

AWS E70C-6M H4

**FabCOR<sup>®</sup> 86R****DESCRIPTION:**

Having the high deposition qualities of a flux-cored wire plus the high efficiencies of a solid wire is what makes **FabCOR 86R** an industry favorite. A high-quality, gas-shielded metal-cored wire that provides deposition rates in excess of 20 lbs/hr. with efficiencies of 95% and greater, FabCOR 86R is designed to weld mild steels in either single- or multi-pass applications. It has high operator-appeal, producing an extremely smooth arc along with low spatter and smoke levels and minimal slag coverage. And because of these characteristics, FabCOR 86R is also an excellent choice for high production and automatic applicators.

**APPLICATIONS:**

Automated or robotic welding, Steel structures, storage vessels, earthmoving equipment and railroad cars.

**FEATURES:**

- High deposition rates and very high efficiencies
- Virtually no slag coverage
- Outstanding high-production performance
- Excellent smooth arc
- Low hydrogen deposit
- Low smoke and spatter levels
- Very versatile

**BENEFITS:**

- Increased productivity
- Allows multi-pass welding without deslagging, reduces clean-up time
- Excellent for robotic welding
- Easy to control
- Reduces propensity for cracking
- Increases welder safety and productivity
- Excellent for both CV and pulsed welding

**SHIELDING GAS:** 75% Ar/25% CO<sub>2</sub> or higher argon gas mixtures

**TYPE OF CURRENT:** DCEP

**TYPICAL WELD METAL PROPERTIES\*(Chem Pad):**

Weld Metal Analysis	75% Ar/25% CO <sub>2</sub>	90% Ar/10% CO <sub>2</sub>
Carbon (C)	0.033	0.033
Manganese (Mn)	1.44	1.61
Silicon (Si)	0.67	0.77
Sulphur (S)	0.015	0.018
Phosphorus (P)	0.008	0.009

**TYPICAL DIFFUSIBLE HYDROGEN:**

(Gas Chromatography)	75% Ar/25% CO <sub>2</sub>	90% Ar/10% CO <sub>2</sub>
	1.48 ml/100 g	2.55 ml/100 g

**TYPICAL MECHANICAL PROPERTIES\*(Aged 48 hrs @ 220°F):**

	75% Ar/25% CO <sub>2</sub>	90% Ar/10% CO <sub>2</sub>
Tensile Strength	81,600 psi (563 MPa)	83,600 psi (577 MPa)
Yield Strength	68,500 psi (472 MPa)	70,600 psi (487 MPa)
Elongation % in 2"	30%	29%

**TYPICAL CHARPY V-NOTCH IMPACT VALUES\*(AW):**

	75% Ar/25% CO <sub>2</sub>	90% Ar/10% CO <sub>2</sub>
Avg. at -20°F (-29°C)	74 ft•lbs (101 Joules)	63 ft•lbs (85 Joules)

\*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 are those 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.



**CONFORMANCES AND APPROVALS:**

- AWS A5.18, E70C-6M H4, ASME SFA 5.18, E70C-6M H4
- ABS 80% Ar/20% CO<sub>2</sub> 3SA, 3YSA
- Bureau Veritas 80% Ar/20% CO<sub>2</sub> SA3YM
- CWB 75% Ar/25% CO<sub>2</sub>, 95% Ar/5% CO<sub>2</sub> E491C-6M H4
- DNV Grade 80% Ar/20% CO<sub>2</sub> II Y40MS
- Lloyd's Register 80% Ar/20% CO<sub>2</sub> 3S, 3Y40S H15

**WELDING DATA:**

The information listed below was determined using 75% Ar/25% CO<sub>2</sub>, shielding gas with flow range between 35 to 40 cubic feet per hour. Welding was performed in the position designated below with DCEP welding current.

Diameter		Weld Position	Amps	Volts	Wire-Feed Speed in/min	Deposition Rate lbs/hr	Stickout ±1/4"
Inches	mm						
.045	1.2	Flat, Horizontal	200	27	265	5.9	3/4"
.045	1.2	Flat, Horizontal	250	29	396	9.5	3/4"
.045	1.2	Flat, Horizontal	300	32	516	13.0	3/4"
.045	1.2	Flat, Horizontal	350	34	640	16.8	3/4"
.045	1.2	Flat, Horizontal	400	36	740	19.5	3/4"
.052	1.4	Flat, Horizontal	200	25	215	6.6	1"
.052	1.4	Flat, Horizontal	250	28	310	9.7	1"
.052	1.4	Flat, Horizontal	300	30	390	12.8	1"
.052	1.4	Flat, Horizontal	350	32	485	16.0	1"
.052	1.4	Flat, Horizontal	400	36	650	21.9	1"
1/16	1.6	Flat, Horizontal	250	28	185	7.8	1"
1/16	1.6	Flat, Horizontal	275	29	210	8.8	1"
1/16	1.6	Flat, Horizontal	350	30	310	13.8	1"
1/16	1.6	Flat, Horizontal	400	32	385	17.8	1"
1/16	1.6	Flat, Horizontal	500	36	535	24.7	1"
3/32	2.4	Flat, Horizontal	350	26	98	12.6	1"
3/32	2.4	Flat, Horizontal	400	28	123	15.6	1"
3/32	2.4	Flat, Horizontal	450	29	148	18.1	1"
3/32	2.4	Flat, Horizontal	500	30	175	20.8	1"
3/32	2.4	Flat, Horizontal	550	31	200	23.7	1"

**CAUTION:**

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

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service.

Because Hobart Brothers Company is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

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