

SAIW 4047

GB/T 10858 SAI 4047(AISi12)
AWS A5.10 ER4047/R4047
EN ISO 18273 SAI 4047(AISi12)

Characteristics: SAIW 4047 is a eutectic aluminum-silicon alloy wire containing 12% Si, which has a lower melting point and a narrower solidification interval compared with 4043 wire. Its high silicon content improves the fluidity of molten pool, reduces the sensitivity of hot crack and increases the shear strength of fillet weld. The welding wire has excellent welding performance, beautiful and bright bead shape and profile, stable arc, and low spatter.

Application: Widely used in automotive manufacturing, sports equipment, motorcycles and other aluminum alloy welding or surfacing processing industries.

Wire chemical composition

Element (wt%)	Si	Fe	Cu	Mn	Mg	Zn	Al
Standard value	11.0-13.0	0.80	0.30	0.15	0.10	0.20	margin
Typical value	12.0	0.75	0.20	0.08	0.05	0.06	margin

Mechanical properties of deposited metal



Testing status	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)
Standard value	-	-	-
As-Welded condition	145	80	6

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	 DCEP	

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