



FLUX-COR 90K2

GAS-SHIELDED FLUX-CORED WIRE
AWS E90T1-K2C

070402 (Replaces 050329)

FLUX-COR 90K2 offers good weldability together with excellent properties for the semi-automatic and automatic welding of many higher strength steels. Several features combine to reduce the tendency for cracking in highly restrained joints. As compared to most EXXT-1 wire deposits, weld metal diffusible hydrogen content is low. The moderately high strength level is such that any tendency to overmatch many base metal yield strengths is minimized. **FLUX-COR 90K2** is thus a good choice for fillet welds on T-1, HY-80, and other quenched and tempered steels. It is also recommended for other high strength steel applications where weld metal with 90,000-110,000 psi tensile strength is appropriate.

PRODUCT CHARACTERISTICS:

- Good welder appeal. For use on higher strength steels such as A710, HY-80, and A514.
- Lower weld metal hydrogen than most EXXT-1 slag systems.
- Immediate tensile range helps minimize "overmatching" base plate yield strengths.

SPECIFICATIONS:

E90T1-K2C per AWS A5.29, ASME SFA 5.29

SHIELDING GAS:

100% CO₂, 35-50 cfh

WELDING POSITION:

Flat and horizontal

STANDARD DIAMETERS:

1/16"

WELD TEST PARAMETERS:

FLUX-COR 90K2 3/32" diameter electrode was welded using 100% CO₂ shielding gas with flow rate of 40 cfh, 450 amps (180 IPM), DCEP, and 30 volts with 1" electrical stickout and 300° ± 25°F inter-pass temperature. A total of seven layers were welded, two passes each for Layers 1 through 7. The direction of travel was reversed for each layer.

TYPICAL UNDILUTED WELD METAL CHEMISTRY*:

	C	Mn	Si	P	S	Mo	Cr	Ni
100% CO ₂	0.05	1.14	0.51	0.008	0.012	0.25	0.04	1.70

TYPICAL MECHANICAL PROPERTIES*:

Tensile Strength	108,000 psi (744 MPa)
Yield Strength	98,000 psi (678 MPa)
Elongation	19%
CVN @0°F (-18°C):	46 ft•lbs (62 J)

*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 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 below was determined by welding performed with 100% 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)
1/16"	24	200	150	5.4
3/4" ± 1/4"	29	350	345	to
Flat and Horizontal	32	400	480	15.9

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 in 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.