

LINCORE® 30-S

Build-Up

KEY FEATURES

- Intended for build-up before final overlay, and as a final surface for metal-to-metal wear with moderate impact
- For automatic and semiautomatic operation on mild and low alloy steels
- Good resistance to cross checking
- Unlimited deposit thickness with proper preheat and interpass temperatures and procedures

TYPICAL APPLICATIONS

- | | |
|-------------------|----------------|
| For Build-up | For Hardfacing |
| ▪ Tractor rollers | ▪ Shafts |
| ▪ Trunnions | ▪ Track rails |
| ▪ Idlers | ▪ Idlers |
| ▪ Crane wheels | |

RECOMMENDED FLUX

Primary Flux _____	Secondary Flux ⁽¹⁾ _____
801	802, 860

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	ED011200	ED011199
1/8 (3.2)	ED015889	ED015891

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)	
6 Layers - Under 801 or 802 Flux	6 Layers - Under 860 Flux
27	27

DEPOSIT COMPOSITION⁽¹⁾

	%C	%Mn	%Si	%Mo
6 Layers - Under 801 or 802	0.11	2.5	0.40	0.50
6 Layers - Under 860	0.11	2.7	0.60	0.50

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)
3/32 in (2.4 mm), DC+ 1-1/2 (38)	1.5 (60)	26	220	2.7 (6.0)
	3.0 (120)	27	360	5.2 (11.5)
	4.6 (180)	28	500	7.7 (17.0)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.3 (50)	27	310	3.4 (7.5)
	2.0 (80)	28	450	6.4 (14.0)
	2.8 (110)	28	600	9.1 (20.0)

⁽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® 32-S

Metal-to-Metal, Build-Up

KEY FEATURES

- Designed for build-up on 4140 drill stems in the deep hole drilling industry
- For automatic and semiautomatic operation on mild and low alloy steels
- Good resistance to cross checking
- Unlimited deposit thickness with proper preheat and interpass temperatures and procedures

TYPICAL APPLICATIONS

- Drill stems

RECOMMENDED FLUX

Primary Flux ⁽¹⁾	Secondary Flux
802	80, 860

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	300 lb (136 kg) Speed-Feed® Drum	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	ED025656	ED025131
1/8 (3.2)		

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)			
2 Layers		2 Layers on 4140 Steel	
Under 802 Flux	Under 803 Flux	Under 802 Flux	Under 803 Flux
28	24	33	32

DEPOSIT COMPOSITION⁽¹⁾

	%C	%Mn	%Si	%Cr	%Mo	%Ni
2 Layers w/ 802	0.05	2.20	0.60	1.80	0.33	0.07
2 Layers w/ 803	0.04	2.50	0.33	1.80	0.35	0.08
On 4140 Steel						
2 Layers w/ 802	0.13	2.11	0.51	1.63	0.30	0.09
2 Layers w/ 803	0.11	2.31	0.24	1.57	0.29	0.10

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)
3/32 in (2.4 mm), DC+ 1-1/2 (38)	1.9 (75)	25	350	3.4 (7.5)
	2.5 (100)	25	400	4.5 (10.0)
	3.3 (130)	25	460	5.9 (13.0)
	4.2 (165)	25	510	7.5 (16.5)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.3 (50)	28	370	3.9 (8.5)
	2.5 (100)	28	540	7.9 (17.5)
	3.2 (125)	28	630	9.6 (21.1)
	3.8 (150)	28	720	11.8 (26.0)

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

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LINCORE® 35-S

Metal-to-Metal, Build-Up

KEY FEATURES

- Intended for rolling and sliding metal-to-metal wear with moderate impact and abrasion
- For automatic and semiautomatic operation on mild and low alloy steels
- Recommended as final overlay where medium hardness and good machinability are required
- Unlimited deposit thickness with proper preheat and interpass temperatures and procedures

TYPICAL APPLICATIONS

- | | |
|-------------------|--------------------|
| For Build-up | For Hardfacing |
| ▪ Tractor rollers | ▪ Mine car wheels |
| ▪ Idlers | ▪ Track rails |
| ▪ Trunnions | ▪ Shafts |
| ▪ Crane wheels | ▪ Bearing journals |
| ▪ Caster rolls | |

RECOMMENDED FLUXES

Primary Flux	Secondary Flux ⁽¹⁾
801	802, 880

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	ED019880	ED019883
1/8 (3.2)	ED019881	ED019884
5/32 (4.0)		ED019885

