



Product Data Sheet

OK 67.45

E 'Manual metal-arc welding'

Prepared by A-C Thorsson	Qualified by Tero Borg	Approved by Tapio Huhtala	Reg no EN010383	Cancelling EN007464	Reg date 2022-12-01	Page 1 (3)
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REASON FOR ISSUE

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GENERAL

Austenitic stainless steel electrode giving a weld metal with less than 5 % ferrite. The tough weld metal has an excellent crack resistance, also when welding steels with very poor weldability. Suitable for joining 12 to 14 % manganese steel with itself or other steels.

Also suitable for buffer layers before hard facing.

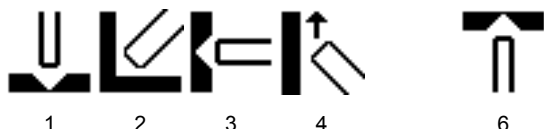
Polarity: DC+

Alloy Type: Stainless austenitic CrNiMn

Coating Type: Lime Basic

Ferrite Content: FN <5

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN ISO 3581-A E 18 8 Mn B 2 2
 SFA/AWS A5.4 (E307-15)

APPROVALS

ABS Stainless
 CE EN 13479
 VdTÜV 01580

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max	Nom
C	0.07	0.15	
Si	0.20	0.70	
Mn	5.0	7.0	
P		0.030	
S		0.020	
Cr	17.5	19.5	
Ni	8.0	10.0	
Mo		0.50	
Cu		0.50	
N		0.08	
Ferrite FN			2

MECHANICAL PROPERTIES OF WELD METAL

Standard	Condition	Rp0.2 [MPa/ksi]		Rm [MPa/ksi]			A4 [%]		A5 [%]	
		Min	Typ	Min	Max	Typ	Min	Typ	Min	Typ
ISO	As welded	350/51	470/68	590/86		605/88			28	35
AWS	As welded	350/51		590/86			30			

Comments:



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MECHANICAL PROPERTIES OF WELD METAL

Standard	Condition	Temp [°C/°F]	Charpy V [J/ft-lb]	
			Min	Typ
ISO	As welded	20/68 -60/-76	47/35 32/24	85/63 50/37

Comments:

Comments:

Interpass temperature < 150°C.

ECONOMICS & CURRENT DATA

Dimension	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
2.5 x 300 mm (0.098 x 11.8 in)	50	80	1.7	100	58	102	0.7 kg/h (1.5 lb/h)	50	23	1,2,3,4,6
3.2 x 350 mm (1/8 x 13.8 in)	70	100	3.3	100	60	51	1.1 kg/h (2.4 lb/h)	71	24	1,2,3,4,6
4.0 x 350 mm (5/32 x 13.8 in)	80	140	5.1	100	60	33	1.5 kg/h (3.3 lb/h)	73	24	1,2,3,4,6
5.0 x 350 mm (0.197 x 13.8 in)	150	200	7.6	100	60	22	2.2 kg/h (4.9 lb/h)	80	25	1,2,3

- 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)



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OTHER DATA

Ferrite content:

All weld metal, as welded condition, transverse cross section of a buttered ISO-joint, measurements done with a Feritscope: FN 1.8 - 2.2, average FN 2.1

Hardness data:

Weld metal, as welded condition, base material 1.4301, V-Joint, no buttering, transverse cross section, indents along a vertical line (6 indents): 159 - 202 HV10, average 177 HV10

All weld metal, as welded condition, transverse cross section of a buttered ISO-joint, measurements done along a horizontal line at the top layer (7 indents) and along a vertical centre line (10 indents): 165 - 231 HV10, average 199 HV10.

The weld metal has great capability to workharden. When the cold working degree >30% the hardness level is approximately 400 HV.

Redrying: 200 °C for 2h.
