

Aluminium & Aluminium alloys Filler Wire & Rods

SM ER 5183



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

SM ER5183

Filler Wire TIG & MIG

Aluminium-Magnesium Alloys

Classification :

AWS SFA 5.10/SFA 5.10M : ER5183
UNS NO. : A95183
EN ISO 18273 : Al 5183 (AlMg4.5Mn0.7(A))

Characteristics :

SM ER 5183 MIG & TIG contains magnesium close to 5%, and it has the higher manganese content with aluminium-magnesium; hence they have great working abilities. They come with good corrosion resistance, heat resistance, high strength, good flexibility. After welding, the ER5183 MIG & TIG is still white and can easily provide good colour for the welded joints. The composition of ER 5183 makes it suitable for welding aluminium alloys with magnesium, such as 5083, 5052, and 5456.

Applications :

1. Can be used to weld the Base materials (ASTM) 3004, 6005 or 6061 aluminium Alloys
2. SM ER5183 makes it suitable for welding aluminium alloys with magnesium, such as 5083, 5052, and 5456.
3. SM ER5183 is commonly used on marine components, drilling rigs, cryogenics, railroad cars, storage tanks and unfired pressure
4. ER 5183 MIG & TIG are used in pressure vessels, nuclear, shipbuilding, boiler, space industry. Also, they can be used in jointing or overlay forging and casting alloys processing in the same grade.

Mechanical Properties – All Weld :

Tensile Strength Min – 275 MPa

Weld Metal Chemistry (wt %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Be	Each	Other
0.4 max	0.4 max	0.10 max	0.5 - 1.0	4.30 - 5.20	0.05 - 0.25	0.25 max	0.15 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.