

Select 70C-7

Description:

SELECT 70C-7 is a carbon steel, composite metal cored electrode for gas- shielded arc welding. This electrode is intended for single and multiple pass welding of carbon and certain low alloy steels, where a minimum tensile strength of 70,000 psi is acceptable. Welding positions are primarily limited to horizontal fillets and flat position weldments. Recommended shielding gas is 75–95% argon / balance carbon dioxide or 98% argon/ 2% oxygen. Dew points should be at least -40 degrees F., and flow rates of 40-55 cfh should be maintained.

Classification & Approval:

- E70C-6M per AWS A5.18, SFA 5.18
- CWB E491C-6, 6M-H4 (CO₂/C5)

Characteristics:

SELECT 70C-7 is a lower fume, lower spatter version of the **SELECT 70C-6** electrode. This product has been formulated to produce substantially less spatter and lower fume generation rates than conventional E70C-6M electrodes. The arc transfer is a soft spray transfer, with a clear weld puddle. Bead geometry is excellent, exhibiting a flat, equal legged profile, with very few slag islands. As with **SELECT 70C-6**, **SELECT 70C-7** offers increased productivity, better fusion on scaled or heavier plate material, and more porosity-free weldments, compared to ER70S-3 and ER70S-6 electrodes. Smaller diameter electrodes can be used in all position welding with either pulse arc or short circuit arc welding process.

Applications:

The exceptionally smooth arc and low spatter level of the **SELECT 70C-7** minimize post weld cleanup, making it ideal for weldments that are to be painted. The low fume levels (40% lower than conventional metal cored electrodes) reduce worker exposure in more difficult-to-ventilate areas. Typical applications would be car & truck frames, structural steels, trailers and earthmoving equipment.

Typical Mechanical Properties:

	<u>75Ar/25CO₂</u>	<u>95Ar/5CO₂</u>
Ultimate Tensile Strength (psi)	79,100	85,800
Yield Strength (psi)	65,300	72,400
Percent Elongation	25	30
CVN (ft•lb f) @-20°F	37	36

Typical Chemical Composition:

Wt. %	<u>C</u>	<u>Mn</u>	<u>P</u>	<u>S</u>	<u>Si</u>
75% Ar/25% CO ₂	.03	1.70	.010	.009	.88

Typical Welding Parameters: Metal Cored – Argon/Carbon Dioxide*

<u>Diam.(in.)</u>	<u>Optimum</u>			<u>Range</u>			<u>CTWD</u>
	<u>Amperage</u>	<u>WFS</u>	<u>Voltage</u>	<u>Amperage</u>	<u>WFS</u>	<u>Voltage</u>	
.035	200	550	29-30	160-250	350-750	24-35	½"-¾"
.045	255	410	29-30	180-330	240-600	27-33	¾"-1"
.052	300	350	29-30	220-460	220-620	25-35	¾"-1"
1/16	360	300	29-30	240-520	175-500	26-37	¾"-1 ¼"
5/64	420	240	29-30	240-550	165-350	27-36	¾"-1 ¼"
3/32	450	155	29-30	350-550	125-250	28-36	1"-1 ¼"
1/8	500	100	28-29	450-625	95-145	26-32	1"-1 ¼"

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

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

* 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 & 98% Ar/ 2% O₂.

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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 for any particular purpose with respect to its products.