

## Basic electrode

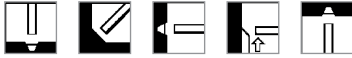
### Classification

AWS A5.1 : E7018 H4  
 ISO 2560-A : E 46 3 B 32 H5

### General description

Basic very low hydrogen electrode ( $H_{DM} < 5 \text{ ml/100g}$ )  
 Very good weldability, in all positions  
 Almost no spatter, nice wetting and full weld pool control  
 Good impact values down to  $-30^\circ\text{C}$   
 Excellent X-ray soundness

### Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3Gup PE/4G

### Current type

DC + / -

### Approvals

ABS	BV	DNV	GL	LR	RINA	TÜV
3H, 3Y	3, 3YHH	3YH5	3YH	3, 3YH5	3YH5	+

### Chemical composition (w%), typical, all weld metal

C	Mn	Si	$H_{DM}$
0.09	1.1	0.6	5 ml/100

### Mechanical properties, typical, all weld metal

Condition	Yield strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)			
				-20 °C	-29 °C	-30°C	-40°C
Required: AWS A5.1	min. 400	min. 483	min. 22	min. 27			
ISO 2560-A	min. 460	530-680	min. 20			min. 47	
Typical values	AW 550	635	25	115	85		65

### Packaging and available sizes

Unit: box	Pieces / unit	Diameter (mm)					
		2.5	3.2	3.2	4.0	4.0	5.0
		Length (mm)					
		350	350	450	350	450	450
		175	115	115	85	85	55
		Net weight/unit (kg)					
		3.9	4.0	5.2	4.6	5.7	6.0

### Identification

Imprint: 7018 / BASO 49

Tip Color: none

Baso<sup>®</sup> 49: rev. EN 22

## Materials to be welded

Steel grades/Code	Type
<b>General structural steel</b>	
EN 10025	S185, S235, S275, S355
<b>Ship plates</b>	
ASTM A131	Grade A, B, D, AH32 to EH40
<b>Cast steel</b>	
EN 10213-2	GP240R
<b>Pipe material</b>	
EN 10208-1	L210, L240, L290, L360
EN 10208-2	L240, L290, L360, L415
API 5LX	X42, X46, X52, X60
EN 10216-1/	P235T1, P235T2, P275T1
EN 10217-1	P275T2, P355N
<b>Boiler &amp; pressure vessel steel</b>	
EN 10028-2	P235GH, P265GH, P295GH, P355GH
<b>Fine grained steel</b>	
EN 10025 part 3	S275, S355, S420
EN 10025 part 4	S275, S355, S420

## Calculation data

Sizes Diam. x length (mm)	Current range (A)	Current type (s)*	Arc time - per electrode at max. current - E(kJ)	Energy H(kg/h)	Dep.rate - (kg)	Weight/ 1000 pcs. B	Electrodes/ kg weldmetal 1/N	kg Electrodes/ kg weldmetal
2.5 x 350	70 - 80	DC+	58	120	0.85	23.1	73	1.7
3.2 x 350	110 - 130	DC+	68	194	1.3	36.8	41	1.5
4.0 x 450	140 - 180	DC+	98	429	1.8	69.5	20	1.4
5.0 x 450	160 - 240	DC+	117	619	2.3	107.3	13	1.4

\* stub end 35 mm

## Welding parameters, optimum fill passes

Welding positions Diameter (mm)	PA/1G	PB/2F	PC/2G	PF/3G up	PE/4G
2.5	95A	95A	90A	90A	85A
3.2	140A	130A	130A	120A	120A
4.0	180A	180A	180A	160A	150A
5.0	230A	230A	230A	180A	

## Remarks/ Application advice

Electrodes after removal from cardboard boxes redry 2-4h 350 ± 25°C