



## Select 910-B3

### Description:

Select 910-B3 is a low alloy steel electrode for flux cored arc welding with external gas shielding. This electrode is intended for single and multiple pass welding of certain Cr-Mo steels, in all positions, where a weld deposit of 2¼% Cr and 1% Mo is required. The recommended shielding gas is carbon dioxide. The use of 75-80% argon-balance carbon dioxide will yield acceptable welding results, but may increase strength levels beyond AWS limits. Gas flow rates of 35-50 cfh should be maintained, along with a dew point of at least -40°F.

### Classifications:

- E91T1-B3C, E91T-B3M per AWS A5.29, SFA 5.29.

### Characteristics:

Select 910-B3 is a flux cored electrode with outstanding, all position capability. The arc is a smooth, stable globular transfer with low spatter emission. A fast freezing slag facilitates welding in all positions; the slag removes easily and cleanly. Modern manufacturing technology ensures the highest degree in quality, consistency, and performance in the welding industry.

Select 910-B3 offers increased deposition rates compared to covered and solid electrodes, elimination of lack of fusion problems associated with solid (wire) electrodes, and greater tolerance of mill scale and rust than other processes.

### Applications:

Select 910-B3 is intended for welding materials subjected to high temperature service, such as A387 Gr. 22 plate and A335 P22 pipe. Preheat and postheat are required for most of these applications, as the weld deposit will harden in still air. No minimum notch toughness requirements have been established for this electrode, thus any specific values and testing must be agreed to by the supplier and purchaser.

### Typical Mechanical Properties:

	SR 1 Hr. at 1275° F	
	CO <sub>2</sub>	75% Ar/25%CO <sub>2</sub>
Ultimate Tensile Strength	102,100	105,300
Yield Strength	87,400	87,700
Percent Elongation	18	19

### Typical Deposit Composition:

Wt%	C	Mn	Si	P	S	Cr	Mo
CO <sub>2</sub>	.08	.51	.59	.010	.010	2.27	.99
75%Ar/25% CO <sub>2</sub>	.08	.54	.62	.010	.010	2.35	.98

### Recommended Welding Parameters\*:

Diameter	Position	Optimum			Range	
		Amperage	WFS	Voltage	Amperage	Voltage
1/16"	Flat	350	300	29	150-400	22-34
	Overhead	225	160	26	150-310	22-28
	Vertical up	225	160	25	150-280	22-27
.052"	Flat	300	360	28	100-330	19-32
	Overhead	225	245	26	150-310	21-28
	Vertical up	225	245	25	150-280	21-27
.045"	Flat	250	282	28	100-300	21-32
	Overhead	200	265	26	150-280	21-29
	Vertical up	200	265	25	100-230	21-28

\*\* With CO<sub>2</sub> shielding gas. For 75Ar/25CO<sub>2</sub> decrease voltage by 1 to 1.5 volts.

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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. Select-Arc disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.