



Product Data Sheet

E 'Manual metal-arc welding'

OK 68.17

Prepared by Helene Rasmuson	Qualified by Tero Tolonen	Approved by Tapio Huhtala	Reg no EN005976	Cancelling EN005092	Reg date 2013-01-08	Page 1 (2)
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REASON FOR ISSUE

EN 1600 replaced by EN ISO 3581-A.

GENERAL

A rutile-basic electrode for welding martensitic 13Cr4Ni-Mo type steels.

Min AC OCV: 55

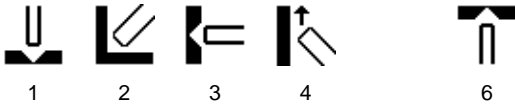
Polarity: DC+, AC

Alloy Type: Martensitic 13Cr4Ni-Mo type

Coating Type: Rutile Basic

Diff Hydrogen: <8.0 ml/100g

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN 14700 E Fe7
EN ISO 3581-A E 13 4 R 3 2
SFA/AWS A5.4 E410NiMo-16
Werkstoffnummer 1.4351

APPROVALS (SPECIFIC)

Seproz UNA 272580

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max
C		0.04
Si	0.20	0.80
Mn	0.5	1.0
P		0.025
S		0.025
Cr	11.0	12.5
Ni	4.0	5.0
Mo	0.40	0.70
Cu		0.3



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MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO	ISO	AWS
	Stress relieved+ 600°C 8h Typ	Stress relieved 600°C 2h Min	Stress relieved 600°C 1h Min
Rp0.2 (MPa)	650	500	
Rm (MPa)	870	750	760
A4 (%)			15
A5 (%)	17	15	
Charpy V at 20°C (J)	45		
Charpy V at -10°C (J)	45		
Charpy V at -40°C (J)	40		

Comments:

Interpass temperature: 100-180 °C.

Weld metal hardness, typical:

As welded:.....36 HRC.

Heat treatment, 600 °C for 1 hour:.....29 HRC.

Heat treatment, 600 °C for 8 hours:....25 HRC.

ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
2.5 x 350	55	100	1.4	117	0.62	73	0.8	61	21	1,2,3,4,6
3.2 x 350	65	135	2.2	118	0.59	45	1.2	66	21	1,2,3,4,6
4.0 x 450	90	190	4.4	115	0.59	23	1.7	92	24	1,2,3,4,6

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

Redrying: 350 °C, 2h.