

## Select 80C-Ni1

### Description:

- A low alloy steel, composite metal cored electrode for gas shielded arc welding
- Intended for welding horizontal and flat fillets and flat groove welds
- Can be used with shielding gas mixtures of 75-95% Ar/balance CO<sub>2</sub>, and 95-98% Ar/balance O<sub>2</sub>
- A good selection for welding steels such as ASTM A203-Grade E, A302, A575, and A633
- Typical applications would be fabrication of earthmoving machinery parts and buckets, mining machinery, and fine grained structural steels

### Classification:

E80C-Ni1-H4 per AWS A5.28, ASME SFA 5.28  
E80T15-M23A5-Ni1-H4, E80T15-M24A5-Ni1-H4 per AWS A5.36, ASME SFA5.36

### Typical Mechanical Properties:

	98% Ar/2% O <sub>2</sub>	90% Ar/10% CO <sub>2</sub>
Ultimate Tensile Strength (psi)	92,500	87,000
Yield Strength (psi)	79,800	72,100
Percent Elongation	26	25
CVN (ft-lbf) @ -50° F	28	30

### Typical Deposit Composition:

Wt%	C	Mn	Si	P	S	Ni
98% Ar/2% O <sub>2</sub>	.03	1.45	.50	.009	.010	.95
90% Ar/10% CO <sub>2</sub>	.05	1.40	.53	.009	.010	.94

### Recommended Welding Parameters\*:

Diam. (in.)	Optimum			Range		CTWD	
	Amperage	WFS	Voltage	Amperage	WFS		
.035	200	550	29-30	160-250	350-750	24-35	½"-3/4"
.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	1"-1¼"
5/64	420	240	29-30	240-550	165-350	27-36	1"-1¼"

\* With 75% Ar/25% CO<sub>2</sub>. For Ar/O<sub>2</sub> mixes lower voltage by 3 volts.

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

	Amperage	WFS	Voltage
.035	100	145	15-16
.045	140	150	16-17
.052	125	120	17-18

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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.