

Spoolarc 29S

Spoolarc 29S is a general purpose copper-coated solid wire suitable for many carbon steel welding applications using the MIG/Gas Metal Arc Welding (GMAW). Spoolarc 29S contains moderate amounts of manganese and silicon to provide sufficient deoxidation over light mill scale. Shielding gas choices for Spoolarc 29S in the GMAW mode are 100% carbon dioxide, argon/carbon dioxide mixtures, argon/oxygen mixtures, and other argon based mixed gas blends. Spoolarc 29S is used in a wide variety of applications including heavy equipment, automotive parts, railcars, agricultural equipment, and sheet metal welding.

Specifications

Classifications	AWS A5.18 : ER70S-3
Approvals	ABS : 3SA, 3YSA CWB : CAN/CSA-ISO14341,B-G 49A 2C G3 (ER49S-3) CWB : CSA W48
Industry	Mobile Equipment Industrial and General Fabrication Civil Construction Automotive

Approvals are based on factory location. Please contact ESAB for more information.

Tensile Properties

Testing Condition	Yield Strength	Tensile Strength	Elongation
75% Ar - 25% CO₂			
As Welded	489.5 MPa (71 ksi)	586 MPa (85 ksi)	21 %
90% Ar - 10% CO₂			
As Welded	496 MPa (72 ksi)	586 MPa (85 ksi)	22 %

Charpy Testing

Testing Condition	Testing Temp	Impact Value
75% Ar - 25% CO₂		
As Welded	-40 °C (-40 °F)	81 J (60 ft-lb)
As Welded	-29 °C (-20 °F)	99 J (73 ft-lb)
As Welded	-45 °C (-50 °F)	79 J (58 ft-lb)
90% Ar - 10% CO₂		
As Welded	-45 °C (-50 °F)	88 J (65 ft-lb)
As Welded	-40 °C (-40 °F)	114 J (84 ft-lb)
As Welded	-29 °C (-20 °F)	130 J (96 ft-lb)

Typical Wire Composition %

C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
0.09	1.18	0.54	0.007	0.015	0.04	0.04	0.01	0.004	0.04

Deposition Data

Diameter	Amps	Efficiency (Per)	Deposition Rate
100% CO₂			
1.2 mm (.045 in.)	200 A	93 %	2.40 kg/h (5.3 lbs/h)
0.8 mm (.030 in.)	150 A	98 %	1.86 kg/h (4.1 lbs/h)
0.9 mm (.035 in.)	200 A	96 %	2.72 kg/h (6.0 lbs/h)
1.2 mm (.045 in.)	250 A	98 %	3.58 kg/h (7.8 lbs/h)
1.6 mm (1/16 in.)	350 A	98 %	5.13 kg/h (11.3 lbs/h)
1.6 mm (1/16 in.)	400 A	96 %	6.21 kg/h (13.7 lbs/h)
0.8 mm (.030 in.)	75 A	96 %	0.86 kg/h (1.9 lbs/h)
1.6 mm (1/16 in.)	250 A	98 %	2.95 kg/h (6.5 lbs/h)
0.9 mm (.035 in.)	150 A	98 %	1.90 kg/h (4.2 lbs/h)

