

# PRIMACORE® LW-81K2

## TYPICAL APPLICATIONS

PRIMACORE® LW-81K2 is a basic-rutile, micro-alloyed, CO<sub>2</sub> shielded flux-cored welding wire designed for all-position welding of mild steel and 550MPa grade high strength steel in applications requiring consistently high impact values. PRIMACORE® LW-81K2 provides excellent bead appearance and operating characteristics.

## APPLICATION

PRIMACORE® LW-81K2 is designed specially for use in butt and llet welding for 550MPa high strength steels in all positions. It is suitable for applications, such as offshore and shipbuilding.

## 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 with hand tools.
- Manufactured under a quality system certified to ISO 9001 and JIS requirements.

## PACKAGING TYPE

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

## DIFFUSIBLE HYDROGEN

- Diffusible hydrogen conforms to relevant agency approval designations.

## SHIELDING GAS

- 100% CO<sub>2</sub> shielding gas.
- Flowrate:40-45 CFH or 20 litres/min

## CONFORMANCE

- JIS Z 3313: T556T1-1CA-N3-H10
- AWS A5.29 / ASME SFA-5.29: E81T1-K2C-JH8
- AWS A5.36 E81T1-C1A8-K2

## WELDING POSITIONS



## DIAMETERS / PACKAGING

Diameter(mm)	Spool/Drum Weight(kg)	Pallet Weight(kg)
1.2	15	1080
1.4	15	1080

## Mechanical Properties

	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation (%)	CCVN Impact (J@-40°C @-60°C)	
Requirements AWS A5.29 E81T1-K2C-JH8	Min470	550-690	Min19	Min27	N.S.
Typical Values (with 100% CO <sub>2</sub> )	500-570	570-640	26-30	83-130	75-90

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## Chemical Composition

	C%	Si%	Mn%	Ni%	S%	P%	Cr%	Mo%	V%
Requirements Max AWS A5.29 E81T1-K2C-JH8	0.15	0.80	0.50-1.75	1.00-2.00	0.03	0.03	0.15	0.35	0.05
Typical Values with 100% CO <sub>2</sub>	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

Diameter Polarity CTWD mm(inches)	Wire Feed Speed in/min(cm/min)	Voltage (V)	Approx.Current (A)	Melt-Off Rate (kg/hr)	Deposition Rate (Kg/hr)
1.2mm DC+ 20mm[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[1080]	28-30	250	4.5	3.7
	475[1207]	29-31	270	5.0	4.2
	600[1524]	31-33	310	6.2	5.3
1.4mm DC+ 25mm[63/64]	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[1016]	28-30	300	5.3	4.5
	450[1143]	29-31	325	6.0	5.1

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Except for special instructions, experiments on welding machines are conducted in accordance with the general standard of IEC60974-1; experiments on welding consumables are conducted in accordance with the general standard of AWS; for specific applicable standards on welding consumables please refer to the product page.

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## 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](http://www.lincolnelectric.com.cn)

