

# FILARC Product Data Sheet

# FILARC 88S

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

Prepared by P-O Oskarsson	Qualified by Tero Borg	Approved by J-P Ernoult	Reg no EN007259	Cancelling EN005272	Reg date 2016-05-19	Page 1 (2)
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## REASON FOR ISSUE

Typical mechanical values amended. DNV-GL approval.

## GENERAL

A basic coated low hydrogen 1% nickel electrode for the positional welding of higher tensile steels , BS4360-55F steel and similar grades. Good CVN toughness down to -60°C; CTOD tested in the AW and SR conditions. Many approved welding procedures are available. Use short arc. Weave slowly when permitted. Use DC- for root passes.

**Min AC OCV:** 65

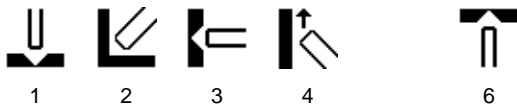
**Polarity:** AC, DC+(-)

**Alloy Type:** C, Mn, 1% Ni

**Coating Type:** Basic

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

## WELDING POSITIONS



## CLASSIFICATIONS Electrode

SFA/AWS A5.5      E8016-G  
EN ISO 2560-A      E 50 6 Mn1Ni B 12 H5

## APPROVALS

ABS                      E8016-G  
CE                        EN 13479  
DB                        10.105.16  
DNV-GL                5 YH5  
LR                        5Y42 H5  
NAKS/HAKC          2.5-4.0 mm  
RS                        4Y H5  
VdTÜV                  06107

## APPROVALS (SPECIFIC)

Seproz                  UNA 272581

## APPROVAL COMMENT

NAKS/HAKC: Valid for lot numbers starting with SB

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## CHEMICAL COMPOSITION

### All Weld Metal (%)

	Min	Max
C	0.04	0.08
Si	0.20	0.50
Mn	1.40	1.90
P		0.020
S		0.015
Cr		0.1
Ni	0.60	0.99
Mo		0.01
V		0.02
Nb		0.01
Cu		0.05
Al		0.008
Sn		0.01
Ti		0.03
Pb		0.01
As		0.02
Sb		0.01

## MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO			AWS
	As welded Min	Max	Typ	As welded Min
Rp0.2 (MPa)	500		560	460
Rm (MPa)	560	720	640	550
A4 (%)				19
A5 (%)	18		27	
Charpy V at -40°C (J)			115	
Charpy V at -60°C (J)	47		100	

## 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	55	85	1.83	100	0.65	87	0.7	59	24	1,2,3,4,6
3.2 x 350	80	140	3.1	95	0.59	54.5	0.96	69	21.4	1,2,3,4,6
4.0 x 450	110	170	6.1	97	0.62	26.8	1.27	106	21.5	1,2,3,4,6
5.0 x 450	180	230	9.3	96	0.63	16.9	1.95	109	22.6	1,2,3,4

**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)