



# Product Data Sheet

E 'Manual metal-arc welding'

# OK 48.00

Prepared by P-O Oskarsson	Qualified by Tero Borg	Approved by J-P Ernoult	Reg no EN006953	Cancelling EN005613	Reg date 2016-01-11	Page 1 (3)
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## REASON FOR ISSUE

New AWS classification.

## GENERAL

A reliable, general purpose electrode for manual metal arc welding of carbon steels, carbon manganese steels and fine-grained carbon manganese steels with elevated yield strength. OK 48.00 deposits a tough, crack-resistant weld metal. The coating is of the low moisture absorption type.

High welding speed in the vertical-up position. OK 48.00 is insensitive to the composition of the base material within fairly wide limits.

The electrode can be used for welding structures where difficult stress conditions cannot be avoided.

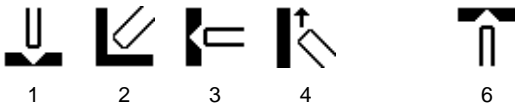
**Polarity:** DC+(-)

**Alloy Type:** Carbon-Manganese

**Coating Type:** Lime Basic

**Diff Hydrogen:** < 4.0 ml/100g

## WELDING POSITIONS



## CLASSIFICATIONS Electrode

SFA/AWS A5.1 E7018 H4 R  
EN ISO 2560-A E 42 4 B 42 H5

## APPROVALS

ABS 3Y H5  
BV 3Y H5  
CE EN 13479  
DB 10.039.12  
DNV 3Y H5  
GL 3Y H5  
LR 3Ym H5  
PRS 3Y H5  
RS 3Y H5  
VdTÜV 00690

## APPROVALS (SPECIFIC)

NAKS/HAKC 2.0-5.0 mm  
Seproz UNA 272580

## APPROVAL COMMENT

Approvals Specific: Valid for lot numbers starting with SF



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## CHEMICAL COMPOSITION

### All Weld Metal (%)

	Min	Max
C	0.02	0.10
Si	0.30	0.70
Mn	0.90	1.40
P		0.020
S		0.015
Cr		0.1
Ni		0.1
Mo		0.06
V		0.04
Nb		0.02
Cu		0.1
Al		0.03
Sn		0.02
Ti		0.03
Pb		0.02
As		0.03
Mn+Ni+Cr+Mo+V		1.75

## MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO			AWS	
	As welded Min	Max	Typ	As welded Min	Typ
Rp0.2 (MPa)				400	
ReL (MPa)	420		475		
Rm (MPa)	530	640	565	490	
A4 (%)				22	
A5 (%)	22		29		
Charpy V at -30°C (J)				27	130
Charpy V at -40°C (J)	47		115		
	Comments: EN standard requires Rm min 500 Mpa and A5 Min 20%.			Comments:	



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## ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	$\eta$	N	B	H	T	U	Welding Positions
	Min	Max								
1.6 x 300	30	55	0.9	127	0.59	192	0.38	50	24	1,2,3,4,6
2.0 x 300	55	80	1.4	128	0.65	125	0.63	45	22	1,2,3,4,6
2.5 x 350	70	110	2.5	129	0.67	65	0.96	57	24	1,2,3,4,6
3.2 x 350	90	140	4.7	124	0.70	42	1.24	68	23	1,2,3,4,6
3.2 x 450	90	140	4.7	124	0.73	31	1.33	85	23	1,2,3,4,6
4.0 x 350	120	190	5.5	118	0.70	29	1.63	75	24	1,2,3,4,6
4.0 x 450	120	190	7.0	118	0.71	22	1.76	92	24	1,2,3,4,6
5.0 x 450	190	260	10.6	119	0.75	13	2.61	99	24	1,2,3,4
6.0 x 450	220	340	14.6	120	0.80	9	3.88	97	26	1,2,3
7.0 x 450	280	410	19.6	118	0.79	7.0	4.83	104	27	1,2,3

**W** = Weight (kg / 100 electrodes)

**$\eta$**  = 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)