



Product Data Sheet

OK 48.00 N

E 'Manual metal-arc welding'
ESAB AB Sweden

Signed by P-O Oskarsson	Approved by Tapio Huhtala/Christos Skodras	Reg no EN004750	Cancelling EN004408	Reg date 2009-02-27	Page 1 (3)
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REASON FOR ISSUE

General description, chemical composition, mechanical properties and remarks under other data revised.

GENERAL

This electrode fulfills the requirements in RCC-M ed. 2000, addenda 2002, 2005 and 2007.

OK 48.00 N is a basic electrode of the low absorption type intended for welding mild and low alloy steels. The weld metal is ductile and has a high hotcracking resistance.

The running characteristics are very good. It provides high welding speed in vertical up position.

Polarity: DC+(-)

Alloy Type: Carbon-Manganese

Coating Type: Lime Basic

Diff Hydrogen: <5.0 ml/100g

WELDING POSITIONS



CLASSIFICATIONS Electrode

SFA/AWS A5.1 E7018
EN ISO 2560-A E 42 4 B 42 H5

APPROVALS

Not applicable

CHEMICAL COMPOSITION

	All Weld Metal (%)	
	Min	Max
C	0.020	0.100
Si	0.30	0.70
Mn	0.90	1.40
P		0.012
S		0.010
Cr		0.20
Ni		0.10
Mo		0.05
Co		0.03
V		0.04
Cu		0.07



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MECHANICAL PROPERTIES OF WELD METAL

Properties	All Weld Metal					
	ISO			ISO		
	As welded			PWHT 600°C 16h		
	Min	Max	Typ	Min	Max	Typ
Rp0.2 (MPa)	400		465	355		440
ReL (MPa)	420					
Rm (MPa)	490	585	533	490	585	538
A5 (%)	22		30	22		31
Charpy V at 0°C (J)	80		245	112		227
Charpy V at -20°C (J)				40		165

Comments:

Mechanical properties in PWHT condition:

Hot tensile test at 360°C:

- Rp0.2: min 200 MPa, typical: 360 MPa
- Rm: typical 495 MPa
- A5: typical 27%

RTNDT:

Drop weight tests according to ASTM E208-81 and ASTM E208-91 do meet the requirement of a RTNDT temperature of maximum -20°C.

Impact toughness at upper shelf:

The average (of three specimens) Charpy V notch value at upper shelf meet the requirement of minimum 130J.

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	N	B	H	T	U
	Min	Max							
2.5 x 350	80	110	2.4	130	0.65	62	1.0	56	23
3.2 x 350	90	140	4.0	122	0.62	54	1.1	61	22
3.2 x 450	90	140	4.8	119	0.64	32	1.5	76	23
4.0 x 350	125	210	5.6	123	0.51	35	2.1	64	24
4.0 x 450	125	210	7.2	123	0.67	20	2.1	86	26
5.0 x 450	200	260	10.6	121	0.69	14	2.6	102	23

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)



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OTHER DATA

Water content in coating at 1000°C prior to packing:

- < 0.20%

Redrying:

- 350 °C, 2h

- electrodes can be redried several times

- total additional time of drying shall not exceed 24h

Storage:

Vacuum packed welding consumables might be held in stock for 5 years or more, provided that the package is undamaged. Intact package is indicated by presence of vacuum in the package.
