameter (mm)	2.0	2.5	3.2	4.0	5.0
	Length (mm)	300	350	350	450	450
Unit: Box	Pieces / unit (nominal)	200	125	135	85	55
	Net weight/unit (kg)	2.3	2.7	4.7	5.8	5.8
Unit: SRP	Pieces / unit	60	65	52	28	22
	Net weight/unit (kg)	0.6	1.4	1.8	2.0	2.4

## Identification

Imprint: 308L-16/Limarosta 304L

Tip colour: light blue

Limarosta® 304L: 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 CrNi 19 11		1.4306	(TP)304L CF-3	S30403 J92500
X2 CrNiN 18 10 Medium carbon C >0.03%	X4 CrNi 18 10		1.4311	(TP)304LN 302.304	S30453 S30400
		GX5 CrNi 19 10	1.4301	(TP)304 CF 8	S30409 J92600
			1.4308	(TP)304	S32100
Ti-, Nb stabilized	X6 CrNiTi 18 10		1.4541	(TP)321 (TP)321H	S32100 S32109
X6 CrNiNb 18 10			1.4550	(TP)347 (TP)347H	S34700 S34709
		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 300	35 - 50	DC+	40	51	0.59	11.6	151	1.75
2.5 x 350	45 - 80	DC+	51	103	0.88	21.7	81	1.75
3.2 x 350	80 - 115	DC+	57	177	1.3	34.3	48	1.64
4.0 x 450	100 - 155	DC+	83	373	1.8	68.0	24	1.64
5.0 x 450	150 - 220	DC+	85	577	2.7	106.2	16	1.67

\* 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
2.0		45	45	40	40	40
2.5	70	70	70	60	60	60
3.2	100	100	100	70	70	70
4.0	140	140	140			
5.0	180	180				

For root passes DC- is recommended.

## Remarks

Deviations: chemical composition:

Si = max. 1.2%

AWS: Si = max. 0.90%