

Select 80C-W

Description:

Select 80C-W is a low alloy steel, composite metal cored electrode, for gas shielded arc welding. This electrode is intended for single and multiple pass welding, in flat and horizontal positions, of the weathering type structural steels, where the coloring and corrosion resistance are required. Recommended shielding gas is 75-80% argon – balance carbon dioxide. Higher argon contents may be utilized, but may produce slight increases in strength levels. Gas flow rates of 40-50 cfh should be maintained, with a minimum dew point of -40°F.

Classification & Approval:

- E80C-W2 per AWS A5.28, SFA 5.28.
- CWB E80C-W2-H8 (90% Ar/10% CO₂)

Characteristics:

Select 80C-W is a premium low alloy steel, metal cored electrode, which welds in a pure spray transfer. The arc is in such total spray transition, using 75-80% argon – balance carbon dioxide, resultant spatter emission is nearly nonexistent. Penetrating characteristics of this tubular electrode are better than solid electrodes, eliminating "cold-lap", or lack of fusion, on heavier plate or scaled areas. **Select 80C-W** generates less fume than flux cored electrodes, and is useful where slag removal and cleanup are problems. Faster travel speeds are achievable than with solid electrodes, thus increasing productivity. Modern, proprietary manufacturing technology ensures the highest levels of quality, consistency, and welding performance in our industry.

Applications:

Select 80C-W is intended for those applications requiring the coloration and corrosion resistance of the weathering type of structural steels, such as ASTM A242 and A588. These steels are used typically in bridges, transmission towers and poles, and some building construction. When all position welding is necessitated, the comparable **Select-Arc** flux cored electrode should be selected.

Typical Mechanical Properties:

	<u>75% Ar/25% CO₂</u>
Ultimate Tensile Strength (psi)	92,000
Yield Strength (psi)	78,100
Percent Elongation	24.7
CVN impact (ft•lb f) @ -20° F	43

Typical Deposit Composition:

<u>Wt%</u>	<u>C</u>	<u>Mn</u>	<u>P</u>	<u>S</u>	<u>Si</u>	<u>Ni</u>	<u>Cr</u>	<u>Cu</u>
	.06	1.20	.010	.010	.40	.63	.58	.65

Recommended Welding Parameter:

<u>Diam. (in.)</u>	<u>Optimum</u>			<u>Range</u>			<u>CTWD</u>
	<u>Amperage</u>	<u>WFS</u>	<u>Voltage</u>	<u>Amperage</u>	<u>WFS</u>	<u>Voltage</u>	
.035	200	550	29-30	160-250	350-750	24-35	1/2" - 3/4"
.045	255	410	29-30	180-330	240-600	27-33	1/2" - 1"
.052	300	350	29-30	220-460	220-620	25-35	1/2" - 1"
1/16	360	300	29-30	240-520	175-500	26-37	1" - 1 1/4"

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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 for any particular purpose with respect to its products.