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
39

DEPOSIT COMPOSITION⁽¹⁾

	%C	%Mn	%Si	%Cr	%Mo
With Recommended Neutral Flux	0.19	1.7	0.60	2.0	0.50

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)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.3 (50)	28	340	3.6 (8.0)
	2.5 (100)	28	500	7.5 (16.5)
	3.8 (150)	28	660	11.3 (25.0)

⁽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/m ³ maximum exposure guideline for general welding fume.
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LINCORE® 40-S

Metal-to-Metal

KEY FEATURES

- Designed for rebuilding heavy equipment undercarriages
- Deposit is machinable and hot forgeable and resists rolling and sliding metal-to-metal wear
- Use on carbon and low alloy steels for good puddle control on roundabout welding
- Limited to 4 layers

TYPICAL APPLICATIONS

- Idlers
- Drive sprockets
- Mine car wheels

RECOMMENDED FLUXES

Primary Flux	Secondary Flux ⁽¹⁾
801	802, 880

⁽¹⁾ 802 and 880 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
1/8 (3.2)	ED015892	ED015909

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c) 3 or More Layers After 2 Hours Post Weld Heat Treat
39 - 42

DEPOSIT COMPOSITION⁽¹⁾

	%C	%Mn	%Si	%Cr	%Mo
With Recommended Neutral Flux	0.12	2.75	0.50	3.30	0.85

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)
1/8 in (3.2 mm), DC+ 1-1/4 (32)	1.7 (65)	27	330	4.4 (9.6)
	2.3 (90)	28	425	5.9 (12.9)
	3.0 (120)	29	525	7.8 (17.3)
1/8 in (3.2 mm), DC+ 2-1/2 (65)	2.0 (80)	29	345	5.2 (11.5)
	2.8 (110)	30	425	7.3 (16.0)
	3.7 (145)	31	500	9.4 (20.8)
1/8 in (3.2 mm), DC+ 3-1/2 (90)	2.5 (100)	31	375	6.5 (14.3)
	3.3 (130)	32	435	8.6 (18.9)
	4.6 (180)	33	520	11.9 (26.1)

⁽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/m ³ maximum exposure guideline for general welding fume.
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LINCORE® 42-S

Metal-to-Metal

KEY FEATURES

- Designed for rebuilding heavy equipment undercarriages
- The deposit exhibits enhanced crack resistance and toughness compared to Lincore® 40-S
- Intended to resist rolling and sliding metal-to-metal wear
- For automatic and semiautomatic operation

TYPICAL APPLICATIONS

- Tractor rollers
- Tractor idlers
- Track pads

RECOMMENDED FLUXES

Primary Flux	Secondary Flux
801	802, 880

⁽¹⁾ 802 and 880 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	300 lb (136 kg) Speed-Feed® Drum	600 lb (272 kg) Speed-Feed® Drum
1/8 (3.2)	ED029264	ED029161

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)	
1 Layer	
40	

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux	%C	%Mn	%Si	%Cr	%Mo
1/8 in Diameter (3/4 in ESO)					
1 Layer	0.14	2.13	0.34	1.45	0.43
2 Layers	0.12	2.70	0.39	2.22	0.66
4 Layers	0.11	3.33	0.44	2.95	0.84
6 Layers	0.10	3.51	0.46	3.20	0.80
1/8 in Diameter (1-5/8 in ESO)					
1 Layer	0.14	2.49	0.33	2.02	0.60
2 Layers	0.13	3.05	0.42	2.96	0.84
4 Layers	0.13	3.41	0.47	3.15	0.99
6 Layers	0.13	3.55	0.51	3.31	1.06

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)
1/8 in (3.2 mm), DC+ 3/4 (20)	1.3 (50)	27	350	3.8 (8.4)
	2.5 (100)	28	565	7.5 (16.5)
	3.2 (125)	29	675	9.3 (20.5)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.3 (50)	27	325	3.8 (8.3)
	2.5 (100)	28	510	7.5 (16.6)
	3.2 (125)	29	605	9.4 (20.8)

⁽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

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LINCORE® 20

Roll Rebuilding, Build Up

KEY FEATURES

- Metal-cored wire with moderate hardness for build-up before stainless overlay
- Good crack resistance and high compressive strength

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux _____	Secondary Flux ⁽¹⁾ _____
801	802, 880

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	EDS18565	-
1/8 (3.2)	EDS18566	ED018569
5/32 (4.0)	-	EDS18570

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
23 - 28

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux					
%C	%Mn	%Si	%Cr	%Ni	%Mo
0.05	0.60	0.40	1.40	2.40	0.40

