LINCORE® 57-G

Multi-Purpose GMAW-C Hardfacing Wire

ONE WIRE. MULTIPLE APPLICATIONS.

Lincore® 57-G metal-cored wire uses state-of-the-art chemical composition to deliver Rockwell Hardness of 56-61 (R_c) and outstanding wear resistance in a wide range of hardfacing applications.

» Great for Moderate Abrasion and Impact applications experienced by:
- Mining equipment rebuilders
- Sugar cane harvesters
- Tire shredders
- Dredging equipment
- Tilling and other earth moving equipment

» Can also be used for Metal-to-Metal or Severe Abrasion with Low Impact applications

» Can be used with bulk tungsten carbide to generate added abrasion resistance for exceptional wear life

» Delivers excellent weldability properties

» Clean, crack-resistant surface appearance with proper preheat and interpass temperatures

» Works well in mechanized and robotic automation applications

Processes
GMAW-C (Metal-Cored)

Positions
All, except overhead

Shielding Gas
75-90% AR / Balance CO_2
98% Ar / 2% O_2

AWS Classifications
None

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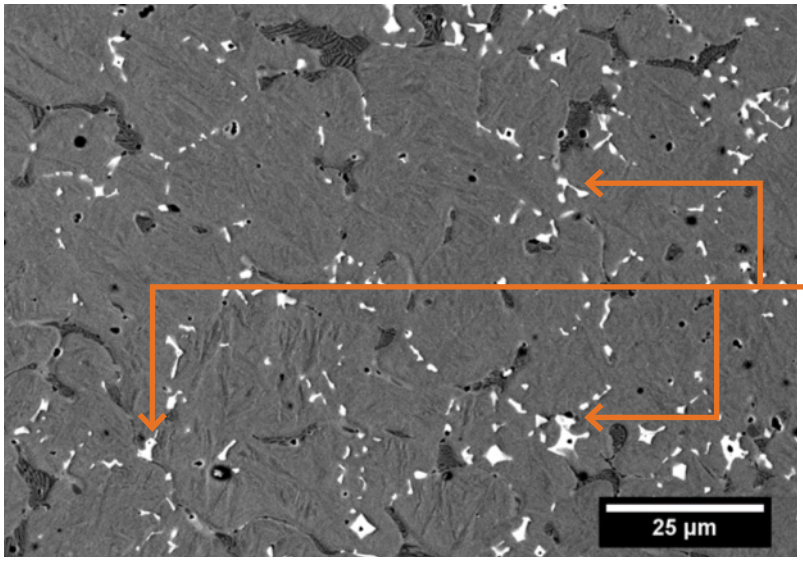
GOOD ABRASION RESISTANCE MADE POSSIBLE BY NIOBIUM CARBIDES

Alloyed with Niobium to form NbC, which enhances wear resistance. Vanadium is added to enhance deposit hardness.

RESULTS

Lincore 57-G delivers very good (R_c) Rockwell Hardness and 0.35g mass loss (ASTM G65) to produce a relatively hard and abrasion-resistant deposit for a multi-purpose hardfacing wire



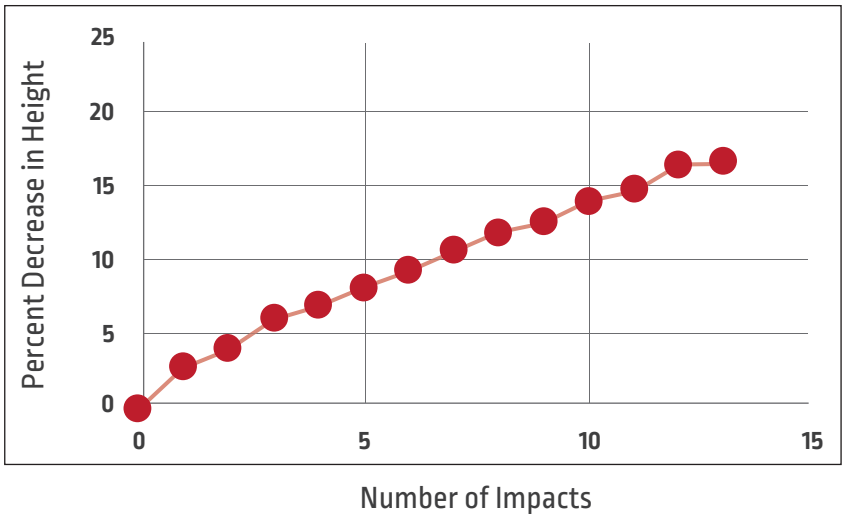
White marks are the Niobium Carbide (NbC) integrated through out, providing abrasion resistance

GOOD METAL-TO-METAL WEAR RESISTANCE AND MODERATE IMPACT RESISTANCE

The hard martensitic matrix provides good metal-to-metal wear resistance and moderate impact resistance when tempered.

