

SAIW 5087

GB/T 10858 SAI 5087(AlMg4.5MnZr)
AWS A5.10 ER5087/R5087
EN ISO 18273 SAI 5087(AlMg4.5MnZr)

Characteristics: SAIW 5087 is an aluminum-magnesium alloy wire containing 4.5% Mg. The small amount of Zr contained therein can refine the weld grain, so it has good applicability to aluminum alloy structures requiring high strength, crack resistance, bending resistance and corrosion resistance. The wire has excellent welding performance, beautiful and delicate weld, stable arc, and low spatter.

Application: It is widely used in the welding of aluminum alloys related to military industry, automobile manufacturing, shipbuilding, marine engineering and aviation.

Wire chemical composition

Element (wt%)	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Zr
Standard value	0.25	0.4	0.05	0.7-1.1	4.5-5.2	0.05-0.25	0.25	0.15	0.10-0.02
Typical value	0.18	0.3	0.03	1.0	4.7	0.1	0.15	0.11	0.05

Mechanical properties of deposited metal



Testing status	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)
Standard value	-	-	-
As-Welded condition	285	165	18

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

Physical properties of deposited metal

Melting temperature range (°C)	Density (g/mm ³)
581-642	2.66

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