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)
3/32 in (2.4 mm), DC+ 3/4 (20)	1.7 (65)	24	270	3.0 (6.7)
	3.0 (120)	28	400	5.6 (12.4)
	4.4 (175)	31	500	8.2 (18.1)
1/8 in (3.2 mm), DC+ 3/4 (20)	1.5 (60)	26	400	4.7 (10.4)
	2.5 (100)	28	550	7.8 (17.3)
	3.6 (140)	30	680	11.0 (24.2)
5/32 in (4.0 mm), DC+ 1-1/2 (38)	1.4 (55)	27	520	6.6 (14.6)
	2.2 (85)	30	725	10.2 (22.5)
	2.9 (115)	32	880	13.8 (30.4)

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LINCORE® 4130

Roll Rebuilding, Build Up

KEY FEATURES

- Metal-cored wire for general build-up
- Can be flame hardened to 38 Rockwell C (R_c)
- Used on mining components such as cable drums, sheaves, gears and shafts

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux _____	Secondary Flux ⁽¹⁾ _____
801	802, 880

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	ED015265	ED015532
1/8 (3.2)	ED015266	ED015405

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R_c)

17 - 21

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux				
%C	%Mn	%Si	%Cr	%Mo
0.12	1.10	0.30	0.80	0.20

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)
3/32 in (2.4 mm), DC+ 3/4 (20)	1.7 (65)	24	300	2.9 (6.5)
	3.0 (120)	28	410	5.4 (12.0)
	4.4 (175)	31	520	7.9 (17.5)
1/8 in (3.2 mm), DC+ 3/4 (20)	1.5 (60)	26	350	3.9 (8.5)
	2.5 (100)	28	465	7.2 (16.0)
	3.6 (140)	30	590	10.6 (23.5)

⁽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

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LINCORE® 8620

Roll Rebuilding, Build Up

KEY FEATURES

- Metal-cored wire for build-up on worn rolls
- A little softer than Lincore® 20 for easier machining

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux	Secondary Flux ⁽¹⁾
801	802, 880

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
1/8 (3.2)	ED020788	ED020791

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
16 - 20

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux					
%C	%Mn	%Si	%Cr	%Ni	%Mo
0.09	0.80	0.30	0.45	0.55	0.15

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)
1/8 in (3.2 mm), DC+ 3/4 (20)	1.5 (60)	26	400	4.7 (10.4)
	2.5 (100)	28	550	7.8 (17.3)
	3.6 (140)	30	680	11.0 (24.2)

⁽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.

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LINCORE® 410

Roll Rebuilding, Metal-to-Metal

KEY FEATURES

- Metal-cored wire with a 410 martensitic stainless steel deposit
- Low carbon content and high corrosion resistance
- Soft and easily machined

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux	Secondary Flux ⁽¹⁾
801	802

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4) 5/32 (4.0)	ED018583	ED018588

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
27 - 32

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux			
%C	%Mn	%Si	%Cr
0.08	0.80	0.40	12.50

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)
3/32 in (2.4 mm), DC+ 3/4 (20)	1.7 (65)	24	250	2.9 (6.5)
	3.0 (120)	28	375	5.4 (12.0)
	4.4 (175)	31	450	7.9 (17.5)
5/32 in (4.0 mm), DC+ 1-1/2 (38)	1.4 (55)	27	475	5.9 (13.1)
	2.2 (85)	30	650	9.2 (20.2)
	2.9 (115)	32	800	12.4 (27.3)

⁽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/m ³ maximum exposure guideline for general welding fume.
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LINCORE® 410NiMo

Roll Rebuilding, Metal-to-Metal

KEY FEATURES

- Metal-cored wire with low carbon deposit, which forms softer, tougher martensite than other roll alloys

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux	Secondary Flux ⁽¹⁾
801	802

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	ED018589	
1/8 (3.2)	ED018590	ED018593
5/32 (4.0)	EDS18591	ED018594

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
32 - 40

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux					
%C	%Mn	%Si	%Cr	%Ni	%Mo
0.05	0.80	0.50	13.00	2.00	1.00

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)
3/32 in (2.4 mm), DC+ 1-1/2 (38)	1.7 (65)	24	250	2.6 (5.8)
	3.0 (120)	28	325	4.9 (10.7)
	4.4 (175)	31	425	7.1 (15.6)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.5 (60)	26	325	4.3 (9.4)
	3.6 (140)	30	575	9.9 (21.8)
5/32 in (4.0 mm), DC+ 1-5/8 (40 mm)	1.4 (55)	27	440	5.8 (12.8)
	2.2 (85)	30	575	9.0 (19.8)
	2.9 (115)	32	700	12.2 (26.8)

