



Product Data Sheet

E 'Manual metal-arc welding'

OK 67.60

Prepared by A-C Thorsson	Qualified by Tero Borg	Approved by Tapio Huhtala	Reg no EN007215	Cancelling EN007119	Reg date 2016-04-27	Page 1 (2)
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REASON FOR ISSUE

Approvals revised. Hardness data under Mechanical Properties of Weld Metal removed.

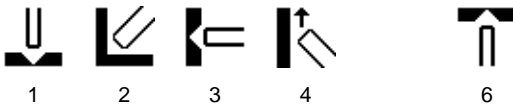
GENERAL

Acid-rutile coated MMA-electrode giving an overalloyed weld metal. Suitable for welding stainless steel to mild and low alloyed steels. Also suitable for welding of transition layers when surfacing mild steel with stainless steel weld metal.

Min AC OCV: 55
Polarity: DC+, AC

Alloy Type: Austenitic CrNi
Coating Type: Acid Rutile
Ferrite Content: FN 10-22

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN ISO 3581-A E 23 12 L R 3 2
SFA/AWS A5.4 E309L-17
CSA W48 E309L-17
Werkstoffnummer 1.4332

APPROVALS

CE EN 13479
CWB CSA W48: E309L-17
DNV-GL VL 309
NAKS/HAKC 2.5-4.0 mm
Seproz UNA 272580
VdTÜV 00898

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max	Nom
C		0.030	
Si	0.50	1.00	
Mn	0.50	1.20	
P		0.025	
S		0.020	
Cr	22.7	24.7	
Ni	12.0	14.0	
Mo		0.3	
Cu		0.3	
N		0.15	
Ferrite FN			15



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MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO		AWS	
	Min	Typ	Min	Typ
Rp0.2 (MPa)	380	470	380	
Rm (MPa)	520	580	520	
A4 (%)			30	
A5 (%)	27	32		
Z (%)		50		50
Charpy V at 20°C (J)	40	50		
Charpy V at -10°C (J)	32	40		

Comments:

Interpass temperature max. 150 °C.

ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
2.0 x 300	45	65	1.3	115	0.60	136	0.7	38	27	1,2,3,4,6
2.5 x 300	45	90	2.0	115	0.60	85	1.1	38	28	1,2,3,4,6
3.2 x 350	65	120	3.8	115	0.60	45	1.6	51	29	1,2,3,4,6
4.0 x 350	85	180	5.7	115	0.60	29	2.5	51	31	1,2,3,4,6
5.0 x 350	110	250	9.0	115	0.60	19	3.3	58	32	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

Hardness data:

all weld metal, as welded condition, 5 different lots measured, 10 indents for each measurement: 198 - 254 HV10, average 232 HV10

Redrying: 350 °C, 2h.