EMR SAHARA®

Vertarosta® 304L

Stainless steel electrode

SMAW

Classification

AWS A5.4-92 : E308L-15
EN 1600-97 : E 19 9 L R 21

Temperature Range

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

General description

A rutile-basic stainless steel electrode for welding 304L or equivalent steels
Specially developed for vertical down welding on DC
Root passes in grooves with root opening
High corrosion resistance in oxidizing environments

Welding positions

ISO/ASME PG/3G down

Current type

DC electr. +

Approvals

DB	TÜV
+	+

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

C	Mn	Si	Cr	Ni	FN
0.020	0.8	0.7	20.0	9.8	4-10

Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) +20°C	Impact ISO-V(J) -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	40	70	50

Packaging, available sizes and identification

	Diameter (mm)	2.5	3.2
	Length (mm)	300	300
Unit: Box	Pieces / unit (nominal)	190	130
	Net weight/unit (kg)	2.9	3.1

Identification Imprint: 308L-15/Vertarosta 304L Tip colour: grey

Vertarosta® 304L: rev. EN 15

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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	X2 CrNi 19 11		1.4306	(TP)304L	S30403
C <0.03%				CF-3	J92500
	X2 CrNiN 18 10		1.4311	(TP)304LN	S30453
Medium carbon				302.304	S30400
C >0.03%	X4 CrNi 18 10		1.4301	(TP)304	S30409
		GX5 CrNi 19 10	1.4308	CF 8	J92600
Ti-, Nb-	X6 CrNiTi 18 10		1.4541	(TP)321	S32100
stabilized				(TP)321H	S32109
	X6 CrNiNb 18 10		1.4550	(TP)347	S34700
				(TP)347H	S34709
		GX5 CrNiNb 19 10	1.4552	CF-8C	J92710

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 300	60 - 70	DC+	44	65	0.81	15.0	101	1.52
3.2 x 300	80 - 110	DC+	51	117	1.2	23.5	59	1.39

* stub end 35mm

Welding parameters, optimum fill passes

Welding positions	3G down
Diameter (mm)	Current (A)
2.5	70
3.2	100

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