

FILARC Product Data Sheet

FILARC 56S

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 EN007258	Cancelling EN007032	Reg date 2016-05-19	Page 1 (2)
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REASON FOR ISSUE

DNV-GL approval.

GENERAL

Basic thin coated AC/DC electrode providing excellent mechanical properties. The electrode ensures fully penetrated root passes even under adverse conditions. Low moisture content of the coating has a high resistance to moisture re-absorption.

The electrode is CTOD-tested.

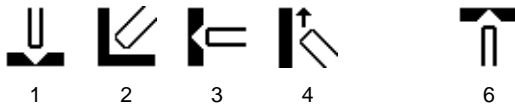
Min AC OCV: 65 V

Polarity: AC, DC+(-)

Alloy Type: Carbon manganese

Diff Hydrogen: < 4.0 ml/100g

WELDING POSITIONS



CLASSIFICATIONS Electrode

SFA/AWS A5.1 E7016-1 H4 R
EN ISO 2560-A E 42 5 B 1 2 H5

APPROVALS

ABS 3YH5
BV 3YH5
CE EN 13479
DB 10.105.15
DNV-GL 4 YH5
LR 4Y40H5
VdTÜV 03012

APPROVALS (SPECIFIC)

RS 4Y42H5
Seproz UNA 272581

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max
C	0.04	0.09
Si	0.20	0.60
Mn	1.10	1.50
P		0.025
S		0.015
Cr		0.07
Ni		0.07
Mo		0.02
V		0.01
Nb		0.01
Cu		0.07
Al		0.01
Sn		0.01
Ti		0.04
Pb		0.01
As		0.05

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MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO			AWS
	As welded Min	Max	Typ	As welded Min
Rp0.2 (MPa)				400
ReL (MPa)	420		470	
Rm (MPa)	530	640	550	490
A4 (%)				22
A5 (%)	22		30	
Charpy V at -45°C (J)			150	27
Charpy V at -50°C (J)	47		140	
	Comments: EN standard requires Rm min 500 Mpa and A5 Min 20%.			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	55	85	1.9	100	0.58	90.0	0.80	50	22	1,2,3,4,6
3.2 x 350	80	140	3.1	100	0.61	52.0	1.30	53	22	1,2,3,4,6
3.2 x 450	80	130	4.0	100	0.61	41.0	1.20	73	22	1,2,3,4,6
4.0 x 350	110	180	4.6	100	0.64	34.0	1.70	62	22	1,2,3,4,6
4.0 x 450	110	170	5.9	100	0.65	26.0	1.70	83	22	1,2,3,4,6
5.0 x 450	180	230	8.9	100	0.66	17.0	2.40	90	22	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)