TM-95K2

GAS-SHIELDED FLUX-CORED WIRE
AWS E90T5-K2C H4

080428 (replaces 060913)

TM-95K2 is excellent where higher tensile strengths and outstanding impact properties are of importance. It is produced with a basic slag formulation which promotes superior deposit quality; the weld metal is low in diffusible hydrogen and less sensitive to high base metal sulfur content than are acid slag (EXXT-1) welds. These characteristics make TM-95K2 a good choice for applications where cracking might be a problem, or where good impact values down to –60°F are needed. TM-95K2 is used for welding such HSLA steels as ASTM A710, A709 Gd HPS70W and many high strength quenched and tempered steels such as A514 and HY-80. The wire is recommended for single-and multiple-pass welding in the flat and horizontal positions using 100% CO_2 or 75% Ar/25% CO_2 shielding gas.

PRODUCT CHARACTERISTICS:

- Excellent low temperature toughness.
- Low hydrogen weld metal.
- Less sensitive to higher sulfur contents in base material than acid slag filler metals.
- Can be used for welding several HSLA steels, such as ASTM A709, A710, A514 and HY-80.

SPECIFICATIONS:

E90T5-K2C H4 per AWS A5.29, ASME SFA 5.29

SHIELDING GAS:

100% CO_2, 75-80% Ar/bal CO_2, 35-50 cfh

WELDING POSITIONS:

Flat and horizontal

STANDARD DIAMETERS:

1/16”

WELD TEST PARAMETERS:

TM-95K2 1/16” diameter electrode was welded using 100% CO_2 shielding gas with flow rate of 40 cfh, 275 amps (290 ipm), DCEP and 27 volts, with 3/4” electrical stickout and 300°± 25°F interpass temperature. A total of seven layers were welded, two passes for each layer. The direction of travel was reversed for each layer.

TYPICAL UNDILUTED WELD METAL CHEMISTRY*:

C	Mn	P	S	Si	Ni	Mo
0.05	1.14	0.010	0.006	0.43	1.89	0.20

AS WELDED TYPICAL MECHANICAL PROPERTIES*:

Tensile Strength	96,000 psi (662 MPa)
Yield Strength	87,000 psi (598 MPa)
Elongation	23%
CVN @-60°F (-51°C)	93 ft•lbs (126 J)

The above properties were determined with 100% CO_2 shielding gas.

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RECOMMENDED OPERATING PARAMETERS:

The information below was determined by welding performed with 100% CO_2 shielding gas at a flow rate minimum of 35 cfh/50 cfh maximum.

Diameter, Electrical Stickout (ES) Position	Arc Voltage	Current DCEP (+)	Approx. Wire Feed Speed	Deposition Rate (lb/hr)
1/16”	25	200	200	7.1
3/4” to 1-1/4”	**28**	**350**	**360**	to
Flat and Horizontal	34	425	485	18.0

Bold— Optimum parameters for welder appeal.

Notice:

Actual use of the product may produce varying results due to conditions and welding techniques over which Tri-Mark 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 Tri-Mark products for the purchaser’s own use. Any prior representations shall not be binding. Tri-Mark 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 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.