

Aluminium electrode

Classification

AWS A5.3 : E1100*
DIN 1732 : Al 1080A

* Deviations see remarks

General description

Aluminium electrode.
Especially for welding pure aluminium.
Good weldability, no porosity.

Welding positions



ISO/ASME PA/1G PB/2F

Current type

DC electr. +

Chemical composition (w%), core wire

Al	Si	Fe	Cu	Mn	Zn	Others
99.8 min.	0.085 max.	0.13 max.	0.02 max.	0.02 max.	0.03 max.	0.02 max.

Mechanical properties, all weld metal

	Condition	0,2% Proof Stress (N/mm ²)	Tensile Strength (N/mm ²)	Elongation (%)
Typical values	AW	30	80	30

Packaging, available sizes and identification

	Diameter(mm)	2.5	3.2	4.0
	Length (mm)	350	350	350
Unit: Can	Pieces/unit.	217	143	98
	Net weight/unit (Kg)	2.0	2.0	2.0

Al 99.8 : rev. EN 15

Materials to be welded

- Pure Aluminium like:
 - Al99.8 (Werkstoff-Nr. 3.0285)
 - Al99 (Werkstoff-Nr. 3.0205)

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
2.5x350	60-90	DC+				9.2		
3.2x350	80-110	DC+				14.0		
4.0x350	100-140	DC+				20.4		

* stub end = 35 mm

Welding parameters, optimum fill passes

Welding position Diameter (mm)	PA/1G Current (A)	PB/2F
2.5	80	80
3.2	100	100
4.0	130	130

Remarks

Deviations: chemical composition:
 Cu = max. 0.02%

AWS: Cu = 0.05 - 0.20%

Application advice

If the thickness is more than 10 mm, it is advisable to preheat at 150 - 250°C