



Product Data Sheet

E 'Manual metal-arc welding'

ESAB 304B

Prepared by Hariharan	Qualified by P Ravi Kumar	Approved by Nagarjuna S	Reg no EN010685	Cancelling EN008560	Reg date 2023-05-29	Page 1 (2)
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REASON FOR ISSUE

EN ISO Classification updated

GENERAL

ESAB 304B is an extra low carbon, basic coated 19Cr-10Ni stainless steel electrode with outstanding welding properties in the vertical and overhead position. The weld metal is highly resistant to cracking and porosity and has good impact toughness at very low temperatures.

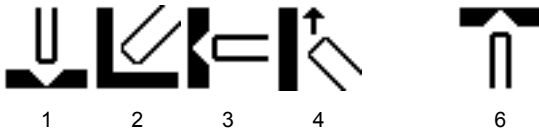
Polarity: DC+

Alloy Type: Austenitic Cr-Ni

Coating Type: Basic

Ferrite Content: 2-8 FN

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN ISO 3581-A E 19 9 L B 2 2
 SFA/AWS A5.4 E308L-15

APPROVALS

Not applicable

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max	Nom
C		0.04	0.03
Si		1.00	0.40
Mn	0.50	2.50	1.50
P		0.04	0.030
S		0.03	0.010
Cr	18.00	21.00	19.00
Ni	9.00	11.00	10.50
Mo		0.75	0.08
Cu		0.75	0.20

MECHANICAL PROPERTIES OF WELD METAL

Standard	Condition	Rp0.2 [MPa/ksi]		Rm [MPa/ksi]			A4 [%]	
		Min	Typ	Min	Max	Typ	Min	Typ
AWS	As welded		450/65	520/75		570/83	35	40

Comments:

Standard	Condition	Temp [°C/°F]	Charpy V [J/ft-lb]	
			Min	Typ
AWS	As welded	-196/-321		30/22

Comments:



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ECONOMICS & CURRENT DATA

Dimension	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max	Nom	Nom	Nom	Nom	Nom	Nom	Nom	
2.5 x 350 mm (0.098 x 13.8 in)	60	100								1,2,3,4,6
3.15 x 350 mm (1/8 x 13.8 in)	80	120								1,2,3,4,6
4.0 x 350 mm (5/32 x 13.8 in)	120	170								1,2,3,4,6

- W** = Weight (kg / 100 electrodes)
 η = Filler metal efficiency (g weld metal x 100 / g wire)(%)
N = Deposition efficiency (g weld metal x 100 / g electrode)(%)
B = Changes (number of electrodes / kg weld metal)
H = Deposition rate at 90% of max current (kg weld metal/hour arc time)
T = Fusion time at 90% of max current (s/electrode)
U = Arc voltage (V)

OTHER DATA

Redrying: 250°C, 2h

Metalized Tip

IGC test according to ASTM A262, Practice E: Satisfactory