Product Data Sheet

OK 48.00

E 'Manual metal-arc welding'
ESAB-MÓR Kft Hungary

Signed by	Approved by	Reg no	Cancelling	Reg date	Page
P-O Oskarsson	Rune Pedersen/Barbro Karlström	EN002006	EN001030	2004-06-07	1 (2)

REASON FOR ISSUE

Correction of polarity

GENERAL

General-purpose basic DC + electrode for mild and low alloy steels.
Very good running characteristics. The coating is of the low moisture absorption type.

Polarity: DC+(-)

Alloy Type: Carbon-Manganese
Coating Type: Lime Basic
Diff Hydrogen: <5.0 ml/100g

WELDING POSITIONS

CLASSIFICATIONS Electrode

EN 499	E 42 4 B 42 H5
SFA/AWS A5.1	E7018
ISO 2560	E51 5B 120 20H

APPROVALS

ABS	3H5, 3Y
BV	3, 3Y HHH
DB	
DNV	3Y H5
DS	EN 499
GL	3YH10
LR	3, 3YH15
VdTÜV	

CHEMICAL COMPOSITION

	All Weld Metal (%)	
Compound	**Min**	**Max**
C	0.02	0.10
Si	0.30	0.70
Mn	0.90	1.40
P		0.020
S		0.015

Product Data Sheet

OK 48.00

E 'Manual metal-arc welding'
ESAB-MÓR Kft Hungary

Signed by	Approved by	Reg no	Cancelling	Reg date	Page
P-O Oskarsson	Rune Pedersen/Barbro Karlström	EN002006	EN001030	2004-06-07	2 (2)

MECHANICAL PROPERTIES OF WELD METAL

	All Weld Metal		
	ISO		
	As welded		
Properties	**Min**	**Max**	**Typ**
ReL (MPa)	420		445
Rm (MPa)	510	640	540
A4-A5 (%)	22		29
Charpy V at -20°C (J)	54		140
Charpy V at -40°C (J)	47		70
	Comments: Elongation=A5		

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	N	B	H	T	U
Ø x Length	Min	Max							
2.0 x 300	50	80							
2.0 x 350	50	80							
2.5 x 350	80	110							
3.2 x 350	110	150	3.6	123	0.62	44	1.14	80	22
3.2 x 450	110	150	4.7	123	0.64	33	1.19	102	22
4.0 x 350	125	210	5.4	116	0.62	30	1.76	76	23
4.0 x 450	125	210	7.0	118	0.66	22	1.86	99	24
5.0 x 350	200	260							
5.0 x 450	200	260							
6.0 x 450	220	340							

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

Applications:
Manual metal arc welding of carbon steels, carbon manganese steels and fine-grained carbon manganese steels with elevated yield strength.
Redrying: 350 °C, 2h