AWS E91T1-K2CJ

FabCO®91K2-C

DESCRIPTION:

FabCo 91K2-C offers exceptional combination of properties for an all-position wire, with good low temperature toughness combined with tensile strength in the 90,000-110,000 psi range. FabCO 91K2-C is characterized by welder appeal, with a smooth stable arc, low smoke and spatter levels. The quick-freezing slag is easily removed and bead geometry in all positions is excellent. FabCO 91K2-C is a superior choice for all-position work with many high-strength low alloy steels, such as A514, A710, and HY-80. It is recommended for single-and multiple-pass welding in all positions with 100% CO_2 shielding gas.

APPLICATIONS:

Offshore, shipbuilding and railcar.

FEATURES:	BENEFITS:
• Fast freezing slag	• Flat weld bead profile
• Low spatter	• No cleanup
• High impact values	• Toughness at low temperatures
• Stable arc transfer	

SHIELDING GAS: 100% CO_2, 35-50 cfh

DIAMETER: 0.045", 1/16"

TYPICAL WELD METAL PROPERTIES(CHEM PAD):**

	0.045"	1/16"
Weld Metal Analysis	**100% CO_2**	**100% CO_2**
Carbon (C)	0.05	0.05
Manganese (Mn)	1.45	1.04
Silicon (Si)	0.19	0.19
Phosphorus (P)	0.018	0.009
Sulphur (S)	0.014	0.014
Molybdenum (Mo)	0.014	0.01
Nickel (Ni)	1.90	1.92

TYPICAL MECHANICAL PROPERTIES*(AS WELDED):

Tensile Strength	97,000 psi (670 MPa)	92,000 psi (635 MPa)
Yield Strength	89,500 psi (618 MPa)	80,000 psi (552 MPa)
Elongation % in 2"	19.0%	27.0%

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

CVN@ 0°F (-18°C)	107 ft•lbs (145 J)	110 ft•lbs (148 J)
CVN@-20°F (-29°C)		100 ft •lbs (135 J)
CVN@-40°F (-40°C)		85 ft•lbs (115 J)
CVN@-60°F (-51°C)		70 ft•lbs (95 J)
CVN@-76°F (-60°C)	81 ft•lbs (110 J)	

CONFORMANCES AND APPROVALS:

AWS A5.29/A5.29M, ASME SFA 5.29, E91T1-K2CJ

*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 A5.29 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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RECOMMENDED OPERATING PARAMETERS:
The information listed below was determined by welding performed with 100% CO_2 shielding gas at a flow rate range between 35 to 50 cubic feet per hour using a 3/4" contact tip - to work distance. Welding was performed in the position designated below with DCEP welding current.

Diameter Inches	Diameter mm	Weld Position	Amps	Volts	Wire Feed Speed in/min	Deposition Rate lbs/hr	Stickout
.045"	1.2	Vertical, Overhead	150	23	280	4.7	1/2" - 3/4"
.045"	1.2	Vertical, Overhead	190	24	375	6.8	1/2" - 3/4"
.045"	1.2	Vertical, Overhead	225	25	455	7.9	1/2" - 3/4"
.045"	1.2	Flat, Horizontal	275	28	590	10.5	1/2" - 3/4"
.045"	1.2	Flat, Horizontal	300	33	675	11.4	1/2" - 3/4"
1/16"	1.6	Vertical, Overhead	160	23	160	4.7	3/4" - 1"
1/16"	1.6	Vertical, Overhead	225	25	210	7.2	3/4" - 1"
1/16"	1.6	Vertical, Overhead	275	27	275	9.5	3/4" - 1"
1/16"	1.6	Flat, Horizontal	350	30	370	12.6	3/4" - 1"
1/16"	1.6	Flat, Horizontal	400	32	430	16.1	3/4" - 1"

Caution:
Consumers should be thoroughly familiar with the safety precautions shown on the Warning Label posted on each shipment and in American National Standards Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW Lejeune Road, Miami, Florida, 33126, and OSHA Safety and Health Standards 29 CFR 1910, 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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