



Select 110C-K4

Description:

Select 110C-K4 is a low alloy steel, composite metal cored electrode for gas-shielded arc welding. This product is intended for single and multiple pass welding of certain carbon and low alloy steels, where a minimum tensile strength of 110,000 psi is required in the deposited weld metal. The recommended shielding gas is argon-carbon dioxide mixtures within the range of 75% to 95% argon. A mixture of 98% argon, 2% oxygen may also be employed. Flow rates should be maintained at 35-50 cfh, with a dew point of at least -40° F.

Classification & Approvals:

- E110C-K4 per AWS A5.28, SFA 5.28.
- CWB E76C-K4-H4

Characteristics:

Select 110C-K4 is a premium, composite metal cored electrode, exhibiting superb welder appeal and outstanding mechanical properties. Arc transfer is a pure spray, with virtually no spatter emission. There are many advantages in using composite metal cored, rather than solid wires, such as: faster travel speeds, leading to increased productivity; enhanced fusion into sidewalls, eliminating "cold-lap"; and minimal tendency for subsurface porosity. Smaller diameter electrodes can be used in all position welding by utilizing pulsed power or short arc transfer. **Select 110C-K4** is ideal for those applications where the slag residue and fume emissions of flux cored electrodes are unwanted. Proprietary manufacturing technology ensures the highest degree of quality, consistency, and welding performance in the industry.

Applications:

Select 110C-K4 is an ideal choice for joining low alloy, high strength steels such as HY-100 and A514. Earthmoving equipment, mining trucks and machinery, and heavy equipment trailers are some areas where these steels may be utilized. This electrode may also be used for overlay or surfacing in certain applications. As with all higher strength filler metals, care must be taken to maintain proper heat input, interpass temperatures, and welding parameters.

Typical Mechanical Properties:

	75% Ar/25% CO ₂	95% Ar/5% CO ₂
Ultimate Tensile Strength	116,600	118,900
Yield Strength	102,700	103,900
Percent Elongation	22	15
CVN (ft•lb f) @ -60° F	27	26

Typical Deposit Composition

	Wt%	C	Mn	S	P	Si	Cr	Ni	Mo
75% Ar/25% CO ₂ :		.03	1.52	.009	.007	.66	.59	2.16	.60
95% Ar/5% CO ₂ :		.06	1.83	.011	.008	.80	.61	2.15	.62

Recommended Welding Parameters: Metal Cored – Argon/Carbon Dioxide

Diam. (in.)	Optimum			Range			ESO
	Amperage	WFS	Voltage	Amperage	WFS	Voltage	
.035	200	550	29-30	160-250	350-750	24-35	½"-¾"
.045	255	410	29-30	180-330	240-600	27-33	½"-1"
.052	300	350	29-30	220-460	220-620	25-35	½"-1"
1/16	360	300	29-30	240-520	175-500	26-37	¾"-1¼"

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

Diam. (in.)	Amperage	WFS	Voltage
.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.

Rev 0 (03/11/2014)

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.