RESULTS

In addition to the wear resistance referenced above, testing shows Lincore 57-G also exhibits moderate impact resistance, helping to make it a good multi-purpose hardfacing wire



Percent decrease in height after 130 ft·lb (176 J) vertical impacts – 2 layers on A36, tempered 2h at 950°F (510°C)

SPECIFICATIONS

DIAMETERS / PACKAGING

Diameter in (mm)	10 lb (4.5 kg) Plastic Spool	25 lb (11.3 kg) Plastic Spool	500 lb (227 kg) Accu-Trak® Drum
0.045 (1.1)	ED037794	ED037795	ED037796
1/16 (1.6)	ED037297	ED037298	ED037296

MECHANICAL PROPERTIES[1]

Shielding Gas	Rockwell Hardness (R_C)	Mass Loss (G65) (g)
75%Ar/25 CO_2	56-59	0.36
98%Ar/2%O_2	59-61	0.36

DEPOSIT COMPOSITION[1]

On Carbon Steel (2 Layers)	%C	%Cr	%Nb	%Mn	%Mo	%Si	%V
0.045 in (1.1 mm) - Ar/CO_2	0.971	8.65	–	1.00	0.59	1.02	–
1/16 in (1.6 mm) - 98% Ar/2% CO_2	0.9-1.1	7.6-10.0	1.3-1.8	1.2-1.6	0.5-0.6	0.8-1.2	1.4-1.9

TYPICAL OPERATING PROCEDURES

Diameter, Polarity ESO – in (mm)	Approx. Current (Amps)	Voltage (Volts)	Wire Feed Speed m/min (ipm)	Deposition Rate kg/hr (lb/hr)
0.045 in (1.1 mm), DC+, 5/8 (16) 75% Ar/25% CO_2	200 260 290	27 28 29	6.4 (250) 8.9 (350) 11.4 (450)	2.4 (5.2) 3.3 (7.2) 4.4 (9.6)
0.045 in (1.1 mm), DC+, 3/4 (20) 90% Ar/10% CO_2	200 260 300	26 27 28	6.4 (250) 8.9 (350) 11.4 (450)	2.5 (5.4) 3.4 (7.4) 4.5 (9.8)
0.045 in (1.1 mm), DC+, 3/4 (20) 98% Ar/2% O_2	215 270 315	24 25 26	6.4 (250) 8.9 (350) 11.4 (450)	2.6 (5.8) 3.6 (7.9) 4.5 (9.8)
1/16 in (1.6 mm), DC+, 5/8 (16) 75% Ar/25% CO2	240 340 420	28 30 32	3.8 (150) 6.4 (250) 8.9 (350)	2.6 (5.8) 4.7 (10.4) 6.8 (15.1)
1/16 in (1.6 mm), DC+, 3/4 (20) 90% Ar/10% CO2	230 315 400	26 27 29	3.8 (150) 6.4 (250) 8.9 (350)	2.7 (6.0) 4.9 (10.7) 7.0 (15.4)
1/16 in (1.6 mm), DC+, 3/4 (20) 98% Ar/2% O2	220 320 415	23 26 28	3.8 (150) 6.4 (250) 8.9 (350)	2.9 (6.4) 5.0 (11.0) 7.1 (15.7)

[1] Based on two layers. Composition and properties depend upon dilution.

NOTE: Work area should be clean, with any previous hardfacing deposit removed, and cracks properly repaired. Cold parts should be warmed to at least 25°C (75°F). Higher preheat of 150°- 260°C (300°- 500°F) on thick parts or heavy sections.

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.

For best welding results with Lincoln Electric® equipment, always use Lincoln Electric consumables. Visit www.lincolnelectric.com for more details.

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