



METAL-COR MAXIM™

**GAS-SHIELDED METAL-CORED WIRE
AWS E70C-6M H4**

071128 (Replaces 070326)

METAL-COR MAXIM is a metal-cored wire with fewer silicon islands than other metal-cored wires. Weld bead toe lines are almost completely free of silicon deposits, eliminating troublesome cleanup time and effort. In addition, the weld bead face is virtually free from silicon island deposits; those remaining islands of silicon are almost self-peeling. Together with exceptional low spatter rates, **METAL-COR MAXIM** will save time and money spent cleaning prior to painting, coating, or plating. The wire is recommended for single-pass and multi-pass welding in both the flat and horizontal positions. The recommended shielding gas is a mixture of argon and carbon dioxide, with a minimum of 75% argon and a maximum of 95% argon. Arc characteristics improve with richer argon gases while spatter and fume levels decrease.

PRODUCT CHARACTERISTICS:

- Exceptionally clean weld beads with minimal silicon islands; almost self-peeling.
- Weld bead toe lines are almost completely free of silicon deposits.
- Better wetting action than solid wire.
- Better gap bridging and reduced burn through than solid wire.
- Higher deposition rates and travel speeds than solid wire.
- Better side wall fusion than solid wire

SPECIFICATIONS:

E70C-6M H4 per AWS A5.18, ASME SFA 5.18
CWB 75% Ar-5% CO₂; 95% Ar/5% CO₂; E492C-6M H4
ABS 75% Ar/25% CO₂; 3SA, 3YSA

SHIELDING GAS:

75-95% Ar/Bal CO₂, 35-50 cfh

WELDING POSITIONS:

CV Spray - flat and horizontal, vertical down
Pulse and short arc - all positions

STANDARD DIAMETERS:

.045", .052", 1/16"

WELD TEST PARAMETERS:

METAL-COR MAXIM 1/16" diameter electrode was welded using 75% Ar/25% CO₂ shielding gas with flow rate of 50 cfh, 350 amps (284 IPM), DCEP, and 29 volts, with 3/4" electrical stick-out and 300°±25°F interpass temperature. A total of six layers were welded, two passes each for Layer 1 through 6. The direction of travel was reversed for each layer.

TYPICAL UNDILUTED WELD METAL CHEMISTRY:

	C	Mn	Si	P	S	Ni
75% Ar/25% CO ₂	0.06	1.56	0.67	0.015	0.012	0.41
90% Ar/10% CO ₂	0.05	1.50	0.72	0.010	0.012	0.42

TYPICAL DIFFUSIBLE HYDROGEN: 2.05 ml/100gr (75% Ar/25% CO₂)
2.10 ml/100gr (90% Ar/10% CO₂)

TYPICAL MECHANICAL PROPERTIES:	75% Ar/25% CO₂	90% Ar/10% CO₂
Tensile Strength	90,000 psi (624 MPa)	97,000 psi (669 MPa)
Yield Strength	79,000 psi (545 MPa)	87,000 psi (600 MPa)
Elongation	24%	22.5%
CVN @ 0°F (-18°C)	50 ft•lbs (68J)	56 ft•lbs (76J)
CVN @ -20°F (-29°C)	39 ft•lbs (52J)	47 ft•lbs (64J)

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company expressly disclaims any liability incurred from any reliance thereon. Typical data is obtained when welded and tested in accordance with AWS A5.18 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers Company.

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RECOMMENDED OPERATING PARAMETERS:

The information below was determined by welding performed with 75% Ar/25% CO₂ shielding gas at a flow rate of 40 cfh.

Diameter Electrical Stickout (ES) Position	Arc Voltage (volts)	Current DCEP (+) (amps)	Approx. Wire Feed Speed (in/min)	Deposition Rate (lbs/hr)
.045" 5/8" ± 1/8" Flat and Horizontal	26	200	265	5.89
	27	250	383	9.15
	28	300	500	12.79
	30	350	632	16.41
	31	400	770	20.03
.052" 5/8" ± 1/8" Flat and Horizontal	27	250	258	7.88
	28	275	306	9.63
	30	300	340	11.20
	32	350	425	14.51
	33	400	500	18.10
1/16" 3/4" ± 1/4" Flat and Horizontal	29	275	190	7.61
	29	300	232	10.01
	30	350	282	12.81
	32	400	341	16.04
	33	450	400	18.29

Bold: Optimum parameters for welder appeal.

Notice:

Actual use of the product may produce varying results due to conditions and welding techniques over which Corex has no control, including, but not limited to, plate chemistry, weldment design, fabrication methods, electrode size, welding procedure, service requirements and environment. The purchaser is solely responsible for determining the suitability of Corex products for the purchaser's own use. Any prior representations shall not be binding. Corex disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.

Caution:

Consumers should be thoroughly familiar with the safety precautions shown on the Warning Label posted on each shipment and in American National Standard Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW LeJeune Road, Miami, FL 33126, and OSHA Safety and Health Standards 29 CFR 1910, available from the U.S. Department of Labor, Washington, D.C. 20210.