

SAIW 4043

GB/T 10858 SAI 4043(AISi5)
AWS A5.10 ER4043/R4043
EN ISO 18273 SAI 4043(AISi5)

Characteristics: SAIW 4043 is a widely used aluminum silicon alloy welding wire. The wire has excellent welding performance, beautiful and bright bead shape and profile, stable arc, low spatter and good fluidity of molten pool. Due to the low thermal cracking sensitivity, it can be used to weld forgings and cast aluminum alloys.

Application: Widely used in aluminum alloy welding in ship manufacturing, locomotive production, chemical equipment, food production equipment, and automotive structural parts.

Wire chemical composition

Element (wt%)	Si	Fe	Cu	Mn	Mg	Zn	Ti	Al
Standard value	4.5-6.0	0.80	0.3	0.05	0.05	0.10	0.20	margin
Typical value	5.2	0.68	0.2	0.04	0.04	0.04	0.15	margin

Mechanical properties of deposited metal



Testing status	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)
Standard value	-	-	-
As-Welded condition	185	45	9

Note: welding method: MIG; shielding gas: 100%Ar

Physical properties of deposited metal

Melting temperature range (°C)	Density (g/mm ³)
574-632	2.68

Shielding gases, polarity and welding position

Gas composition	Power polarity	Welding position
99.99%Ar、 75%Ar+25%He、 50%Ar+50%He		

Recommended welding specifications

Welding method	Wire diameter (mm)	Arc voltage (V)	Welding current (A)	Wire stick-out (mm)	Gas flow rate (L/min)
MIG	1.2	18-26	180-300	15-25	20
	1.6	20-28	200-400	15-25	20
	2.0	22-32	240-450	15-25	20
TIG	1.6-2.5		150-250		20
	2.5-4.0		200-320		20
	4.0-5.0		220-400		20