

SAIW 3103

GB/T 10858 SAI 3103(AlMn1)
 AWS A5.10 ER3103/R3103
 EN ISO 18273 SAI 3103(AlMn1)

Characteristics: SAIW 3103 is an aluminum alloy wire containing 1% manganese. This wire has excellent welding performance. It has good bead shape, stable arc, low spatter, and excellent corrosion resistance and crack resistance. Its strength is higher than pure aluminum, while its weldability and plasticity are good.

Application: widely used as filling material in argon arc welding machine gas welding for 3000 series aluminum manganese alloy.

Wire chemical composition

Element (wt%)	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti+Zr	Al
Standard value	0.50	0.70	0.10	0.9-1.5	0.30	0.10	0.20	0.10	margin
Typical value	0.40	0.60	0.04	1.1	0.20	0.05	0.08	0.05	margin

Mechanical properties of deposited metal



Testing status	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)
Standard value	-	-	-
As-Welded condition	135	85	25

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

Physical properties of deposited metal

Melting temperature range (°C)	Density (g/mm ³)
643-654	2.73

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
	1.2	18-26	180-300	15-25	20