

Low carbon 18%Cr-12%Ni-2%Mo STS

### Conformances

AWS A5.9/ ASME SFA5.9 ER316L

JIS Z3321 YS316L

EN ISO 14343-A G 19 12 3L

CE

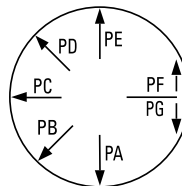
### Applications

- Steel Structures - Chemical industries and nuclear reactors

### Features

- Excellent corrosion resistance
- Excellent resistance to heat
- Excellent Arc stability and bead wetting

### Welding Position



### Current

DC +

### Shielding Gas

Ar / Ar + O<sub>2</sub>

### Diameter / Packaging

| Diameter<br>mm (in) | Spool          |               |              | Ball Pac       |                |                |
|---------------------|----------------|---------------|--------------|----------------|----------------|----------------|
|                     | 12.5kg (28lbs) | 15kg (33 lbs) | 20kg (44lbs) | 150kg (330lbs) | 200kg (440lbs) | 250kg (551lbs) |
| 0.8 (0.033)         | √              |               |              |                |                |                |
| 0.9 (0.035)         | √              |               |              |                |                |                |
| 1.0 (0.040)         | √              | √             |              |                |                |                |
| 1.2 (0.045)         | √              | √             |              |                |                |                |
| 1.4 (0.052)         |                |               |              |                |                |                |
| 1.6 (1/16)          | √              |               |              |                |                |                |

### Typical Chemical Composition of the Wire(%)

| C    | Si   | Mn   | Cr   | Ni   | Mo  |
|------|------|------|------|------|-----|
| 0.02 | 0.39 | 1.69 | 19.5 | 12.8 | 2.5 |

### Typical Mechanical Properties of All-Weld Metal

| TS<br>MPa(lbs/in <sup>2</sup> ) | EL<br>(%) |
|---------------------------------|-----------|
| 570 (82,700)                    | 39        |

### Typical Welding Parameters

| Diameter, Polarity<br>Shielding Gas | CTWD<br>mm(in)       | Wire Feed Speed<br>m/min (in/min) | Amp.<br>(A) | Volt.<br>(V) | Deposition Rate<br>kg/hr (lb/hr) |
|-------------------------------------|----------------------|-----------------------------------|-------------|--------------|----------------------------------|
| 1.0mm (0.040 in), DC +              |                      |                                   |             |              |                                  |
| 100% Ar Gas                         | 15~20<br>(0.59~0.78) | 6.0 (236)                         | 140         | 24           | 2.1 (4.6)                        |
|                                     |                      | 7.1 (280)                         | 160         | 24           | 2.5 (5.5)                        |
|                                     |                      | 9.2 (362)                         | 190         | 24           | 3.2 (7.1)                        |
| Mixed Gas (Ar + 2% O <sub>2</sub> ) | 15~20<br>(0.59~0.78) | 5.2 (204)                         | 160         | 26           | 1.8 (4.0)                        |
|                                     |                      | 7.0 (276)                         | 190         | 26           | 2.4 (5.3)                        |
|                                     |                      | 8.3 (327)                         | 220         | 26           | 2.9 (6.4)                        |
| 1.2mm (0.045 in), DC +              |                      |                                   |             |              |                                  |
| 100% Ar Gas                         | 15~20<br>(0.59~0.78) | 9.2 (362)                         | 190         | 27           | 4.6 (10.1)                       |
|                                     |                      | 11.9 (469)                        | 220         | 27           | 6.0 (13.2)                       |
|                                     |                      | 15.5 (610)                        | 260         | 27           | 7.8 (17.2)                       |
| Mixed Gas (Ar + 2% O <sub>2</sub> ) | 15~20<br>(0.59~0.78) | 7.7 (303)                         | 200         | 28           | 3.9 (8.6)                        |
|                                     |                      | 8.6 (339)                         | 230         | 28           | 4.3 (9.5)                        |
|                                     |                      | 10.1 (398)                        | 260         | 28           | 5.1 (11.2)                       |