

Basic electrode

Classification

AWS A5.1 : E7018-1 H4R
ISO 2560-A : E 42 5 B 32 H5

General description

Basic all position extremely 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 at -50°C
Also available in vacuum sealed Sahara ReadyPack® (SRP)

Welding positions



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

Current type

AC / DC + / -

Approvals

ABS	BV	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	HbM
0.05	1.3	0.4	2 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 ISO 2560-A		min. 400 min. 420	min. 483 500-640	min. 22 min. 20			min. 27	
Typical values	AW	490	575	28	200	130		min. 47 100

Packaging and available sizes

	Diameter (mm)	2.0	2.5	3.2	4.0	4.0	5.0
	Length (mm)	300	350	350	450	350	450
Unit: box	Pieces / unit	180	135	120	120	85	55
	Net weight/unit (kg)	2.1	2.8	4.4	5.8	4.7	6.0
Unit: SRP	Pieces / unit	53	69	50	50	28	23
	Net weight/unit (kg)	0.6	1.4	2.0	2.5	1.6	2.6

Identification

Imprint: 7018-1 / BASO G

Tip Color: blue

Baso® G: rev. EN 21

Materials to be welded

Steel grades/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
Boiler & pressure vessel steel	
EN 10028-2	P235GH, P265GH, P295GH, P355GH
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. current - (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 positions Diameter (mm)	PA/1G	PB/2F	PC/2G	PF/3G up	PE/4G	5G
2.0						45A
2.5	80A	80A	85A	90A	80A	80A
3.2	145A	120A	150A	120A	115A	120A
4.0	160A	145A	170A	150A	145A	145A
5.0	220A	210A	215A	170A		

Remarks/ Application advice

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