

# SF-70MX

Type : Semi-Metal



## Conformances

AWS A5.36/ ASME SFA5.36 E70T1-C1A0-CS1

(AWS A5.20/ ASME SFA5.20 E70T-1C)

JIS Z3313 T49 J 0 T1-0 C A-U H10

EN ISO 17632-A-T 42 0 R C1 3

KR 2SG, 2YSG (C1) H10, 2MG, 2YMG(C1) H10

ABS 2SA, 2YSAH10, 2Y400SA

LR 2S, 2YS H10

BV SA2YM HH

DNV·GL IY40MS H10

NK KSW2G, KSW52Y40G(C) H10

KAW2MG, KAW52MG(C) H10

CCS 2YSM H10

CRS 2HSM, 2YHSM

RINA 2YS H10

CWB CSA W48 E492T-1-H8

CE

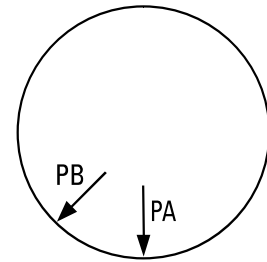
## Applications

- Shipbuilding
- Structural fabrication
- General fabrication
- Transportation equipment

## Features

- Designed for welding with 100% CO<sub>2</sub> shielding gas
- Good high deposition rate
- Good penetration and good arc stability
- Low spatter and soft arc
- Good anti-porosity

## Welding Position



## Current

DC +

## Shielding Gas

100% CO<sub>2</sub>

## Diameter / Packaging

| Diameter    | Spool       |              |              | Pac            |                |                |
|-------------|-------------|--------------|--------------|----------------|----------------|----------------|
|             | 5kg (11lbs) | 15kg (33lbs) | 25kg (55lbs) | 100kg (220lbs) | 250kg (551lbs) | 300kg (661lbs) |
| 1.2 (0.045) | ✓           | ✓            |              | ✓              | ✓              | ✓              |
| 1.4 (0.052) | ✓           | ✓            |              | ✓              | ✓              | ✓              |
| 1.6 (1/16)  | ✓           | ✓            |              | ✓              | ✓              | ✓              |
| 2.4 (3/32)  |             |              | ✓            | ✓              | ✓              |                |

### Typical Chemical Composition of All-Weld Metal (%)

| C    | Si  | Mn  | P     | S     |
|------|-----|-----|-------|-------|
| 0.05 | 0.5 | 1.5 | 0.011 | 0.013 |

### Typical Mechanical Properties of All-Weld Metal

| YS<br>MPa(lbs/in <sup>2</sup> ) | TS<br>MPa(lbs/in <sup>2</sup> ) | EL<br>(%) | Temp<br>°C(°F) | CVN-Impact Value<br>J (ft·lbs) |
|---------------------------------|---------------------------------|-----------|----------------|--------------------------------|
| 560 (81,300)                    | 590 (85,700)                    | 28        | -20 (-4)       | 50(37)                         |

### 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) | Efficiency<br>(%) |
|-------------------------------------|-----------------|-----------------------------------|-------------|--------------|----------------------------------|-------------------|
| <b>1.2mm (0.045 in) DC+</b>         |                 |                                   |             |              |                                  |                   |
| 100% CO <sub>2</sub>                | 25 (1)          | 11.5 (450)                        | 200~240     | 24~28        | 4.1 (9.0)                        | 85~87             |
|                                     |                 | 12.6 (500)                        | 220~260     | 27~29        | 4.5 (10.0)                       | 87~89             |
|                                     |                 | 14.3 (560)                        | 240~280     | 29~33        | 5.0 (10.9)                       | 87~89             |
|                                     |                 | 15.4 (610)                        | 260~300     | 29~33        | 5.4 (11.9)                       | 89~90             |
| <b>1.4mm (0.052 in) DC+</b>         |                 |                                   |             |              |                                  |                   |
| 100% CO <sub>2</sub>                | 25 (1)          | 9.6 (380)                         | 230~270     | 24~28        | 4.4 (9.8)                        | 87~89             |
|                                     |                 | 10.7 (420)                        | 250~290     | 25~29        | 5.0 (11.1)                       | 87~89             |
|                                     |                 | 12.2 (480)                        | 270~310     | 29~33        | 5.6 (12.4)                       | 88~90             |
|                                     |                 | 12.8 (500)                        | 300~340     | 30~34        | 5.9 (13.0)                       | 88~90             |
|                                     |                 | 13.1 (515)                        | 330~370     | 30~34        | 6.1 (13.4)                       | 88~90             |
| <b>1.6mm (1/16 in) DC+</b>          |                 |                                   |             |              |                                  |                   |
| 100% CO <sub>2</sub>                | 25 (1)          | 6.4 (250)                         | 250~290     | 26~30        | 3.8 (8.5)                        | 86~88             |
|                                     |                 | 7.6 (300)                         | 270~310     | 28~32        | 4.5 (10.0)                       | 87~89             |
|                                     |                 | 8.9 (350)                         | 300~340     | 30~34        | 5.5 (12.1)                       | 87~89             |
|                                     |                 | 10.2 (400)                        | 340~380     | 33~37        | 6.3 (13.9)                       | 89~91             |
| <b>2.4mm (3/32 in) DC+</b>          |                 |                                   |             |              |                                  |                   |
| 100% CO <sub>2</sub>                | 25 (1)          | 3.2 (125)                         | 335         | 23~28        | 4.9 (10.8)                       | 86~88             |
|                                     |                 | 5.1 (200)                         | 445         | 27~32        | 7.6 (16.7)                       | 88~89             |
|                                     |                 | 6.4 (250)                         | 500         | 29~34        | 9.6 (21.3)                       | 89~92             |
|                                     |                 | 7.6 (300)                         | 590         | 31~36        | 11.8 (26.0)                      | 89~92             |