

# LINCOLNWELD® LC-72

Mild Steel Cored Electrode ▪ AWS EC1

## KEY FEATURES

- A cored wire designed to increase deposition rates 10-30% when used with 980 flux
- Designed to provide optimal bead shape, penetration, and slag removal in semiautomatic submerged arc welding
- Actual (Type 3.1) certificates for each lot of wire showing chemical composition are available in the certificate center of [lincolnelectric.com](http://lincolnelectric.com)

## CONFORMANCES

AWS A5.17/A5.17M: EC1

## RECOMMENDED FLUXES

Lincolnweld® 980™

## DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (23 kg) Coil	300 lb (136 kg) Speed Feed® Reel	600 lb (272 kg) Speed Feed® Reel	600 lb (272 kg) Speed Feed® Drum
5/64 (2.0)	ED011099		EDS27184	
3/32 (2.4)	ED011098	EDS01186		EDS01187

## WIRE COMPOSITION<sup>(1)</sup> - As Required per AWS A5.23/A5.23M

	%C	%Mn	%Si	%S	%P	%Cu
Lincolnweld® LC-72 <sup>(1)</sup>	0.15	1.8	0.9	0.035	0.035	0.35

<sup>(1)</sup>Single values are maximums.

# LINCOLNWELD® LAC-B2

Low Alloy Cored Electrode ▪ AWS ECB2

## KEY FEATURES

- Designed to weld with either single or tandem arcs using a neutral flux
- A cost-effective choice when welding 1 1/4% chromium, 1/2% molybdenum steels where a low Bruscato factor (X-factor) is not required
- Actual (Type 3.1) certificates for each lot of wire showing chemical composition are available in the certificate center of [lincolnelectric.com](http://lincolnelectric.com)

## CONFORMANCES

AWS A5.23/A5.23M: ECB2

## RECOMMENDED FLUXES

Lincolnweld® 880™, 880M®

## DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (23 kg) Coil	600 lb (272 kg) Speed Feed® Drum
3/32 (2.4)	ED010954	ED019581
5/32 (4.0)	ED010955	ED019582

# LINCOLNWELD® LAC-NI2

Low Alloy Cored Electrode ▪ AWS ECNi2

## KEY FEATURES

- A 2% nickel electrode used primarily in weathering steel applications
- When used with 888 flux, it can produce impact properties exceeding 27 J (20 ft·lbf) at -73°C (-100°F)
- Actual (Type 3.1) certificates for each lot of wire showing chemical composition are available in the certificate center of [lincolnelectric.com](http://lincolnelectric.com)

## CONFORMANCES

AWS A5.23/A5.23M: ECNi2

## RECOMMENDED FLUXES

Lincolnweld® 880™, 880M®, 882™, 888™, 980™

## DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (23 kg) Coil
3/32 (2.4)	ED010986

# LINCOLNWELD® LAC-690

Low Alloy Cored Electrode ▪ AWS ECG

## KEY FEATURES

- Combine with Lincolnweld® 888™ flux for H4 diffusible hydrogen weld deposits
- Charpy V-notch test results capable of exceeding 27 J (20 ft·lbf) @ -73°C (-100°F) with Lincolnweld® 888™ flux
- Excellent Tandem, AC and DC Operation
- Clean and easy slag removal minimizes risk of inclusions, even in narrow gap applications
- Actual (Type 3.1) certificates for each lot of wire showing chemical composition are available in the certificate center of [lincolnelectric.com](http://lincolnelectric.com)

## CONFORMANCES

**AWS A5.23/A5.23M:** F11A10-ECG-G-H4  
F11P6-ECG-G-H4

## RECOMMENDED FLUXES

Lincolnweld® 888™

## DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (23 kg) Coil
3/32 (2.4)	ED032958
1/8 (3.2)	ED032959
5/32 (4.0)	ED033302

## WIRE COMPOSITION<sup>(1)</sup>

	%C	%Mn	%Si	%S	%P
Lincolnweld® LAC-690 <sup>(2)</sup>	0.08	1.51	0.36	0.007	0.011
	%Cr	%Ni	%Mo	%Cu	Diffusible Hydrogen (mL/100g weld deposit)
Lincolnweld® LAC-690 <sup>(2)</sup>	0.36	2.59	0.44	0.04	3.6

<sup>(1)</sup>See test results disclaimer <sup>(2)</sup>Limits are for weld metal deposited with a particular flux (Lincolnweld® 888™ flux).

# 9CRMOV-N

Low Alloy Steel ■ AWS EB9

## KEY FEATURES

- Designed to provide creep strength for high integrity structural service at elevated temperatures
- Superior corrosion resistance with high strength toughness

## CONFORMANCES

AWS 5.23 EB9

## TYPICAL APPLICATIONS

- Main Steam Piping
- Power Generation Plants
- Oil Refineries

## DIAMETERS / PACKAGING

Diameter in (mm)	25kg (55.1 lb) Coil
3/32 (2.4)	SA9CRMOVN-24
1/8 (3.2)	SA9CRMOVN-32

## MECHANICAL PROPERTIES<sup>(1)</sup> – As Required per AWS A5.23

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @20 °C (68 °F)	Hardness HV
<b>Requirements</b> AWS EB9	415 (60) min	620 (90) min	16 min	-	-
<b>Typical Performance<sup>(3)</sup></b> As-Welded	675 (98)	750 (109)	22	220	260

## DEPOSIT COMPOSITION<sup>(1)</sup> – As Required per AWS A5.23

	%C	%Mn	%Si	%S	%P	%Cr	%Ni
<b>Requirements</b> AWS EB9	0.08-0.13	0.40-0.80	0.15-0.50	0.010 max	0.010 max	8.5-9.5	0.4-0.8
<b>Typical Performance<sup>(3)</sup></b>	0.1	0.5	0.25	0.006	0.008	8.7	0.6
	%Mo	%Nb	%V	%N	%Cu	%Al	
<b>Requirements</b> AWS EB9	0.85-1.1	0.03-0.08	0.15-0.25	0.03-0.07	0.10 max	0.04 max	
<b>Typical Performance<sup>(3)</sup></b>	1	0.05	0.2	0.05	0.03	<0.01	

## TYPICAL OPERATING PROCEDURES

Diameter mm (in)	Polarity	Amperage	Voltage	WFS
2.4	DC+	450A	30V	450 mm/min

<sup>(1)</sup> Typical all weld metal <sup>(2)</sup> Measured with 0.2% offset <sup>(3)</sup> See test results disclaimer <sup>(4)</sup> Preferred polarity is listed first.