

High strength basic electrode

Classification

AWS A5.5 : E11018M-H4
EN 757 : E 69 5 Z B 32 H5

General description

Basic all position extremely low hydrogen electrode

Weldable on AC and DC

110 - 115% recovery

Good impact values at -51°C

Meets the requirements of military specifications

Suitable for welding submarines high strength steels (UTS up to 800 N/mm²)

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

Welding positions



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

Current type

AC / DC + / -

Approvals

ABS LR
+ 4Y69H5

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

C	Mn	Si	P	S	Ni	Mo	H _{DM}
0.06	1.5	0.4	0.015	0.01	2.2	0.4	2 ml/100g

Mechanical properties, all weld metal

Condition	0.2% Proof strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)		
				-40°C	-50°C	-51°C
Required: AWSA5.5	680-760*	min. 760	min. 20			min. 27
EN 757	min. 690	760-960	min. 17		min. 47	
Typical values AW	750	785	22	100	80	

* Diam. 2.5 max. 795 N/mm²

Packaging and available sizes

	Diameter (mm)	2.5	3.2	4.0	5.0
	Length (mm)	350	350	350	450
Unit: Box	Pieces / unit	225	120	90	60
	Net weight/unit (kg)	4.4	4.5	5.0	6.3
Unit: SRP	Pieces / unit	70	50	28	23
	Net weight/unit (kg)	1.4	1.9	1.5	2.5

Identification

Imprint: 11018-M / CONARC 80

Tip Color: gold

Conarc® 80: rev. EN 21

Materials to be welded

Steel grades/Code	Type
Pipe material API-5LX	X70, X75
Fine grained steel EN 10137-2	S620, S690 root runs and fillet welds in S890

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
2.5 x 350	60 - 80	DC+	55	99	0.8	19.5	82	1.61
3.2 x 350	80 - 130	DC+	78	261	1.1	36.5	43	1.55
4.0 x 350	120 - 180	DC+	75	356	1.6	53.2	30	1.59
5.0 x 450	160 - 240	DC+	116	627	2.3	105.1	14	1.45

* stub end 35 mm

Welding parameters, optimum fill passes

Welding positions Diameter (mm)	PA/1G	PB/2F	PC/2G	PF/3G up	PE/4G	PF/5G up
2.5	75A	75A	75A	80A	75A	80A
3.2	130A	120A	135A	120A	115A	120A
4.0	145A	145A	155A	140A	140A	140A
5.0	225A	230A	210A			

Remarks/ Application advice

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