LINCORE® BU-G

Build-Up

KEY FEATURES

- Delivers deposits with moderate hardness for build-up or as final overlay
- Provides some resistance to metal-to-metal wear and moderate impact
- Unlimited layers with proper preheat and interpass temperatures and procedures

WELDING POSITIONS

Flat & Horizontal

TYPICAL APPLICATIONS

- Rolls
- Shafts
- Pump and shovel parts
- Pulverizer
- Plows

SHIELDING GAS

75-90% Argon / Balance CO_2
98% Argon / 2% O_2

DIAMETERS / PACKAGING

Diameter in (mm)	25 lb (11.3 kg) Plastic Spool
0.045 (1.1)	ED029079
1/16 (1.6)	ED029080

MECHANICAL PROPERTIES[1]

Rockwell Hardness (R_b)	
As-Welded	Work-Hardened
21 - 33	40 - 42

DEPOSIT COMPOSITION[1]

On Carbon Steel	%C	%Mn	%Si	%Cr	%Mo
4 Layers	0.08	1.60	0.50	0.90	0.30

TYPICAL OPERATING PROCEDURES

Diameter, Polarity, ESO - in (mm) Shielding Gas	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Deposition Rate kg/hr (lb/hr)
0.045 in (1.1 mm), DC+, 5/8 (16) 75% Ar/25% CO_2	5.1 (200) 7.6 (300) 10.2 (400)	29 30 32	175 240 300	1.7 (3.7) 2.8 (6.1) 3.9 (8.6)
0.045 in (1.1 mm), DC+ , 3/4 (20) 90% Ar/10% CO_2	5.1 (200) 7.6 (300) 10.2 (400)	25 27 29	215 250 285	2.1 (4.7) 3.1 (6.9) 4.1 (9.1)
0.045 in (1.1 mm), DC+, 3/4 (20) 98% Ar/2% O_2	5.1 (200) 7.6 (300) 10.2 (400)	25 26 28	210 280 315	2.0 (4.5) 3.2 (7.1) 4.4 (9.7)
1/16 in (1.6 mm), DC+, 5/8 (16) 75% Ar/25% CO_2	3.8 (150) 6.4 (250) 8.9 (350)	27 29 31	280 370 460	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% CO_2	3.8 (150) 6.4 (250) 8.9 (350)	25 27 29	270 375 470	2.6 (5.7) 4.9 (10.8) 7.2 (15.9)
1/16 in (1.6 mm), DC+, 3/4 (20) 98% Ar/2% O_2	3.8 (150) 6.4 (250) 8.9 (350)	24 26 28	290 390 490	2.8 (6.1) 5.0 (11.1) 7.3 (16.1)

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

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 SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

LINCORE® 55-G

Metal-to-Metal

KEY FEATURES

- Produces a deposit which resists metal-to-metal wear and mild abrasion
- The deposit results in an even harder material when used with the Bulk Tungsten Carbide process
- To be used on carbon steel and low alloy steel
- Unlimited layers with proper preheat and interpass temperatures and procedures

TYPICAL APPLICATIONS

- Crane wheels
- Blower blades
- Bucket lips
- Dredge parts
- Tillage tools

SHIELDING GAS

75-90% Argon / Balance CO_2
98% Argon / 2% O_2

WELDING POSITIONS

All, except overhead

DIAMETERS / PACKAGING

Diameter in (mm)	25 lb (11.3 kg) Plastic Spool	500 lb (227 kg) Accu-Trak® Drum
0.045 (1.1)	ED028176	ED031475
1/16 (1.6)	ED028177	ED032661

MECHANICAL PROPERTIES[1]

	Rockwell Hardness (R_C)		
Shielding Gas	1 Layer	2 Layer	4 Layers
75%Ar/25%CO_2	50 - 51	53 - 54	54 - 55
98%Ar/2%O_2	54 - 55	55 - 56	56 - 57

DEPOSIT COMPOSITION[1]

On Carbon Steel (2 Layers)	%C	%Mn	%Si	%Cr	%Mo
0.045 in (1.1 mm) - Ar/CO_2	0.39	1.24	0.93	5.61	0.55
0.045 in (1.1 mm) - Ar/O_2	0.47	1.30	1.18	6.44	0.65
1/16 in (1.6 mm) - Ar/CO_2	0.41	1.24	0.95	5.69	0.57
1/16 in (1.6 mm) - Ar/O_2	0.45	1.25	1.10	5.81	0.58

TYPICAL OPERATING PROCEDURES

Diameter, Polarity, ESO - in (mm) Shielding Gas	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Deposition Rate kg/hr (lb/hr)
0.045 in (1.1 mm), DC+, 5/8 (16) 75% Ar/25% CO_2	5.1 (200)	27	165	2.0 (4.3)
	7.6 (300)	29	225	3.0 (6.7)
	10.2 (400)	31	290	4.2 (9.2)
0.045 in (1.1 mm), DC+, 3/4 (20) 90% Ar/10% CO_2	5.1 (200)	25	145	2.1 (4.7)
	7.6 (300)	28	195	3.3 (7.2)
	10.2 (400)	30	245	4.4 (9.7)
0.045 in (1.1 mm), DC+, 3/4 (20) 98% Ar/2% O_2	5.1 (200)	25	145	2.3 (5.1)
	7.6 (300)	27	200	3.4 (7.5)
	8.9 (350)	28	225	3.9 (8.7)
	10.2 (400)	29	250	4.4 (9.8)
1/16 in (1.6 mm), DC+, 5/8 (16) 75% Ar/25% CO_2	3.8 (150)	28	260	2.6 (5.8)
	6.4 (250)	30	340	4.7 (10.4)
	8.9 (350)	32	420	6.8 (15.1)
1/16 in (1.6 mm), DC+, 3/4 (20) 90% Ar/10% CO_2	3.8 (150)	25	230	2.7 (6.0)
	6.4 (250)	27	315	4.9 (10.7)
	8.9 (350)	29	400	7.0 (15.4)
1/16 in (1.6 mm), DC+, 3/4 (20) 98% Ar/2% O_2	3.8 (150)	24	220	2.9 (6.4)
	6.4 (250)	26	315	5.0 (11.0)
	8.9 (350)	28	410	7.1 (15.7)

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

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.

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