



Product Data Sheet

OK 73.68

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 EN007341 | Cancelling EN006924 | Reg date 2016-08-02 | Page 1 (2) |
|-----------------------------|---------------------------|----------------------------|--------------------|------------------------|------------------------|---------------|

REASON FOR ISSUE

Alloy and coating type amended. Approval scope and typical mechanical properties updated.

GENERAL

Nickel alloyed basic AC/DC electrode for welding low alloyed steels with impact requirements down to -60 °C, e.g. in offshore/onshore applications.

The electrode is CTOD-tested.

Min AC OCV: 65

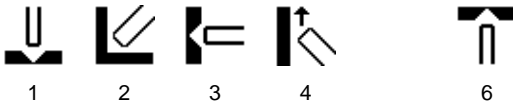
Polarity: AC, DC+

Alloy Type: Low alloyed (2.5 % Ni)

Coating Type: Basic covering

Diff Hydrogen: < 5.0 ml/100g

WELDING POSITIONS



CLASSIFICATIONS Electrode

SFA/AWS A5.5 E8018-C1
EN ISO 2560-A E 46 6 2Ni B 32 H5

APPROVALS

ABS 3Y400 H5*
ABS E 8018-C1
BV 5Y40M H5*
CE EN 13479
DNV-GL 5 Y46H5
LR 5Y42m H5*
NAKS/HAKC 2.5-5.0 mm
PRS 5Y 42 H5
RS 5Y46M H5*
Seproz UNA 272580
VdTÜV 01529

APPROVAL COMMENT

*) Only up to 4.0 mm. NAKS/HAKC: Valid for lot numbers starting with SB



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CHEMICAL COMPOSITION

All Weld Metal (%)

| | Min | Max |
|----|------|-------|
| C | 0.02 | 0.10 |
| Si | 0.15 | 0.55 |
| Mn | 0.65 | 1.15 |
| P | | 0.020 |
| S | | 0.020 |
| Cr | | 0.1 |
| Ni | 2.15 | 2.60 |
| Mo | | 0.05 |
| V | | 0.03 |
| Nb | | 0.02 |
| Cu | | 0.1 |
| Al | | 0.03 |
| Sn | | 0.01 |
| Ti | | 0.03 |
| Pb | | 0.02 |
| As | | 0.03 |

MECHANICAL PROPERTIES OF WELD METAL

| Properties | ISO | | | AWS | |
|-----------------------|--|-----|-----|--------------------------|-----|
| | Min | Max | Typ | Min | Typ |
| As welded | | | | Stress relieved 620°C 1h | |
| Rp0.2 (MPa) | 460 | | 540 | 460 | 500 |
| Rm (MPa) | 560 | 680 | 615 | 550 | 600 |
| A4 (%) | | | | 19 | 28 |
| A5 (%) | 22 | | 28 | | |
| Charpy V at -60°C (J) | 47 | | 105 | 27 | 85 |
| Charpy V at -80°C (J) | | | 65 | | |
| | Comments: EN standard requires Rm min 530MPa and A5 min 20%. | | | Comments: | |

ECONOMICS & CURRENT DATA

| Dimension (mm) | Current (A) | | W | η | N | B | H | T | U | Welding Positions |
|------------------------|-------------|-----|------|--------|------|------|------|-----|----|-------------------|
| | Min | Max | | | | | | | | |
| \varnothing x Length | | | | | | | | | | |
| 2.5 x 350 | 70 | 110 | 2.3 | 120 | 0.62 | 70.0 | 0.90 | 55 | 23 | 1,2,3,4,6 |
| 3.2 x 450 | 105 | 150 | 4.8 | 120 | 0.62 | 32.0 | 1.40 | 81 | 23 | 1,2,3,4,6 |
| 4.0 x 450 | 140 | 190 | 7.3 | 120 | 0.65 | 21.0 | 2.00 | 88 | 23 | 1,2,3,4,6 |
| 5.0 x 450 | 190 | 270 | 11.5 | 120 | 0.65 | 13.5 | 2.50 | 104 | 27 | 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)