Aluminium electrode

Classification

ISO 18273 : Al 4047A

General description

Aluminium electrode.
Especially for welding forged and cast aluminium alloys containing more than 7% Si as main alloying element.
Also applicable as surfacing electrode.
Good weldability, no porosity.
Applicable when Al-properties are unknown.

Welding positions

ISO/ASME PA/1G PB/2F PF/3G up

Current type

DC electr. +

Chemical composition (w%). core wire

Si	Fe	Cu	Mn	Mg	Zn	Ti	Others	Al
11.0-12.0	0.40 max.	0.05 max.	0.10 max.	0.05 max.	0.10 max.	0.10 max.	0.15 max.	Bal.

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.	227	152	102
	Net weight/unit (Kg)	2.0	2.0	2.0

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AlSi 12

Materials to be welded

Aluminium cast alloys with silicon level up to approx. 12%, like:
- G-AlSi 10Mg (Werkstoff-Nr. 3.2381)
- G-AlSi 12 (Werkstoff-Nr. 3.2581)

Calculation data

Sizes Diam. x length	Current range	Current type	Arc time	Energy	Dep.rate	Weight/ 1000 pcs.	Electrodes/ kg weldmetal	kg Electrodes/ kg weldmetal
			- per electrode at max.current -					
(mm)	(A)		(s)*	E(kJ)	H(kg/h)	(kg)	B	1/N
2.5x350	60-90	DC+				8.8		
3.2x350	80-110	DC+				13.2		
4.0x350	100-140	DC+				19.6		

* stub end = 35 mm

Welding parameters, optimum fill passes

Welding position	PA/1G	PB/2F	PF/3G up
Diameter (mm)	Current (A)		
2.5	80	80	75
3.2	100	100	95
4.0	130	130	125

Application advice

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

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