

Aluminium & Aluminium alloys Filler Wire & Rods

**SM ER 4047**



 **SENOR<sup>®</sup>**  
One Stop Solution for Welding & Brazing Consumables

## SM ER 4047

## Filler Wire TIG & MIG

## Aluminium Alloy Electrodes

### Classification :

AWS SFA 5.10/SFA 5.10M : ER4047

UNS NO. : A94047

EN ISO 18273 : S Al 4047 (AlSi12)

### Characteristics :

SM ER4047 is commonly used not only in MIG or TIG applications, but also as a general purpose brazing alloy providing a free-flowing filler metal and good corrosion resistance. ER4047 is recommended for welding or brazing aluminium alloys 3003, 6005, 6053, 6061, 6951, 7005 and cast alloys 710.0 and 711.0. ER4047 has an approximate melting range of 1070°-1080°F and the post anodizing colour tint is greyish-black. ER4043 High silicon content, good fluidity, and reducing the hot cracking tendency to the minimum, increasing the shear strength of the weld.

### Applications :

1. Can be used to weld the Base materials (ASTM) 3003, 6005, 6053, 6061, 6951, 7005 aluminium Alloys and cast alloys 710.0 and 711.0.
2. SM ER4047 can be used to weld various grades of aluminium.
3. It can also be used such as boats, ships, bicycles, trucks, pressure vessels, and automotive parts and equipment.
4. SM ER4047 wires are recurrently used in many industries, including chemical and petrochemical processing, oil and gas, power generation, pharmaceutical, pulp, paper production, and wastewater treatment.

### Mechanical Properties – All Weld :

Tensile Strength Min – 170 MPa

### Weld Metal Chemistry (wt %)

Si	Fe	Cu	Mn	Mg	Zn	Al	Be	Each	Other
11.0 - 13.0	0.8 max	0.30 max	0.15 max	0.10 max	0.20 max	Rem.	0.0003 max	0.05	0.15

### WELDING CURRENT (AC for GTAW) (DCEP for GMAW)

1.60 mm	2.40 mm	3.20 mm	4.00 mm
60 - 100	130 - 180	160 - 200	180 - 240

### Availability :

Standard Size : 1.6, 2.0, 2.5, 3.0, 3.2, 4.0 & 5.0 mm dia in 500 / 1000 mm length

Packing : 500 mm in 2 kg. & 1000 mm in 5 kg. for TIG welding

Spools : 0.8, 0.9, 1.0, 1.2, 1.6 & 2.0 mm dia in 6.5 kg. spool for MIG welding

## **Note On Usage:**

1. Clean the area to be welded
2. Maintaining a proper welding procedure - including pre-heat and inter pass temperatures - may be critical depending on the type and thickness of aluminium being welded.
3. 100% Argon (Ar) or Argon/Helium mixtures, typical: GMAW - 14-16 LPM, GTAW 10-14 LPM

Above are basic guidelines and will vary depending on joint design, number of passes and other factors.

## **⚠WARNING ⓘ**

Protect yourself and others. Read and understand this warning. Do not remove this warning.

### **Fumes and Gases can be hazardous to your health**

- Before use, read and understand the Material Safety Data Sheet (MSDS), the manufacturer's instructions, and your employer's safety practices.
- If MSDS is not enclosed. Obtain from your employer.
- Keep your head out of the fumes. See Section 5 of the MSDS for specific fume concentration limits.
- Use enough Ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and the general area. If needed, use a proper respirator.
- No hazards exist before this product is used in arc welding.

### **Electric Shock can kill**

- Always wear dry insulating gloves
- Insulate yourself from work and ground.
- Do not touch live electrical parts.

### **ARC Rays can injure eyes and burn skin**

- Wear welding helmet with correct filter.
- Wear correct eye, ear, and body protection.

### **Welding can cause fire or explosion**

- Do not weld near flammable material.
- Watch for fire, keep, extinguisher nearby.

Read American National Standards Z49.1, "Safety In Welding, Cutting and Allied Process." from American Welding Society.