

AWS E81T1-K2CJ H8

FabCO® 81K2-C**DESCRIPTION:**

FabCO 81K2-C is an all-position low alloy flux-cored wire. This high performance 100% CO₂ electrode is characterized by a flat bead profile, smooth stable arc and low spatter even when welded out of position. The exceptional mechanical properties and low diffusible hydrogen makes this product well suited for the shipbuilding and offshore oil construction market.

APPLICATIONS:

Offshore and shipbuilding.

FEATURES:

- Fast freezing slag
- Low spatter
- High impact values
- Stable arc transfer

BENEFITS:

- Flat weld bead profile
- No cleanup
- Toughness at low temperatures

SHIELDING GAS: 100% CO₂

TYPICAL WELD METAL PROPERTIES(CHEM PAD):****Weld Metal Analysis**

Carbon (C)	0.07
Manganese (Mn)	1.13
Silicon (Si)	0.27
Phosphorus (P)	0.015
Sulphur (S)	0.014
Nickel (Ni)	1.67

TYPICAL DIFFUSIBLE HYDROGEN:

3.9 ml/100 gr

TYPICAL MECHANICAL PROPERTIES*(AS WELDED):

Tensile Strength	87,000 psi (600 MPa)
Yield Strength	78,000 psi (538 MPa)
Elongation % in 2"	27%
Reduction of Area	71.2%

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

Avg. at -40°F (-40°C) 91 ft•lbs (123 Joules)

CONFORMANCES AND APPROVALS:

- AWS A5.29/A5.29M, ASME SFA 5.29, E81T1-K2CJ H8 • ABS 100% CO₂ 3Y, 3YSA

*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 A5.29 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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WELDING DATA:

The information listed below was determined using 100% CO₂ shielding gases with flow rate range between 35 to 50 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	Vertical, Overhead	150	23	250	5.0	1/2"
.045	1.2	Vertical, Overhead	190	23	315	6.3	1/2"
.045	1.2	Vertical, Overhead	225	25	417	8.2	1/2"
.045	1.2	Flat, Horizontal	275	28	530	10.1	1/2"
.045	1.2	Flat, Horizontal	300	30	604	12.1	1/2"
1/16"	1.6	Vertical, Overhead	175	23	130	3.9	3/4"
1/16"	1.6	Vertical, Overhead	225	24	150	6.3	3/4"
1/16"	1.6	Vertical, Overhead	275	26	235	9.6	3/4"
1/16"	1.6	Flat, Horizontal	350	29	335	13.6	3/4"
1/16"	1.6	Flat, Horizontal	400	31	420	17.0	3/4"

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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