

Limarosta® 304L

EMR
SAHARA®

CLASSIFICATION

AWS A5.4	E308L-17	A-Nr	8	Mat-Nr	1.4316
ISO 3581-A	E 19 9 L R 12	F-Nr	5		
		9606 FM	5		

TEMPERATURE RANGE

Pressurized 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
High resistance to porosity
Weldable on AC and DC
Also available in vacuum sealed Sahara ReadyPack® (SRP)
Arosta® 304L, diam. 2.5 mm, is recommended for welding root pass

WELDING POSITIONS (ISO/ASME)



CURRENT TYPE

AC / DC + / -

APPROVALS

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

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

C	Mn	Si	Cr	Ni	FN [acc.WRC 1992]
0.025	0.75	0.95	19.0	9.7	4-10

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition	0.2% Proof strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J)	
				+20°C	-20°C
Required: AWS A5.4 ISO 3581-A Typical values	not required min. 320 440	min. 520 min. 510 600	min. 35 min. 30 45	not required not required 75	60

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	2.0	2.5	3.2	4.0	5.0
	Length (mm)	300	350	350	450	450
Carton + PE foil	Pieces / unit	125	125	135	85	55
	Net weight/unit (kg)	2.3	2.7	4.7	5.8	5.8
SRP	Pieces / unit	-	65	52	28	22
	Net weight/unit (kg)	-	1.4	1.8	2.0	2.4
Linc Can™	Pieces / unit	-	203	124	78	48
	Net weight/unit (kg)	-	4.4	4.3	5.3	3.5

Identification Imprint: 308L-17 / LIMAROSTA 304 L Tip Color: light blue

Limarosta® 304L: rev. C-EN25-01/02/16

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EXAMPLES OF MATERIALS TO BE WELDED

Steel grades	EN 10088-1/-2	EN 10213-4	Mat. Nr	ASTM/ACI A240/A312/A351	UNS
Extra low carbon [C <0.03%]					
	X2CrNi19-11		1.4306	(TP)304L CF-3	S30403 J92500
	X2CrNi18-10		1.4311	(TP)304LN 302,304	S30453 S30400
Medium carbon [C >0.03%]					
	X4CrNi18-10		1.4301 1.4308	(TP)304 CF 8	S30409 J92600
		GX5CrNi19-10			
Ti-, Nb stabilized					
	X6CrNiTi18-10		1.4541	(TP)321 (TP)321H	S32100 S32109
	X6CrNiNb18-10		1.4550	(TP)347 (TP)347H	S34700 S34709
		GX5CrNiNb19-10	1.4552	CF-8C	J92710

CALCULATION DATA

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current -		Dep. rate H(kg/h)	Weight/ 1000 pcs (kg)	Electrodes/ kg weldmetal B	kg electrodes/ kg weldmetal 1/N
			(S)*	E(kJ)				
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

Diameter (mm)	Welding positions					
	PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G	PH/5Gup
2.0		45A	45A	40A	40A	40A
2.5	70A	70A	70A	60A	60A	60A
3.2	100A	100A	100A	70A	70A	70A
4.0	140A	140A	140A			
5.0	180A	180A				