

Aluminium electrode

Classification

AWS A5.3 : E4043
ISO 18273 : Al 4043A*

General description

Aluminium electrode.

Especially for welding forged and cast aluminium alloys containing less than 5% Si as main alloying element.
Good weldability, no porosity.

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
4.7-5.3	0.2 max.	0.05 max.	0.05 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	90	160	15

Packaging, available sizes and identification

	Diameter(mm)	2.5	3.2	4.0
	Length (mm)	350	350	350
Unit: Can	Pieces/unit.	222	152	98
	Net weight/unit (Kg)	2.0	2.0	2.0

Materials to be welded

Several Aluminium alloys like :

- AlCuMg1 (Werkstoff-Nr. 3.1325)
- AlMgSi1 (Werkstoff-Nr. 3.2315)
- AlZn4.5Mg1 (Werkstoff-Nr. 3.4335)

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	PF/3G up
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 - 250°C