

## Select 810-W

### Description:

**Select 810-W** is a gas-shielded, flux cored, low alloy steel electrode for all position welding of weathering steels. This electrode is intended for single and multiple pass welding. Welder appeal is excellent with a spray transfer, thin slag which removes easily and cleanly, and a smooth bead profile.

### Classifications & Approvals:

- E81T1-W2C, E81T1-W2M per AWS A5.29, ASME SFA 5.29
- CWB E81T1-W2C-H8, E81T1-W2M-H8

### Characteristics:

- Matches coloring and corrosion resistance of weathering steels.
- All position welding capability.
- Good mechanical properties.

### Applications:

**Select 810-W** contains alloy additions which match those of the "weathering" steels such as ASTM A588. This provides weld metal which matches the corrosion resistance and coloring of the weathering-type structural steels. These steels are commonly used in bridge construction and other structural components used in highway construction.

### Typical Mechanical Properties

	<u>75% Ar/25% CO<sub>2</sub></u>	<u>CO<sub>2</sub></u>
Ultimate Tensile Strength (psi)	91,300	86,500
Yield Strength (psi)	78,800	71,200
Percent Elongation	24	25
CVN (ft • lb f) @-20F	28	31

### Typical Deposit Composition

<u>WT %</u>	<u>C</u>	<u>Mn</u>	<u>P</u>	<u>S</u>	<u>Si</u>	<u>Cr</u>	<u>Ni</u>	<u>Cu</u>
CO <sub>2</sub>	.06	.94	.010	.010	.41	.53	.66	.43
75Ar/25CO <sub>2</sub>	.06	1.05	.010	.010	.49	.57	.72	.46

### Typical Welding Parameters\*:

<u>Diameter</u>	<u>Position</u>	<u>Optimum</u>			<u>Range</u>	
		<u>Amperage</u>	<u>WFS</u>	<u>Voltage</u>	<u>Amperage</u>	<u>Voltage</u>
1/16"	Flat	350	350	29	150-400	22-34
	Overhead	225	180	26	150-310	22-28
	Vertical up	225	180	25	150-280	22-27
.052"	Flat	300	440	28	100-330	19-32
	Overhead	200	245	26	150-310	21-28
	Vertical up	200	245	25	150-280	21-27
.045"	Flat	250	450	28	100-300	21-32
	Overhead	190	305	26	150-280	21-29
	Vertical up	190	305	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. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.