

Aluminium & Aluminium alloys Filler Wire & Rods

SM ER 4043



 **SENOR[®]**
One Stop Solution for Welding & Brazing Consumables

SM ER4043

Filler Wire TIG & MIG

Aluminium Alloys

Classification :

AWS SFA 5.10/SFA 5.10M : ER4043

UNS NO. : A94043

EN ISO 18273 : Al 4043 (AlSi5)

Characteristics :

SM ER4043 is a 5% silicon, all position aluminium weld wire used to weld heat treatable alloys such as the 6XXX base metals and cast alloys. It can be found in many common welding applications, such as bicycles, trucks, trailers, and automotive parts and equipment. Silicon with this alloy gives improved wetting action yielding a less crack sensitive bright weld bead. The silicon gives improved wetting action and lowers the crack sensitivity. It is preferred by most welders because it “wets and flows better” and it also makes brighter looking GMAW welds. This filler metal is not well suited for welding aluminium-magnesium alloys (5XXX alloys).

Applications :

1. Can be used to weld the Base materials (ASTM) 3003, 6005 or 6061 aluminium Alloys
2. SM ER4043 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 ER4043 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 – 165 MPa

Weld Metal Chemistry (wt %)

Si	Fe	Cu	Mn	Mg	Zn	Ti	Al	Be	Each	Other
4.0 - 6.5	0.8 max	0.30 max	0.05 max	0.05 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.