

# PRIMACORE™ LW-70S



PRIMACORE™ LW-70S is a metal cored type, CO<sub>2</sub> gas shielded welding wire designed for high productivity welding of mild steel in the downhand welding position. PRIMACORE™ LW-70S has excellent operating characteristics which provide good bead appearance, with high travel speeds and deposition rates. It also provides good resistance to porosity on primed or mill scaled plate.

## APPLICATION

PRIMACORE™ LW-70S is a highly efficient wire designed for welding 490N/mm<sup>2</sup> tensile grade structural steels in the 1G or 2F positions. It is especially well suited for panel line welding applications in shipbuilding, as well as other automated, high productivity fillet welding applications.

## CONFORMANCE

- AWS A5.20/ ASME SFA-5.20: E70T-1C (100% CO<sub>2</sub> shielding gas only)
- JIS Z3313: T492T15-0CA-H10

## LINCOLN ADVANTAGE

- Consistent properties at a wide range of heat inputs
- Arc action and metal transfer are smooth resulting in very low spatter
- High deposition rate
- Very light, self-peeling slag
- Manufactured under a quality system certified to ISO 9001-2008 requirements.

## WELDING POSITIONS



## DIFFUSIBLE HYDROGEN

Diffusible hydrogen conforms to relevant agency approval designations.

## PACKAGING TYPE

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

## APPROVALS

- ABS:2YSAH10 • CCS:2YSH10 • DNV:IIYMS H10
- LR:2YSH15 • GL:2YH10S • BV:SA2YM H10

## DIAMETERS / PACKAGING

Diameter (mm)	Packaging Type	Pallet Weight (kg)	Product No.
1.2	15kg Plastic Spools	1080	COPL70SE21
1.4	15kg Plastic Spools	1080	COPL70SE41
1.6	15kg Plastic Spools	1080	COPL70SE61
1.2	225kg Bulk Drum	900	COPL70SX27
1.4	200kg Bulk Drum	800	COPL70SX46
1.6	200kg Bulk Drum	800	COPL70SX66
1.2	300kg Bulk Drum	600	COPL70SX22
1.4	350kg Bulk Drum	700	COPL70SX48
1.6	350kg Bulk Drum	700	COPL70SX68

**PRIMACORE™ LW-70S****MECHANICAL PROPERTIES, ALL WELD METAL**

	Yield Strength (0.2% Offset) Mpa	Tensile Strength Mpa	Elongation (%)	Impact Value@-20°C (J)
Requirements E70T-1C Per AWS A5.20/A5.20M	Min.390	490-670	Min.22	Min.27
Typical Values (*with 100% CO <sub>2</sub> )	460-510	550-610	27	48

**CHEMICAL COMPOSITION, ALL WELD METAL**

	C	Si	Mn	S	P
Requirements (%) Max. E70T-1C Per AWS A5.20/A5.20M	0.12	0.90	1.75	0.03	0.03
Typical Values (%) (*with 100% CO <sub>2</sub> )	0.06	0.50	1.36	0.013	0.016

\* 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 cover these products under warranty for use with shielding gases other than those listed in the test data.

**RECOMMENDED OPERATING PROCEDURES**

PRIMACORE™ LW-70S Ø1.2mm ( 100% CO <sub>2</sub> )		
WFS (IPM)	Current (A)	Voltage (V)
185	150	21
210	165	22
260	185	23
285	200	24
330	220	25
345	230	26
370	240	27
405	250	28
435	265	29
480	275	30
525	285	31
570	295	32
605	305	33
655	335	34
740	355	36

PRIMACORE™ LW-70S Ø1.6mm ( 100% CO <sub>2</sub> )		
WFS (IPM)	Current (A)	Voltage (V)
115	170	22
135	190	23
150	210	24
170	225	25
190	245	26
200	260	27
225	275	28
250	300	29
260	310	30
275	325	31
300	345	32
350	360	33
375	370	34

PRIMACORE™ LW-70S Ø1.2mm ( 100% CO <sub>2</sub> )					
WFS (IPM)	Current (A)	Voltage (V)	Melt-off Rates (kg/hr)	Deposition Rates (kg/hr)	Efficiency (%)
260	185	23	3.06	2.86	93.3
405	250	28	4.82	4.45	92.2
570	295	32	6.79	6.23	91.7

PRIMACORE™ LW-70S Ø1.6mm ( 100% CO <sub>2</sub> )					
WFS (IPM)	Current (A)	Voltage (V)	Melt-off Rates (kg/hr)	Deposition Rates (kg/hr)	Efficiency (%)
150	210	24	3.07	2.83	92.2
225	275	28	4.65	4.19	90.1
300	345	32	6.08	5.47	90.0

**Customer Assistance Policy**

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

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