

**TRU-CORE™ MC 70C**  
AWS E70C-6M H4, E70C-3M H4



**PRODUCT DESCRIPTION:**

Tru-Core MC 70C is a metal cored, gas shielded electrode intended for gas metal arc welding with shielding gas blends of 75-95% Argon, balance Carbon Dioxide. Designed to weld carbon steels and certain low alloy steels, in applications demanding higher productivity and requiring a minimum of 70,000 psi tensile strength. The core is comprised entirely of metallic powders, allowing the electrode to perform like a solid wire. MC 70C is recommended for use in single and multiple pass applications.

**Metal Cored, Gas Shielded,  
Carbon Steel Electrode**

**CLASSIFICATIONS & APPROVALS:**

- AWS A5.18: E70C-6M H4, E70C-3M H4
- ASME SFA 5.18: E 70C-6M H4
- CWB W48-06: E 492C-6M-H4

PRODUCT FEATURES	
Excellent mechanical properties	Flat bead geometry
Excellent feedability	Easy slag removal
Smooth arc transfer	High deposition/automation friendly

**WELDING POSITIONS:**

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

**TYPICAL APPLICATIONS :**

Tru-Core MC 70C is an excellent choice for welding most carbon steels, such as ASTM A 36, A 285, A 515 Grade 70 and A 516 Grade 70, as well as certain low alloy steels. It is ideal for gauges ranging from heavier sheet metal to thick plate, where the weld is positioned for either manual, automatic or robotic applications. Some examples are:

- Hot Water Heaters
- Shipbuilding
- Structural Steel
- Agricultural Equipment
- Railcar Construction
- Truck Frames

**MANUFACTURING ADVANTAGES:**

- Patented forming, feeding and drawing equipment
- Consistent strip-to-core ratio
- Precise thermal treatment that controls the type, amount and uniformity of surface oxides on the wire
- Consistent diffusible hydrogen levels

**TYPICAL APPLICATION SHIELDING GAS BLENDS:**

- 75-95% Argon/Balance CO<sub>2</sub>
- Flow Rate: 35-45 CFH

**WIRE DIAMETERS (in):**




.045	.052	.062	.078	.093
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	AWS/ASME REQ.	75% Ar / 25% CO <sub>2</sub>	90% Ar / 10% CO <sub>2</sub>
<b>TYPICAL WELD METAL COMPOSITION</b>			
<b>CARBON (C)</b>	0.12 (max.)	0.04	0.04
<b>MANGANESE (Mn)</b>	1.75 (max.)	1.60	1.61
<b>SILICON (Si)</b>	0.90 (max.)	0.82	0.85
<b>SULPHUR (S)</b>	0.03 (max.)	0.010	0.009
<b>PHOSPHORUS (P)</b>	0.03 (max.)	0.009	0.006
<b>CHROMIUM (Cr)</b>	0.20 (max.)	0.05	0.04
<b>NICKEL (Ni)</b>	0.50 (max.)	0.02	0.02
<b>MOLYBDENUM (Mo)</b>	0.30 (max.)	0.01	0.001
<b>VANADIUM (V)</b>	0.08 (max.)	0.000	<0.001
<b>COPPER (Cu)</b>	0.50 (max.)	0.06	0.05
<b>TYPICAL MECHANICAL PROPERTIES</b>			
<b>TENSILE STRENGTH (ksi)</b>	70 (min.)	81.5	83.9
<b>YIELD STRENGTH (ksi)</b>	58 (min.)	66.9	70.8
<b>ELONGATION (% IN 2")</b>	22 (min.)	32	30
<b>CVN @ -20°F (-29°C)</b>	20 (min.)	46.7 ft-lbf	32.6 ft-lbf
<b>TYPICAL DIFFUSIBLE HYDROGEN – AWS A4.3 REQUIREMENTS</b>			
<b>ml /100g</b>	4.0 (max.)	1.1	2.06




**APPROXIMATE WELDING PARAMETERS: METAL CORED WIRE-FLAT AND HORIZONTAL POSITIONS**

DIAMETER (in)	POLARITY	AMPERAGE		VOLTAGE		WIRE FEED SPEED (in/min)		CTWD (in)	SHIELDING GAS
		Min.	Max.	Min.	Max.	Min.	Max.		
.045	DCEP	120	340	17	30	190	520	5/8	75-90% Argon/Balance CO <sub>2</sub>
.052	DCEP	145	360	17	30	175	475	5/8	75-90% Argon/Balance CO <sub>2</sub>
1/16 (.062)	DCEP	190	485	17	30	150	450	3/4 - 1	75-90% Argon/Balance CO <sub>2</sub>
1/16 (.062)	DCEP	345	550	21	31	150	250	1	75-90% Argon/Balance CO <sub>2</sub>

PACKAGES
33-lb. Fiber Spool
50-lb. Fiber Spool
60-lb. Coil
500-lb. Drum Pack
500-lb. Smart Pak™ 
600-lb. Drum Pack
600-lb. Smart Pak™ 
600-lb. Wood Reel
600-lb. Tru-Trac® 

Note: See "Premium Packaging Options" for full description of packages. For additional packages, please contact NS Customer Service at 1-800-777-1618.

 Exclusive to NS customers.

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