

## Select 910-Ni2

### Description:

Select 910-Ni2 is a low alloy steel, flux cored wire for use with external gas shielding. This electrode is intended for single and multiple pass welding, in all positions, of certain low alloy steels and steels with low temperature CVN properties. Carbon dioxide is the recommended shielding gas. Mixtures of 75/80 percent argon – balance carbon dioxide may be used, with an increase in tensile strength due to higher manganese and silicon recoveries in the weld deposit. Shielding gas flow rates should be 35-50 cfh, with a minimum dew point of -40°F.

### Classifications:

- E91T1-Ni2C, 91T1-Ni2M per AWS A5.29, SFA 5.29.

### Characteristics:

Select 910-Ni2, due to the rutile based slag system, has a smooth spray transfer, with minimal spatter. The fast freezing slag facilitates welding in all positions. This electrode produces weld beads with excellent profile and minimum convexity. Slag removes easily and cleanly.

### Applications:

Select 910-Ni2 is a fine choice for welding steels requiring low temperature charpy v-notch toughness, such as the fine grained ASTM A516, A517 and A572 grades, as well as the nickel bearing steels, such as ASTM A203, GrE, A302, and A633. Such steels are used in the fabrication of earthmoving machinery, mining equipment and oil storage tanks.

### Typical Mechanical Properties:

	<u>CO<sub>2</sub></u>	<u>75%Ar/25CO<sub>2</sub></u>
Ultimate Tensile Strength (psi)	96,000	104,300
Yield Strength (psi)	85,000	90,700
Percent Elongation	24	23
CVN (ft-lb f) @ -40°F	33	35

### Typical Deposit Composition:

<u>Shielding Gas</u>	<u>C</u>	<u>Mn</u>	<u>Si</u>	<u>P</u>	<u>S</u>	<u>Ni</u>
CO <sub>2</sub>	.05	1.27	.40	.010	.010	2.50
75Ar/ 25 CO <sub>2</sub>	.05	1.43	.54	.010	.010	2.55

### Recommended 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	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.