

PRIMACORE™ LW-81K2



PRIMACORE™ LW-81K2 is a basic-rutile, micro-alloyed, CO₂ shielded flux-cored welding wire designed for all-position welding of mild steel and 550Mpa grade high tensile strength steel in applications requiring consistently high impact toughness values. PRIMACORE™ LW-81K2 provides excellent bead appearance and operating characteristics.

APPLICATION

PRIMACORE™ LW-81K2 is designed specially for use in butt and fillet welding for 550Mpa high tensile strength steels in all positions. It is suitable for the following applications: offshore and shipbuilding, etc.

APPROVALS

ABS: 5Y400SAH10
DNV: VY42MS (H10)
CCS: 5Y42SH10
LR: 5Y42H10

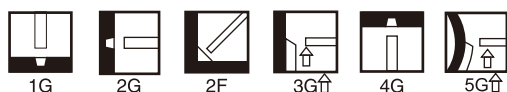
CONFORMANCE

JIS Z 3313: YFL-C506R
AWS A5.29 / ASME SFA-5.29: E81T1-K2C-JH8
(With 100% CO₂ shielding gas only)

SHIELDING GAS

100% CO₂ shielding gas.
Flowrate: 40-45 CFH or 20 litres/min

WELDING POSITIONS



LINCOLN ADVANTAGE

- Robust impact values @ -40°C & -60°C
- Consistent properties at a wide range of heat inputs
- Excellent operating characteristics
- All position single and multiple pass semiautomatic and automatic wire.
- Slag removal is easily achieved manually.
- Manufactured under a quality system certified to ISO 9001 requirements.
- The manufacture and quality conform to Japanese Industrial Standard (JIS).
- Drum packaging is available.

DIFFUSIBLE HYDROGEN

Diffusible hydrogen conforms to relevant approval agency designations.

PACKAGING TYPE

- All spools of wire are level layer wound on black plastic spool.
- The spools are then vacuum-packed with silica gel in moisture proof, foil-poly bags.
- The spools of wire are boxed and securely stacked on wooden pallets with shrink-wrap plastic.

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DIAMETERS / PACKAGING

Diameter (mm)	Spool/Drum Weight (kg)	Pallet Weight (kg)	Product No.
1.2	15	1,080	COP81K2E21
1.4	15	1,080	COP81K2E41
1.2	225	900	COP81K2X28
1.4	200	800	COP81K2X48

Cone + Conduit Adapter Part No.: QTM-0001

MECHANICAL PROPERTIES --- ALL WELD METAL

	Yield Strength (0.2% Offset) Mpa	Tensile Strength (Mpa)	Elongation (%)	Impact Value (J) @-40°C @-60°C	
Requirements E81T1-K2C-JH8 Per AWS A5.29	470	550-690	19	27	N. S.
Typical Values (*with 100% CO ₂)	500-570	570-640	26-30	83-130	75-90

*Test results and product properties listed herein for gas shielded wires have been developed with the shielding gas stated.
A change of shielding gas may cause significant changes in product performance and weld metal properties.
Lincoln Electric does not warrant these products for use with shielding gases other than those listed in the test data.

DEPOSIT COMPOSITION --- ALL WELD METAL

	C	Si	Mn	Ni	S	p	Cr	Mo	V
Requirements(%) Max. E81T1-K2C-JH8 Per AWS A5.29	0.15	0.80	0.50-1.75	1.00-2.00	0.030	0.030	0.15	0.35	0.05
Typical Values(%) (*with 100% CO ₂)	0.04-0.05	0.32-0.40	1.10-1.32	1.67-1.89	<0.01	<0.02	0.01-0.04	<0.01	<0.01

TYPICAL OPERATING PROCEDURES

Wire Polarity CTWD mm (inches)	Wire Feed Speed in/min (cm/min)	Arc Voltage (volts)	Approx.Current (amps)	Melt-Off Rate (kg/hr)	Deposition Rate (kg/hr)
1.2mm PRIMACORE™ LW-81K2 DC+ 20(3/4)	175 (445)	21-24	130	1.8	1.5
	225 (572)	23-25	165	2.4	1.9
	275 (699)	25-27	185	2.9	2.4
	325 (826)	26-29	200	3.4	2.9
	375 (953)	27-29	230	4.0	3.3
	425 (1,080)	28-30	250	4.5	3.7
	475 (1,207)	29-31	270	5.0	4.2
1.4mm PRIMACORE™ LW-81K2 DC+ 25(63/64)	600 (1,524)	31-33	310	6.2	5.3
	150 (381)	23-25	150	2.0	1.7
	200 (508)	24-26	190	2.6	2.2
	250 (635)	25-27	225	3.3	2.8
	300 (762)	26-28	240	4.0	3.6
	350 (889)	27-29	275	4.6	3.7
	400 (1,016)	28-30	300	5.3	4.5
	450 (1,143)	29-31	325	6.0	5.1

Customer Assistance Policy

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customers particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has not been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to change - This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com.cn for any updated information.

Authorized Distributor:

THE SHANGHAI LINCOLN ELECTRIC CO., LTD

No.195, Lane 5008, Hu Tai Road, Shanghai China 201907
TEL:86-21-6673 4530 FAX:86-21-6602 6621

www.lincolnelectric.com.cn

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