



Product Data Sheet

E 'Manual metal-arc welding'

ESAB 120

Prepared by Meenakshi.A	Qualified by Ravi Palli Kumar	Approved by Nagarjuna S	Reg no EN009482	Cancelling EN008544	Reg date 2021-03-17	Page 1 (2)
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REASON FOR ISSUE

RP 0.2 Maximum value updated.

GENERAL

ESAB 120 is a Cr-Ni-Mo alloyed low hydrogen electrode, for welding ultra high strength low alloy steels. The electrode is designed to give a tough weld metal avoiding risk of temper brittleness. The operational characteristics are excellent in all positions.

Min AC OCV: 70

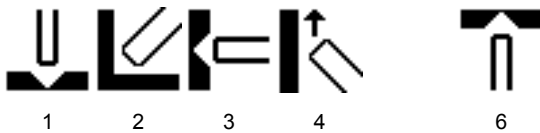
Polarity: AC, DC+

Alloy Type: Cr-Ni-Mo alloyed

Coating Type: Basic

Diff Hydrogen: < 5 ml/100g

WELDING POSITIONS



CLASSIFICATIONS Electrode

SFA/AWS A5.5 E12018M

APPROVALS

Not applicable

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max	Nom
C		0.10	0.06
Si		0.60	0.25
Mn	1.30	2.25	1.60
P		0.03	0.020
S		0.03	0.015
Cr	0.30	1.50	0.90
Ni	1.75	2.50	2.35
Mo	0.30	0.55	0.40
V		0.05	0.005

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	745/108	790/115	830/120		860/125	18	20

Comments:

Rp0.2 max : 830 MPa. For 2.5 mm electrodes the upper value for Rp0.2 may be 35 MPa higher than the indicated value.

Standard	Condition	Temp [°C/°F]	Charpy V [J/ft-lb]	
			Min	Typ
AWS	As welded	-50/-58	27/20	70/52

Comments:



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ECONOMICS & CURRENT DATA

Dimension	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
3.15 x 450 mm	90	140								1,2,3,4,6
4.0 x 450 mm (5/32 x 17.7 in)	140	190								1,2,3,4,6
5.0 x 450 mm (0.197 x 17.7 in)	190	240								1,2,3,4

- 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