

Wearshield® 44

Abrasion & Impact

Key Features

- ▶ Moderate hardness to resist abrasion with impact up to 600°C (1100°F)
- ▶ Higher alloy results in improved spalling resistance than Wearshield® ABR
- ▶ Can be used on carbon steels, low alloy steels, cast irons, austenitic manganese steels and austenitic stainless steels

Typical Applications

- ▶ Buckets
- ▶ Chain links
- ▶ Rolling mill guides
- ▶ Pulleys
- ▶ Ingot tongs

Welding Positions

Flat & Horizontal

DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	10 lb (4.5 kg) Carton	40 lb (18.1 kg) Master Carton
1/8 (3.2)	14 (350)		ED024940
5/32 (4.0)	14 (350)		ED024941

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)		
1 Layer	2 Layers	4 Layers
42	47	48

DEPOSIT COMPOSITION⁽¹⁾

On Carbon Steel	%C	%Mn	%Si	%Cr	%Mo
1 Layer	1.56	0.17	0.77	19.5	1.92
2 Layers	1.96	0.16	0.87	24.2	2.48
4 Layers	2.21	0.18	0.93	27.1	2.86

TYPICAL OPERATING PROCEDURES

Polarity ⁽²⁾	Current (Amps)	
	1/8 in (3.2 mm)	5/32 in (4.0 mm)
DC+	120 - 160	150 - 220
AC	130 - 160	180 - 220

NOTE: Wearshield® 44 electrodes form a deep cup, which permits light dragging of the electrode during welding. The arc is steady with little spatter in the DC+ mode. During AC welding, the arc is also steady, but the usable current range is reduced, and the melt-off rates are reduced at any current. Since the amount of dilution does not affect the microstructure, the impact properties and abrasion resistance will be similar from the first layer to the last.

On cast irons, Wearshield® 44 deposits usually check crack. These check cracks should be closely spaced to prevent spalling. This is obtained by using stringer beads.

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. ⁽²⁾Preferred polarity is listed first.

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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