

# Stainless Steel Electrodes (MMAW)

## SME 316L-16



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

## SME 316L-16

## Stick Electrodes (MMAW)

## Stainless Steel

### Classifications:

AWS A / SFA 5.4 :E 316L-16  
IS 5206 :E 19.12.2 LR26  
Coating Type : Rutile  
Coating Factor : Medium  
Identification : Brand Printed

### Characteristics:

Senor SME 316L-16 an extra low Carbon, SS electrode with controlled Ferrite content of 3 to 8% for maximum resistance to cracking. It possesses properties similar to SME 316-16 except with a much lower carbon content which reduces susceptibility to sensitization during welding. Weld metal is resistant to Stress Corrosion cracking, Hot Cracking, Chemical corrosion at high temp. upto 850°C. The slag is easily controlled and does not interfere with the arc action. Weld beads are smooth, and of good appearance.



### Applications:

- 1) Welding Stainless Steel types 316, 316-L and 318
- 2) Stainless steel piping and vessels in oil and gas industry,
- 3) For welding in refineries and chemical and petro-chemical plants.
- 4) For welding of equipments in Chemical industries, Paper and Pulp industry, Paint and Dye industries

### Mechanical Properties – All-Weld:

| Condition | UTS MPa | % Elong (L=4Xd) | RA %    | Ferrite No. |
|-----------|---------|-----------------|---------|-------------|
| As Welded | 510-610 | 30-40           | 50 min. | 3-8         |

### Weld Metal Chemistry (wt%):

| C        | Mn       | Si        | S        | P        | Ni        | Cr        | Mo      |
|----------|----------|-----------|----------|----------|-----------|-----------|---------|
| 0.04 max | 0.70-2.0 | 0.30-0.75 | 0.03 max | 0.03 max | 11.0-14.0 | 17.0-20.0 | 2.0-3.0 |

### Current Conditions: AC, DC (+):

| 5.0     | 4.0     | 3.2    | 2.5   | 2.0   | 1.6   |
|---------|---------|--------|-------|-------|-------|
| 150-180 | 110-140 | 80-100 | 50-75 | 35-45 | 25-35 |

### Welding Positions:

F, H, V-up, OH

### Re-drying Conditions:

To obtain best results re dry the electrodes at 300°C for 1hour (Optionally available in vacuum-packed condition, re-drying not required in this packaging).

## Note On Usage:

- 1) Keep electrode dry (Optionally also available in vacuum-packed condition, redrying not required in this packaging)
- 2) To obtain best results rebake the electrodes at 250 ~ 300°C for 1 hour and keep it at 100 ~ 150°C prior to use.
- 3) Use stainless steel wire brush for cleaning of slags
- 4) Follow the recommended welding parameters to achieve good sound welds
- 5) Do not use excessive currents. Hold short arc. Use good fit-up on joints.

**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.**