

AISi5

CLASSIFICATION

AWS A5.3 : E4043  
ISO 18273 : Al 4043A\* (AlSi5(A))

\*:Deviation,see remarks

GENERAL DESCRIPTION

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 +

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

Al	Si
bal.	5.0

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

		0.2% Proof strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)
Condition				
Typical values	AW	90	160	15

PACKAGING AND AVAILABLE SIZES

Diameter (mm)		2.5	3.2	4.0
Length (mm)		350	350	350
Unit: Can	Pieces / unit	-	-	-
	Net weight/unit (kg)	2.0	2.0	2.0

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## MATERIALS TO BE WELDED

Aluminium-silicon alloys and dissimilar of several aluminium alloys. With restriction : precipitation hardening alloys such as :

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 weld- metal B	kg electrodes/ kg weldmetal 1/N
2.5 x 350	40-70	DC+				9.2		
3.2 x 350	60-90	DC+				14.0		
4.0 x 350	80-120	DC+				20.4		

\*Stub end 35mm

## WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions		
	PA/1G	PB/2F	PF/3Gup
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