

WEARTECH® GUARDIAN® CF

Severe Abrasion

KEY FEATURES

- Industry leading casing wear protection
- Exceptional tool wear life
- Applicable over other hardband materials
- Weldable with or without gas shielding

TYPICAL APPLICATIONS

- Hardbanding

SHIELDING GAS (for GMAW-C)

98%Ar/2%O₂ or Ar/CO₂ blends

No shielding gas is required for FCAW-S applications

DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Spool PLW	45 lb (20.4 kg) Fiber Spool PLW
1/16 (1.6)	W9500-160X15	ED037279 (W9500-160X20)

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)	Wear Resistance
58-62	ASTM G65-04 Procedure A 0.22 g mass loss

DEPOSIT COMPOSITION⁽¹⁾

%Fe	%C	%Cr	%B	%Nb	%Mn	%Si
Balance	<3	<10	<6	<9	<5	<2

TYPICAL OPERATING PROCEDURES

Diameter, Polarity ESO - in (mm)	Current (Amps)	Voltage (Volts)	Wire Feed Speed m/min (ipm)	Shielding Gas	Flow Rate (cft)
1/16 in (1.6mm), DC+ ½ - ¾ (15) GMAW-C ¾ - 1 (20) FCAW-S	200-350	23-28 for Globular Transfer 27-33 for Spray Transfer - 98Ar/2O ₂ recommended	7.0 (275)	98%Ar/2%O ₂ or Ar/CO ₂ blends	40-60

⁽¹⁾Two layers

ADDITIONAL NOTES

Torch Oscillation Rate: 40-70 OSC/min.

Torch Oscillation Width: 5/8 - 1 in. (16-25 mm)

Beam Tilt for Elevation Band (for 18° Groove): 17° +/-1°

Bead Overlap: 1/8-1/4 in. (3-6 mm)

Max. Interpass Temp: 850°F (454°C)

Soak Heat: 50°F (10°C) max. temp. change in 4 min.

Recommended Wire Storage: On pallet in dry area.

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

FUMES AND GASES can be hazardous to your health.

- Fumes from the normal use of this product contain significant quantities of potentially hazardous compounds. See consumable product label/insert.
- Keep your head out of the fumes.
- Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area.
- An approved respirator should be used unless exposure assessments are below applicable exposure limits.

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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