



Select 90C-M2

Description:

Select 90C-M2 is a premium composite metal cored electrode. This product is intended for single and multiple pass welding of certain low alloy steels, in the flat and horizontal positions, where a minimum tensile strength of 90,000 psi is required in the deposited weld metal. The recommended shielding gas is 90% Argon- 10% CO₂. Other Ar-CO₂ mixtures may be employed, with a minimum of 75-80% argon. Flow rates should be maintained at 35-50 CFH.

Classification:

- E90C-K3-H4 per AWS A5.28, SFA 5.28.

Characteristics:

Select 90C-M2 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 instead of solid wire, such as faster travel speeds leading to increased productivity and enhanced fusion into sidewalls, eliminating "cold-lap". **Select 90C-M2** is ideal for those applications where the slag residue and fume emissions of flux cored electrodes are unwanted.

Applications:

Select 90C-M2 is an ideal choice for joining low alloy, high strength steels such as HY-80, A514 and A710. Earthmoving equipment, mining trucks and machinery, and heavy equipment trailers are some areas where these steels may be utilized. This electrode is an ideal choice for weldments where distortion must be minimized and de-slagging is not desirable.

Typical Mechanical Properties:

	<u>90% Ar/10% CO₂</u>
Ultimate Tensile Strength	92,100
Yield Strength	78,900
Percent Elongation	22
CVN (ft•lb f) @ -20° F	31
@ -60° F	21

Typical Deposit Composition (wt%):

<u>Shielding Gas</u>	<u>C</u>	<u>Mn</u>	<u>S</u>	<u>P</u>	<u>Si</u>	<u>Ni</u>	<u>Mo</u>
98% Ar/2% O ₂	0.05	1.32	.008	.008	.26	1.95	.40

Recommended Welding Parameters: Metal Cored – Argon/Oxygen

<u>Diam. (in.)</u>	<u>Amperage</u>	<u>Optimum</u>		<u>Amperage</u>	<u>Range</u>		<u>CTWD</u>
		<u>WFS</u>	<u>Voltage</u>		<u>WFS</u>	<u>Voltage</u>	
.035	200	550	25	180-320	350-750	23-29	½" -¾"
.045	255	410	26	180-330	240-600	22-28	½"-1"
.052	300	350	26	220-460	220-620	23-30	½"-1"
1/16	360	300	26	230-520	160-500	22-31	1"-1¼ "

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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.