



# Product Data Sheet

# OK 75.75

E 'Manual metal-arc welding'  
ESAB Perstorp AB Sweden

Prepared by A-C Thorsson	Qualified by Tero Borg	Approved by J-P Ernoult	Reg no EN007079	Cancelling EN006925	Reg date 2016-02-17	Page 1 (3)
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## REASON FOR ISSUE

Typical mechanical values amended.

## GENERAL

Electrode giving a weld metal of high yield strength/tensile strength ratio, for welding high tensile low-alloy steels, e.g. USS T-1.

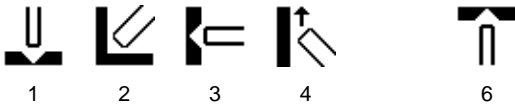
**Polarity:** DC+

**Alloy Type:** Low alloy steel

**Coating Type:** Lime Basic

**Diff Hydrogen:** <5.0 ml/100g

## WELDING POSITIONS



## CLASSIFICATIONS Electrode

SFA/AWS A5.5      E11018-G  
EN ISO 18275-A    E 69 4 Mn2NiCrMo B 42 H5

## APPROVALS

ABS                    E11018-G  
CE                    EN 13479  
DB                    10.039.19  
VdTÜV                01028

## APPROVALS (SPECIFIC)

Seproz                UNA 272580

## CHEMICAL COMPOSITION

### All Weld Metal (%)

	Min	Max
C	0.03	0.08
Si	0.15	0.55
Mn	1.5	2.0
P		0.020
S		0.020
Cr	0.30	0.60
Ni	2.0	2.6
Mo	0.30	0.60
V		0.05
Nb		0.05
Cu		0.30



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## MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO			AWS
	As welded Min	Max	Typ	As welded Min
Rp0.2 (MPa)	690		780	670
Rm (MPa)	770	900	830	760
A4 (%)				15
A5 (%)	18		20	
Charpy V at -40°C (J)	47		60	
	Comments: EN standard requires Rm between 760 and 960 MPa ; A5 Min 17%.			Comments:

## 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	70	110	2.3	125	0.67	66.0	1.00	54	22	1,2,3,4,6
3.2 x 450	100	150	4.9	125	0.67	31.5	1.40	80	23	1,2,3,4,6
4.0 x 450	135	200	7.4	120	0.65	21.0	1.90	92	24	1,2,3,4,6
5.0 x 450	180	260	11.4	120	0.63	12.0	2.50	105	25	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)



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## OTHER DATA

Welding and heat treatment conditions:

All-weld specimens, welded at 150 °C interpass temperature.

As welded:

(+100 °C) :..... Rp0.2= 745 MPa, Rm= 780 MPa, A5= 18%, Z= 61%

(+200 °C) :..... Rp0.2= 730 MPa, Rm= 740 MPa, A5= 16%, Z= 55%

(+300 °C) :..... Rp0.2= 715 MPa, Rm= 760 MPa, A5= 18%, Z= 50%

(+400 °C) :..... Rp0.2= 670 MPa, Rm= 750 MPa, A5= 18%, Z= 58%

Stress relieved at 620 °C, 1h:

(+100 °C) :.. Rm= 780 MPa

(+200 °C) :.. Rm= 780 MPa

(+300 °C) :.. Rm= 850 MPa

(+400 °C) :.. Rm= 800 MPa

Normalized at 920 °C, 1 h, air-cooled:

Rp0.2= 490 MPa, Rm= 740 MPa, A5= 18%, Z= 60%

Hardened tempered, 925 °C, water, 625 °C, 1 h, air-cooled:

Rp0.2= 730 MPa, Rm= 800 MPa, A5= 18%, Z= 63%

.....  
Weld in 12mm steel of the type USS T 1:

Charpy V, As welded:

+20 °C:..... 63 J (Horizontal) and 70 J (Vertical-up)

- 20 °C:..... 38 J (Horizontal) and 42 J (Vertical-up)

- 40 °C:..... 31 J (Horizontal) and 24 J (Vertical-up)

Charpy V, Stress relieved:

+20 °C:.. 56 J (Horizontal) and 55 J (Vertical-up)

- 20 °C:.. 31 J (Horizontal) and 28 J (Vertical-up)

- 40 °C:.. 23 J (Horizontal) and 21 J (Vertical-up)

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