

Lincore[®] 50

Abrasion & Impact

Typical Applications

- ▶ Crusher rolls
- ▶ Dredge cutter teeth
- ▶ Ore chute baffles
- ▶ Muller plows and tires
- ▶ Coal mining cutting teeth

Welding Positions

Flat & Horizontal

Key Features

- ▶ Delivers an abrasion resistant deposit, even under conditions of moderate impact
- ▶ Larger wire diameter sizes may be used for the submerged arc process
- ▶ Can be used on low carbon, medium carbon, low alloy, manganese and stainless steels
- ▶ Limited to 4 layers

DIAMETERS / PACKAGING

Diameter - in (mm)	25 lb (11.3 kg) Steel Spool	50 lb (22.7 kg) Coil	125 lb (56.7 kg) Speed-Feed [®] Drum
0.045 (1.1)	ED031123		
1/16 (1.6)	ED031124	ED020829	
5/64 (2.0)	ED031125	ED017825	
7/64 (2.8)		ED011275	ED011274

MECHANICAL PROPERTIES⁽¹⁾

	Rockwell Hardness (R _c)		
	1 Layer	2 Layers	3 Layers
On Mild Steel	34-37	44-48	48-52
On 0.50% Carbon Steel	41-43	47-50	50-53
On Austenitic Mn Steel	-	43-45	48-50
with 801 Flux	38-43	47-52	48-56

DEPOSIT COMPOSITION⁽¹⁾

	%C	%Mn	%Si	%Al	%Cr	%Mo
Open Arc						
0.045 in & 1/16 in	2.4	1.3	1.0	0.6	11.4	-
5/64 in & 7/64 in	2.0	0.9	1.0	0.6	9.2	0.5
Submerged Arc						
5/64 in & 7/64 in						
w/ 801 Flux	2.5	1.1	1.3	0.4	10.1	0.5
w/ 803 Flux	2.5	1.8	1.2	0.2	11.1	0.5
w/ 860 Flux	2.5	2.0	1.7	0.2	11.0	0.5

TYPICAL OPERATING PROCEDURES

Diameter, Polarity ESO - in (mm)	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Deposition Rate kg/hr (lb/hr)	
0.045 in (1.1mm), DC+ 1 (25)	5.1 (200)	19-21	120	1.9 (4.2)	
	10.2 (400)	23-25	190	3.9 (8.5)	
	15.2 (600)	27-29	250	5.8 (12.8)	
1/16 in (1.6 mm), DC+ 1 (25)	3.8 (150)	22-24	175	2.7 (5.9)	
	8.4 (350)	29-31	325	6.2 (13.6)	
	11.4 (450)	32-34	365	7.9 (17.5)	
5/64 in (2.0 mm), DC+ 1-1/4 (32)	3.2 (125)	27	210	3.4 (7.4)	
	5.1 (200)	31	325	5.4 (11.9)	
	6.4 (250)	33	380	6.8 (14.9)	
7/64 in (2.8 mm), DC+ 1-1/4 (32)	2.0 (80)	26	315	3.9 (8.6)	
	2.5 (100)	27	375	4.9 (10.7)	
	3.3 (130)	29	450	6.4 (14.0)	
7/64 in (2.8 mm), DC+ 2-1/2 (64)	2.5 (100)	27	315	4.9 (10.7)	
	3.3 (130)	29	370	6.4 (14.0)	
	4.4 (175)	31	450	8.6 (19.0)	
With Recommended Neutral Fluxes					
	7/64 in (2.8 mm), DC+	2.5 (100)	29	400	5.2 (11.4)
	1-1/4 (32)	3.0 (120)	30	450	6.2 (13.7)
		4.4 (175)	33	540	9.1 (20.0)

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m³ maximum exposure guideline for general welding fume. BEFORE USE, READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET (MSDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

⁽¹⁾ Composition and properties depend upon dilution. Single layer deposit properties depend upon base metal and/or build-up material.

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

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 information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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