

## Select 70C-6

### Description:

- A carbon steel, metal cored electrode for gas shielded arc welding
- Tubular construction promotes faster travel speeds and better fusion than solid GMAW electrodes
- High level of deoxidizers enhances welding over hot rolled and rusted plate material
- Intended for welding carbon steels, such as ASTM A36, A515, and A516
- Smaller diameters (1/16" or smaller) can be pulse welded in all positions
- The versatility of a slag free cored wire makes this ideal for general fabrication, structural steel welds, and thin section applications, such as automotive components and hot water heaters

### Classification & Approvals:

- E70C-6M per AWS A5.18, ASME SFA-5.18
- E70T15-M21A2-CS1, E70T15-M24A2-CS1 per AWS A5.36, ASME SFA-5.36
- ABS 3SA, 3YSA, FVD (75% Ar/25% CO<sub>2</sub>); DNV 3 YMS, FVD (75% Ar/25% CO<sub>2</sub>); Lloyds 2S, 2YS, F(75% Ar/25% CO<sub>2</sub>); CWB E491C-6, 6M-H4 (100% CO<sub>2</sub>/Ar + 5% CO<sub>2</sub>)

### Typical Mechanical Properties:

	<u>75Ar/25CO2</u>	<u>95Ar/5CO2</u>	<u>90Ar/10CO2</u>
Ultimate Tensile Strength (psi)	87,200	91,800	91,400
Yield Strength (psi)	78,900	80,700	80,500
Percent Elongation	25	24	24
CVN(ft•lbf) @ -20°F	46	51	48

### Typical Chemical Composition (wt%):

Shielding Gas	C	Mn	P	S	Si
75Ar/25CO <sub>2</sub>	.06	1.55	.010	.010	.66
95Ar/5CO <sub>2</sub>	.05	1.69	.010	.010	.81
90Ar/10CO <sub>2</sub>	.04	1.67	.011	.010	.83

### Typical Welding Parameters\*:

Diam. (in.)	Optimum			Range			CTWD
	Amperage	WFS	Voltage	Amperage	WFS	Voltage	
.035	200	550	29-30	160-250	350-750	24-35	1/2"-3/4"
.045	255	410	29-30	170-330	200-600	21-30	3/4"-1"
.052	300	350	29-30	220-460	220-620	25-35	3/4"-1"
1/16	360	300	29-30	190-340	160-320	26-32	3/4"-1 1/4"
5/64	420	240	29-30	240-550	165-350	27-36	3/4"-1 1/4"
3/32	450	155	29-30	350-550	125-250	28-36	1"-1 1/4"
7/64	475	135	29-30	400-600	110-200	27-34	1"-1 1/4"
1/8	500	100	28-29	450-625	95-145	26-32	1"-1 1/4"

### Typical Short Arc Parameters (for out of position welding):

	Amperage	WFS	Voltage
.035	100	145	15-16
.045	140	150	16-17
.052	125	120	17-18

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

Rev 8 (01/21/19)

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.