

Aluminium electrode

Classification

ISO 18273 : Al 4047A (AlSi12(A))

General description

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/3Gup

Current type

DC +

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

Si	Al
12	Bal.

Mechanical properties, typical, all weld metal

	Condition	0.2% Proof strength (N/mm ²)	Tensile Strength (N/mm ²)	Elongation (%)
Typical values	AW	80	180	5

Packaging and available sizes

	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

AlSi12: rev. EN 21

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 (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	40-70	DC+				8.8		
3.2x350	60-90	DC+				13.2	164	2.16
4.0x350	80-120	DC+				19.6		

Welding parameters, optimum fill passes

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

Remarks/ Application advice

If the thickness is more than 10 mm, it is advisable to preheat at 150 - 250°C
 Welding with short arc preferable
 Electrode with 90° angle on material