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

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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/m ³ maximum exposure guideline for general welding fume.
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LINCORE® 423L

Roll Rebuilding, Metal-to-Metal

KEY FEATURES

- Metal-cored wire, provides a softer "as-welded" deposit than Lincore® 420
- More resistance to softening during tempering above 482°C (900°F)

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux⁽¹⁾
802

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	600 lb (272 kg) Speed-Feed® Drum
1/8 (3.2)	ED018551

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
41-47

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux						
%C	%Mn	%Si	%Cr	%Ni	%Mo	%V
0.15	1.20	0.40	11.50	2.00	1.00	0.15

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)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.5 (60)	26	350	4.2 (9.3)
	2.5 (100)	28	500	7.0 (15.5)
	3.6 (140)	30	610	9.8 (21.7)

⁽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.

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LINCORE® 423CR

Roll Rebuilding, Metal-to-Metal

KEY FEATURES

- Metal-cored wire with a higher chrome deposit than Lincore® 423L for improved corrosion resistance

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux⁽¹⁾

802

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	EDS18553	ED018557
1/8 (3.2)	EDS18554	

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
41-47

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux						
%C	%Mn	%Si	%Cr	%Ni	%Mo	%V
0.15	1.20	0.40	13.50	2.00	1.00	0.15

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)
3/32 in (2.4 mm), DC+ 1-1/2 (38)	1.7 (65)	24	250	2.7 (6.0)
	3.0 (120)	28	350	5.0 (11.0)
	4.4 (175)	31	450	7.3 (16.0)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.5 (60)	26	375	4.5 (9.9)
	2.5 (100)	28	540	7.5 (16.5)
	3.6 (140)	30	640	10.5 (23.1)

⁽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/m ³ maximum exposure guideline for general welding fume.
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LINCORE® 420

Roll Rebuilding, Metal-to-Metal

KEY FEATURES

- Metal-cored wire that is most widely used for caster roll rebuilding

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux	Secondary Flux
801	802

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	ED015260	ED015261
1/8 (3.2)	ED015262	ED015268
5/32 (4.0)		ED015264

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
46-50

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux			
%C	%Mn	%Si	%Cr
0.20	1.20	0.50	12.00

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)
3/32 in (2.4 mm), DC+ 1-1/2 (38)	1.7 (65)	24	250	2.9 (6.5)
	3.0 (120)	28	375	5.4 (12.0)
	4.4 (175)	31	450	7.9 (17.5)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.5 (60)	26	350	4.3 (9.5)
	2.5 (100)	28	500	7.2 (15.8)
	3.6 (140)	30	625	10.0 (22.1)
5/32 in (4.0 mm), DC+ 1-5/8 (40)	1.4 (55)	27	475	5.9 (13.1)
	2.2 (85)	30	650	9.2 (20.2)
	2.9 (115)	32	800	12.4 (27.3)

⁽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/m ³ maximum exposure guideline for general welding fume.
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LINCORE® 414N

Roll Rebuilding, Metal-to-Metal

RECOMMENDED FLUX

Current, Amp. DC+:	400-500
Voltage:	26-30
Wire Extension:	1 1/4" - 1 1/2"

TYPICAL APPLICATIONS

- Continuous caster rolls

RECOMMENDED FLUX

Primary Flux	Secondary Flux
802	801

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
1/8 (3.2)	ED034257	ED034258

DEPOSIT COMPOSITION⁽¹⁾

%C	%Mn	%Cr	%Si	%Mo	%Ni	%N	Avg HRC
0.05	1.20	12.80	0.50	0.67	3.40	0.09	38

⁽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.

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LINCORE® 423N

Roll Rebuilding, Metal-to-Metal

RECOMMENDED FLUX

Current, Amp. DC+:	400-500
Voltage:	26-30
Wire Extension:	1 1/4" - 1 1/2"

TYPICAL APPLICATIONS

- Higher Wear Continuous caster rolls

RECOMMENDED FLUX

Primary Flux	Secondary Flux
802	801

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
1/8 (3.2)	ED036012	ED036013

DEPOSIT COMPOSITION⁽¹⁾

%C	%Mn	%Cr	%Si	%Mo	%Ni	%V	%W	%N	Avg HRC
0.06	1.86	11.71	0.62	1.40	3.77	0.29	0.27	0.08	42

⁽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.

