Tru-Core® MC 90C-D2 Metal-Cored Welding Wire

AWS E90C-D2 H4

Tru-Core® MC 90C-D2 is a low alloy steel, composite metal cored electrode for gas shielded arc welding of low alloy, and certain carbon, steels that demand outstanding tensile strengths exceeding 90 ksi and excellent CVN values, even at temperatures as low as -20°F.

The core composition, consisting entirely of metallic powders, enables its usage within the GMAW process. It features flat bead geometry, low fume emissions, superior mechanical properties, nearly slag-free welds, and smooth arc transfer.



Manufacturing Advantages

- \bullet Welding steels from $^{1\!/\!4''}$ thickness up to heavy plates sections
- Typically used on grades matching the mechanical properties and corrosion resistance of high strength, low alloy pressure vessel steels, such as ASTM A302, and manganese molybdenum castings such as ASTM A49, A291, and A735
- Lower diffusible hydrogen content for reduced risk of hydrogen-induced cracking
- Provides deep penetration for welding thick materials

Welding Positions

All position welding is possible when using the correct shielding gas blends, welding process, and welding parameters.

Shielding Gas Blends

- 95-98% Argon/Balance O₃
- 75-95% Argon/Balance CO,
- Flow rate: 40-55 CFH

Applications

- Agricultural Equipment
- Auto Body
- Automotive Exhaust
- General Fabrication
- Heavy Equipment
- Pressure Vessels
- Shipbuilding
- Structural Steel
- Structures
- Railcars

Specifications

Meets or Exceeds:

- AWS A5.28/A5.28M: E90C-D2 H4
- ASME SFA-A5.28: E90C-D2 H4
- ✓ Made in the USA

Storage

Welding wire should be stored in a dry, enclosed environment and in its originally sealed package.



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Typical Weld Metal Composition (as required per AWS)

	С	Mn	Si	P	s	Cu	Ni	Cr	Мо	v
95% Ar/5% O ₂	0.02	1.79	0.89	0.011	0.007	0.05	0.02	0.04	0.55	<0.01
AWS/ASME	0.12 (max.)	1.00-1.90	0.90 (max.)	0.025 (max.)	0.030 (max.)	0.35 (max.)			0.40-0.60	0.03 (max.)

Typical Mechanical Properties (as welded)

	TENSILE STRENGTH KSI		ELONGATION (% IN 2")	CVN @ -20° F (-29°C)
95% Ar/5% O ₂	97.4	83.7	26.5	29 ft-lbf
AWS/ASME	90 (min.)	78 (min.)	17 (min.)	20 ft-lbf

Typical Diffusable Hydrogen (ml/100g)

AWS/ASME	4.0 (max.)		
95% Ar/5% O ₂	2.3		







