

SM-70EN

Classification

**AWS** A5.18/ ASME SFA-5.18 ER70S-6  
**JIS** Z 3312 YGW12  
**EN** ISO 14341-A G 42 2 C1 4Si1 / ISO 14341-A G 46 5  
M21 4Si1

Features

- All position welding by short-circuiting type transfer
- Mixed gas
- Good Bead Appearance and low spatter

Application Areas

- Structural fabrication
- Automotive
- Machinery

Approvals

|     |    |    |     |
|-----|----|----|-----|
| DNV | CE | DB | TUV |
| ✓   | ✓  | ✓  | ✓   |

Typical Chemical Composition of the Wire (wt%)

|      |      |      |       |       |
|------|------|------|-------|-------|
| C    | Si   | Mn   | P     | S     |
| 0.08 | 0.95 | 1.65 | 0.019 | 0.015 |

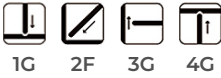
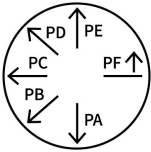
Typical Mechanical Properties of All-Weld Metal

| Shielding Gas | Yield Strength<br>MPa(ksi) | Tensile Strength<br>MPa(ksi) | Elongation<br>(%) | Temperature<br>°C (°F) | Impact Toughness<br>J (ft · lbs) |
|---------------|----------------------------|------------------------------|-------------------|------------------------|----------------------------------|
| 100% CO2      | 460 (67)                   | 560 (81)                     | 29                | -20 (0)                | 95 (70)                          |
|               |                            |                              |                   | -30 (-20)              | 55 (41)                          |
| Ar + 20% CO2  | 520 (75)                   | 620 (90)                     | 27                | -20 (0)                | 110 (81)                         |
|               |                            |                              |                   | -50 (-60)              | 70 (52)                          |

Diameter / Welding Parameters / Packaging

| Wire Diameter<br>mm(in)                                        | Packaging                                                                              |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 0.9 (0.035), 1.0 (0.039), 1.2 (0.045), 1.4 (0.052), 1.6 (1/16) | Spool 15kg(33lbs), 20kg (44lbs)<br>Drum 250kg (551lbs), 300kg (661lbs), 350kg (771lbs) |

Welding Positions



Polarity

DC +

Shielding Gas

100% CO2  
Ar + 20% CO2

SMW

GMAW

GTAW

FCAW

Metal-cored Wire

SAW Wire

SAW Flux