

Basic electrode

Classification

AWS A5.1-91 : E7018-1 H4R
EN 499-94 : E 42 5 B 32 H5

General description

Basic all position very low hydrogen electrode

115 - 120% recovery

AC/DC welding in all positions especially pipe

Excellent for site welding applications

Good pipe welding

Good impact values down to -50°C

Also available in vacuum sealed Sahara ReadyPack® (SRP) H_{DM} <3 ml/100g

Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3G up PE/4G PF/5G up

Current type

AC / DC electr. + / -

Approvals

ABS	BV	CTL	DB	DNV	GL	LR	RINA	RMRS	TÜV
3H,3Y	3,3YH	+	+	3YH5	3YH10	3,3YH5	4YH5	3-3YH5	+

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

C	Mn	Si	H _{DM}
0.05	1.3	0.4	3 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	-40°C	-46°C	-50°C
Required: AWS A5.1-91		min. 399	min. 482	min. 22			min. 27	
EN 499-94		min. 420	500-640	min. 20				min. 47
Typical values	AW	490	575	28	200	130		100

Packaging, available sizes and identification

	Diameter (mm)	2	2.5	3.2	4.0	4.0	5.0
Length (mm)	300	350	350	450	350	450	450
Unit: box	Pieces / unit (nominal)	180	135	120	120	85	55
	Net weight/unit (kg)	2.1	2.8	4.4	5.8	4.7	5.9
Unit: SRP	Pieces / unit		69	50	50	28	28
	Net weight/unit (kg)		1.4	2.0	2.5	1.6	2.0

Identification Imprint: 7018-1/BasoG Tip colour: blue

Baso® G: 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 EH40
Cast steel	EN 10213-2	GP240R
Pipe material	EN 10208-1	L210, L240, L290, L360
	EN 10208-2	L240, L290, L360, L415, L445
	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, S275, S355, S420
	EN 10113-3	S275, S355, S420,

Calculation Data

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. (s)*	Energy E(kJ)	Dep.rate - H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
2.0 x 300	35 - 55	DC+	50	61	0.5	11.7	149	1.75
2.5 x 350	55 - 90	DC+	59	107	0.8	20.3	78	1.59
3.2 x 350	75 - 120	DC+	70	234	1.2	36.5	42	1.54
3.2 x 450	75 - 120	DC+	79	265	1.4	45.4	33	1.47
4.0 x 350	120 - 180	DC+	75	358	1.7	50.9	28	1.45
4.0 x 450	120 - 180	DC+	96	473	1.7	69.3	22	1.52
5.0 x 450	160 - 240	DC+	114	671	2.2	106.2	14	1.54

* 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	5G
2.0						45
2.5	80	80	85	90	80	80
3.2	145	120	150	120	115	120
4.0	160	145	170	150	145	145
5.0	220	210	215	170		

Application Advice

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