Product Data Sheet

E 'Manual metal-arc welding'

OK 67.45

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
A-C Thorsson	P-O Oskarsson	Tapio Huhtala	EN007464	EN007113	2017-02-06	1 (2)

REASON FOR ISSUE

Ferrite FN under Chemical composition adjusted. Under section Other data additonal hardness data and new ferrite content information added.

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

1 2 3 4 6

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
Seproz	UNA 272580
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

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MECHANICAL PROPERTIES OF WELD METAL

	ISO		AWS
	As welded		As welded
Properties	**Min**	**Typ**	**Min**
Rp0.2 (MPa)	350	470	350
Rm (MPa)	590	605	590
A4 (%)			30
A5 (%)	28	35	
Z (%)		50	35
Charpy V at 20°C (J)	47	85	
Charpy V at -60°C (J)	32	50	

Comments:

Interpass temperature < 150°C.

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	N	B	H	T	U	Welding
Ø x Length	Min	Max								Positions
2.5 x 300	50	80	1.7	100	0.58	102	0.7	50	23	1,2,3,4,6
3.2 x 350	70	100	3.3	100	0.60	51	1.1	71	24	1,2,3,4,6
4.0 x 350	80	140	5.1	100	0.60	33	1.5	73	24	1,2,3,4,6
5.0 x 350	150	200	7.6	100	0.60	22	2.2	80	25	1,2,3

W = Weight (kg / 100 electrodes)

η = Efficiency (g weld metal x 100 / g core wire)

N = Effective value (kg weld metal / kg electrodes)

B = Changes (number of electrodes / kg weld metal)

H = Deposit 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

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 horisontal 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.