

FILARC Product Data Sheet

FILARC 27P

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

Prepared by P-O Oskarsson	Qualified by P-O Oskarsson	Approved by J-P Ernoult	Reg no EN008104	Cancelling EN007328	Reg date 2018-08-08	Page 1 (2)
------------------------------	-------------------------------	----------------------------	--------------------	------------------------	------------------------	---------------

REASON FOR ISSUE

VdTUV approval grade added.

GENERAL

This low hydrogen electrode is specially designed for downhill welding circumferential joints in pipes. The low hydrogen weld metal provides high notch toughness and excellent ductility to reduce the risk of cracking. The electrode is used particularly for pipelines, compressor stations, hot tapping and associated work using pipe steels in API 5LX52 to X70 grades in the oil and gas distribution industries, also process piping etc. Productivity is overall 25-30% faster than cellulosic electrodes and 40-50% faster than conventional low hydrogen electrodes for welding vertically up.

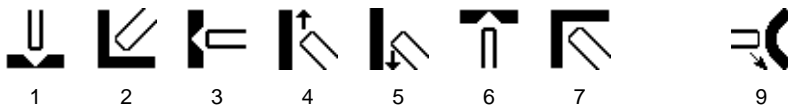
Welding advice : Keep short arc using beaded or weaved runs. 2.5 mm size can also be welded uphill for increased heat input. DC- is preferred.

Polarity: DC+(-)

Alloy Type: Carbon Manganese

Coating Type: Basic covering

WELDING POSITIONS



CLASSIFICATIONS Electrode

SFA/AWS A5.5 E8018-G (nearest)
EN ISO 2560-A E 46 4 B 41 H5

APPROVALS

ABS 3Y
BV 3Y H10
CE EN 13479
DB 10.105.03
DNV-GL 3 YH10
LR 4Y40 H10
VdTÜV 02591

APPROVALS (SPECIFIC)

Seproz UNA 272581

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max
C	0.060	0.090
Si	0.30	0.70
Mn	1.00	1.40
P		0.015
S		0.015

Comments:
2.5mm Mn 0.70-1.10

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

Prepared by P-O Oskarsson	Qualified by P-O Oskarsson	Approved by J-P Ernoult	Reg no EN008104	Cancelling EN007328	Reg date 2018-08-08	Page 2 (2)
------------------------------	-------------------------------	----------------------------	--------------------	------------------------	------------------------	---------------

MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO			AWS
	As welded Min	Max	Typ	As welded Min
Rp0.2 (MPa)				460
ReL (MPa)	460		560	
Rm (MPa)	560	680	610	550
A4 (%)				19
A5 (%)	22		29	
Charpy V at -40°C (J)	47		90	
Charpy V at -50°C (J)			70	
	Comments: EN standard requires Rm min 530 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	80	100	2.2	120	0.67	66.7	1.0	53	25	1,2,3,4,5,6,7,9
3.2 x 350	110	150	3.4	120	0.68	43.7	1.6	53	26	1,2,3,4,5,6,7,9
4.0 x 350	180	220	5.0	120	0.74	27.0	2.8	50	28	1,2,3,4,5,6,7,9

- 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

Mechanical properties: Downhill pipe joint e.g X70 steel.

Rp0.2 (N/mm2):.....min 510

Rm (N/mm2):.....600-660

A(L=4D) (%) :.....min 24

ISO-V:

-40 °C:.....min 50 J

-20 °C:.....min 80 J