

## Select 4130C

### Description:

Select 4130C is a low alloy steel, composite metal cored electrode for gas-shielded arc welding of 4130, 4140, 8630 and similar alloy steels that are to be post weld heat treated. This electrode is designed to meet the properties of quenched and tempered steels, and therefore should not be used for as-welded applications. Select 4130C is intended for single or multiple pass welding in horizontal fillets and the flat position. Recommended shielding gas is 98% Argon / 2% O<sub>2</sub>. Argon-CO<sub>2</sub> mixtures like 90Ar/ 10CO<sub>2</sub> may also be used. Gas flow rates should be 40-50 cfh.

### Classification:

- No AWS classification

### Advantages:

- Smooth spray arc transfer with minimal spatter
- Contains <1% Ni, making it suitable for most sour service applications
- Low diffusible hydrogen content of <4mL per 100g

### Typical Mechanical Properties (90Ar/10CO<sub>2</sub>):

	<u>SR- 4hrs @ 1175F</u>	<u>SR- 32hrs @ 1175F</u>	<u>Aust. @ 1625F for 1hr, Temper @ 1100F for 2 hr</u>
Ultimate Tensile Strength (psi)	107,000	100,000	132,000
Yield Strength (psi)	88,000	80,700	118,000
Percent Elongation	25	25	18
CVN (ft•lb f) @ -20° F	33	30	--
@ -40° F	26	26	--
Hardness (Rockwell B)	93	95	23 (HRC)

### Typical Deposit Composition (wt%):

<u>Shielding Gas</u>	<u>C</u>	<u>Mn</u>	<u>Si</u>	<u>P</u>	<u>S</u>	<u>Ni</u>	<u>Cr</u>	<u>Mo</u>
98%Ar / 2%O <sub>2</sub>	.21	1.32	.75	.006	.010	.68	.65	.20
90%Ar / 10%CO <sub>2</sub>	.21	1.42	.84	.010	.012	.85	.72	.21

### Recommended Welding Parameters (98%Ar/2%O<sub>2</sub>\*):

<u>Diam. (in.)</u>	<u>Optimum</u>			<u>Range</u>			<u>ESO</u>
	<u>Amperage</u>	<u>WFS</u>	<u>Voltage</u>	<u>Amperage</u>	<u>WFS</u>	<u>Voltage</u>	
.045	255	410	26	180-330	240-600	22-31	½"-1"
1/16	360	300	26	230-520	160-500	22-32	¾"-1"

\*Welding parameters for 98% Ar/2% O<sub>2</sub>. For 90% Ar/10% CO<sub>2</sub> mixture, increase voltage to 30V.

Rev 0 (09/15/2014)

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.