

Basic electrode

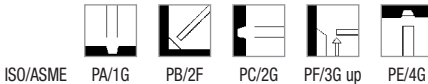
Classification

AWS A5.1-91 : E7018-1 H8
 EN 499-94 : E 46 3 B 32 H10

General description

Rutile basic coated electrode with excellent start- and restart properties
 Weldable on AC and DC
 Stable arc, also at low amperage
 Popular at welding schools
 Min. 60 Volt is recommended
 Good mechanical and impact properties down to -30°C (47 J)
 All weld metal with low hydrogen content $H_{DM} < 8$ ml/100 weld metal)

Welding positions



Current type

Ø 2.5 AC / DC electr. + / -
 Ø 3.2 AC / DC electr. +
 Ø 4.0 AC / DC electr. +
 Ø 5.0 AC / DC electr. +

Approvals

ABS	BV	CTL	DNV	LR	TÜV
3YH10	HHH	+	3YH5	3,3YH10	+

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

C	Mn	Si	H _{DM}
0.075	1.4	0.65	7 ml/100 g

Mechanical properties, all weld metal

	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)		
					-20°C	-30°C	-46°C
Required: AWS A5.1-91		min. 399	min. 482	min. 22			min. 27
EN 499-94		min. 460	530-680	min. 20		min. 47	
Typical values	AW	590	640	25	90	60	

Packaging, available sizes and identification

	Diameter (mm)	Length (mm)	2.5			3.2		4.0	
			350	350	450	350	450	450	
Unit: box	Pieces / unit (nominal)		125	78	78	50	50	50	
	Net weight/unit (kg)		2.5	2.6	3.3	2.5	3.4	5.5	

Identification Imprint: 7018-1/Baso 48SP

Tip colour: green

Baso[®] 48 SP: rev. EN 15

Materials to be welded

Steel	Code	Type
General structural steel	EN 10025	S185, S235, S275, S355
Ship plates	ASTM A131	Grade A, B, D, AH32 to EH36.
Cast steel	EN 10213-2	GP240R
Pipe material	EN 10208-1	L210, L240, L290, L360
	EN 10208-2	L240, L290, L360, L415
	API 5LX	X42, X46, X52, X60
	EN 10216-1/ EN 10217-1	P235T1, P235T2, P275T1 P275T2, P355N
	EN 10028-2	P235GH, P265GH, P295GH, P355GH
Boiler & pressure vessel steel		
Fine grained steel	EN 10113-2	S275, S355, S420
	EN 10113-3	S275, S355, S420, S460

Calculation Data

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at (s)*	Energy - per electrode at E(kJ)	Dep.rate - current - H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
2.5 x 350	50 - 85	AC	48	104	0.9	19.4	82	1.6
3.2 x 450	85 - 135	AC	75	273	1.1	41.0	42	1.72
4.0 x 450	135 - 190	AC	95	487	1.6	64.6	24	1.55

* stub end 35 mm

Welding parameters, optimum fill passes

Welding position Diameter (mm)	PA/1G Current (A)	PB/2F	PC/2G	PF/3G up	PE/4G
2.5	80	85	85	85	80
3.2	120	115	115	115	110
4.0	170	180	180	180	160

Application Advice

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