

Select 70C-6LS

Description:

- A carbon steel, composite metal cored electrode for gas shielded arc welding
- Designed to produce cleaner weld deposits, with minimal slag islands, than conventional metal cored electrodes
- Minimizing slag islands and spatter allows multiple beads to be deposited with no cleanup in between
- Arc transfer is a stable, fine droplet spray
- Ideal for welding structural steel, thin plate fabrication, general fabrication, and welding of thin walled tanks.
- Intended for welding carbon steels such as ASTM A36, A285, A515-Gr 70, and A516-Gr 70

Classification & Approvals:

- E70C-6M-H4 per AWS A5.18, ASME SFA 5.18
- AWS D1.8 – 0.052" & 1/16" in M20, 0.052" in M21
- E70T15-M20A2-CS1-H4, E70T15-M21A2-CS1-H4 per AWS A5.36, ASME SFA5.36
- ABS 3YSA (M21)
- Per CSA W48-18; E491T15-GA3-CS1-H4 (E491C-6M-H4), E491T15-M20A3-CS1-H4 (E491C-6M-H4) and E491T15-M21A3-CS1-H4 (E491C-6M-H4)

Typical Mechanical Properties:

| | <u>75Ar/25CO₂</u> | <u>90Ar/10CO₂</u> |
|---------------------------------|------------------------------|------------------------------|
| Ultimate Tensile Strength (psi) | 81,500 | 78,800 |
| Yield Strength (psi) | 64,500 | 61,500 |
| Percent Elongation | 27 | 38 |
| CVN (ft • lb f) @ -20° F | 32 | 57 |

Typical Chemical Composition:

| <u>Wt%</u> | <u>C</u> | <u>Mn</u> | <u>P</u> | <u>S</u> | <u>Si</u> |
|------------------------------|----------|-----------|----------|----------|-----------|
| <u>75Ar/25CO₂</u> | .05 | 1.54 | .007 | .010 | .60 |
| <u>90Ar/10CO₂</u> | .04 | 1.70 | .011 | .019 | .66 |

Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.

Typical Welding Parameters*:

| Diameter | Weld Position | Amps | Volts | Wire-Feed Speed in/min | Contact Tip to Work Distance |
|----------|-------------------|---------|-------|---------------------------|------------------------------------|
| .035" | Flat & Horizontal | 170 | 25 | 345 | 1/2" - 5/8" |
| | Flat & Horizontal | 190 | 26 | 425 | |
| | Flat & Horizontal | 210 | 27.5 | 475 | 5/8" - 3/4" |
| | Flat & Horizontal | 225 | 29 | 570 | |
| | **SCT Range | 110-135 | 14-20 | 155-215 | 1/4"-3/8" |
| .045" | Flat & Horizontal | 200 | 25 | 260 | 1/2" - 5/8" |
| | Flat & Horizontal | 220 | 26 | 305 | |
| | Flat & Horizontal | 240 | 27.5 | 360 | 5/8" - 3/4" |
| | Flat & Horizontal | 255 | 29 | 405 | |
| | **SCT Range | 130-155 | 15-18 | 140-175 | 1/4"-3/8" |
| .052" | Flat & Horizontal | 215 | 25 | 235 | 5/8" - 3/4" |
| | Flat & Horizontal | 260 | 26 | 315 | |
| | Flat & Horizontal | 275 | 27.5 | 330 | 3/4" - 1" |
| | Flat & Horizontal | 295 | 29 | 345 | |
| | **SCT Range | 165-195 | 15-18 | 125-175 | 1/4"-3/8" |
| 1/16" | Flat & Horizontal | 250 | 25 | 200 | 5/8" - 3/4" |
| | Flat & Horizontal | 290 | 26 | 245 | |
| | Flat & Horizontal | 310 | 27.5 | 275 | 3/4" - 1" |
| | Flat & Horizontal | 330 | 29 | 285 | |
| | **SCT Range | 185-225 | 15-20 | 115-160 | 1/4"-1/2" |
| 5/64" | Flat & Horizontal | 350 | 25 | 170 | 3/4" - 1" |
| | Flat & Horizontal | 370 | 26 | 185 | |
| | Flat & Horizontal | 400 | 28 | 210 | 1" - 1.25" |
| | Flat & Horizontal | 415 | 29 | 255 | |
| 3/32" | Flat & Horizontal | 370 | 25 | 125 | 3/4" - 1" |
| | Flat & Horizontal | 390 | 26 | 140 | |
| | Flat & Horizontal | 425 | 28 | 160 | 1" - 1.25" |
| | Flat & Horizontal | 450 | 29 | 185 | |

* Welding parameters are for 75% Ar/25% CO₂. At higher levels of argon the voltage should be gradually decreased; ½-1 volt for 85% Ar/15% CO₂, 1-1½ volts for 90% Ar/10% CO₂ and 1-2 volts for 95% Ar/5% CO₂.

** SCT, short circuit transfer