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LINCORE® 96-S

Roll Rebuilding, Metal-to-Metal

KEY FEATURES

- Metal-cored wire which produces a high carbon, 420 stainless steel deposit
- Use where a higher hardness is required
- Can be used on work rolls and backup rolls when water spray causes pitting on tool steel deposits

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux _____	Secondary Flux _____
801	802

DIAMETERS / PACKAGING

Diameter in (mm)	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	ED018574
1/8 (3.2)	ED018575
5/32 (4.0)	ED018576

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
48-54

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux				
%C	%Mn	%Si	%Cr	%Ni
0.23	1.20	0.40	13.00	0.20

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)
3/32 in (2.4 mm), DC+ 1-1/2 (38)	1.7 (65)	24	250	2.6 (5.7)
	2.5 (100)	28	525	7.1 (15.7)
	4.4 (175)	31	450	7.0 (15.5)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.5 (60)	26	360	4.3 (9.4)
	2.5 (100)	28	525	7.1 (15.7)
	3.6 (140)	30	635	10.0 (22.0)
5/32 in (4.0 mm), DC+ 1-5/8 (40)	1.4 (55)	27	450	5.9 (12.9)
	2.2 (85)	30	650	9.1 (20.0)
	2.9 (115)	32	775	12.3 (27.1)

⁽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/m ³ maximum exposure guideline for general welding fume.
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LINCORE® 102W

Roll Rebuilding, Metal-to-Metal

KEY FEATURES

- Metal-cored wire which produces a tool steel deposit that retains hardness at high working temperatures
- Used for guide rolls, and work rolls
- Can also be used as the seat on blast furnace bells and hoppers

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux ⁽¹⁾	Secondary Flux
802	801

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	ED018578	ED018580
1/8 (3.2)		ED018581
5/32 (4.0)		ED018582

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
48-54

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux						
%C	%Mn	%Si	%Cr	%Mo	%V	%W
0.28	1.50	0.40	6.50	1.00	0.15	1.00

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)
3/32 in (2.4 mm), DC+ 1-5/8 (40)	1.7 (65)	24	240	2.8 (6.2)
	3.0 (120)	28	400	5.2 (11.5)
	4.4 (175)	31	500	7.6 (16.8)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.5 (60)	26	390	4.4 (9.8)
	2.5 (100)	28	540	7.4 (16.4)
	3.6 (140)	30	680	10.4 (23.0)
5/32 in (4.0 mm), DC+ 1-5/8 (40)	1.4 (55)	27	500	6.4 (14.2)
	2.2 (85)	30	685	9.9 (21.9)
	2.9 (115)	32	850	13.4 (29.6)

⁽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/m ³ maximum exposure guideline for general welding fume.
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LINCORE® 102HC

Roll Rebuilding, Metal-to-Metal

KEY FEATURES

- Metal-cored wire with a higher carbon content than Lincore® 102W
- Will give a higher hardness tool steel deposit
- Deposit is "hot" [above 204 °C (400 °F)] machinable, for easy sizing after welding

TYPICAL APPLICATIONS

- Caster rolls

RECOMMENDED FLUX

Primary Flux ⁽¹⁾	Secondary Flux
802	801

⁽¹⁾ 802 and 860 standard flux are not sized for semiautomatic applications; however, they can be ordered in special sizing by contacting your Lincoln Electric representative.

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	600 lb (272 kg) Speed-Feed® Drum
3/32 (2.4)	ED026085	ED026086
1/8 (3.2)		ED026087

MECHANICAL PROPERTIES⁽¹⁾

Rockwell Hardness (R _c)
54 - 60

DEPOSIT COMPOSITION⁽¹⁾

With Recommended Neutral Flux						
%C	%Mn	%Si	%Cr	%Mo	%V	%W
0.40	2.10	1.60	6.70	1.60	0.20	1.30

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)
3/32 in (2.4 mm), DC+ 1-1/2 (38)	1.7 (65)	24	240	2.8 (6.2)
	3.0 (120)	28	400	5.2 (11.5)
	4.4 (175)	31	500	7.6 (16.8)
1/8 in (3.2 mm), DC+ 1-5/8 (40)	1.5 (60)	26	390	4.4 (9.8)
	2.5 (100)	28	540	7.4 (16.4)
	3.6 (140)	30	680	10.4 (23.0)

⁽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/m ³ maximum exposure guideline for general welding fume.
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