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Deposition Data

Diameter	Amps	Efficiency (Per)	Deposition Rate
1.6 mm (1/16 in.)	300 A	93 %	3.86 kg/h (8.5 lbs/h)
1.2 mm (.045 in.)	200 A	98 %	2.54 kg/h (5.6 lbs/h)
1.2 mm (.045 in.)	100 A	98 %	0.95 kg/h (2.1 lbs/h)
1.6 mm (1/16 in.)	350 A	93 %	4.85 kg/h (10.7 lbs/h)
1.2 mm (.045 in.)	150 A	93 %	1.54 kg/h (3.4 lbs/h)
1.2 mm (.045 in.)	350 A	93 %	5.67 kg/h (12.5 lbs/h)
1.6 mm (1/16 in.)	450 A	93 %	7.48 kg/h (16.5 lbs/h)
0.8 mm (.030 in.)	75 A	98 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	125 A	93 %	1.22 kg/h (2.7 lbs/h)
1.2 mm (.045 in.)	250 A	96 %	3.45 kg/h (7.6 lbs/h)
0.9 mm (.035 in.)	200 A	98 %	2.81 kg/h (6.2 lbs/h)
0.8 mm (.030 in.)	200 A	93 %	2.95 kg/h (6.5 lbs/h)
0.9 mm (.035 in.)	80 A	96 %	0.95 kg/h (2.1 lbs/h)
1.6 mm (1/16 in.)	400 A	93 %	6.03 kg/h (13.3 lbs/h)
1.2 mm (.045 in.)	100 A	93 %	0.86 kg/h (1.9 lbs/h)
1.6 mm (1/16 in.)	275 A	96 %	3.45 kg/h (7.6 lbs/h)
1.6 mm (1/16 in.)	450 A	96 %	7.76 kg/h (17.1 lbs/h)
1.6 mm (1/16 in.)	350 A	96 %	6.21 kg/h (11.0 lbs/h)
1.2 mm (.045 in.)	350 A	96 %	5.85 kg/h (12.9 lbs/h)
0.8 mm (.030 in.)	200 A	98 %	3.08 kg/h (6.8 lbs/h)
1.6 mm (1/16 in.)	450 A	98 %	7.89 kg/h (17.4 lbs/h)
0.9 mm (.035 in.)	200 A	93 %	2.68 kg/h (5.9 lbs/h)
0.9 mm (.035 in.)	80 A	98 %	1.00 kg/h (2.2 lbs/h)
0.8 mm (.030 in.)	100 A	93 %	1.13 kg/h (2.5 lbs/h)
0.9 mm (.035 in.)	100 A	98 %	1.22 kg/h (2.7 lbs/h)
0.8 mm (.030 in.)	200 A	96 %	3.04 kg/h (6.7 lbs/h)
1.2 mm (.045 in.)	350 A	98 %	5.99 kg/h (13.2 lbs/h)
0.8 mm (.030 in.)	150 A	93 %	1.77 kg/h (3.9 lbs/h)
1.6 mm (1/16 in.)	275 A	98 %	3.49 kg/h (7.7 lbs/h)
1.2 mm (.045 in.)	200 A	96 %	2.49 kg/h (5.5 lbs/h)
1.2 mm (.045 in.)	300 A	96 %	4.53 kg/h (10.0 lbs/h)
0.8 mm (.030 in.)	100 A	98 %	1.18 kg/h (2.6 lbs/h)
0.8 mm (.030 in.)	75 A	93 %	0.82 kg/h (1.8 lbs/h)
0.9 mm (.035 in.)	150 A	96 %	1.86 kg/h (4.1 lbs/h)
1.6 mm (1/16 in.)	250 A	96 %	2.90 kg/h (6.4 lbs/h)
0.9 mm (.035 in.)	250 A	93 %	3.90 kg/h (8.6 lbs/h)
0.9 mm (.035 in.)	250 A	98 %	4.08 kg/h (9.0 lbs/h)
0.9 mm (.035 in.)	80 A	93 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	300 A	98 %	4.63 kg/h (10.2 lbs/h)
1.6 mm (1/16 in.)	400 A	98 %	6.35 kg/h (14.0 lbs/h)
1.2 mm (.045 in.)	150 A	98 %	1.63 kg/h (3.6 lbs/h)
0.8 mm (.030 in.)	100 A	96 %	1.18 kg/h (2.6 lbs/h)
1.2 mm (.045 in.)	300 A	93 %	4.40 kg/h (9.7 lbs/h)
0.9 mm (.035 in.)	250 A	96 %	3.09 kg/h (8.8 lbs/h)
1.6 mm (1/16 in.)	250 A	93 %	2.81 kg/h (6.2 lbs/h)
1.6 mm (1/16 in.)	300 A	96 %	3.99 kg/h (8.8 lbs/h)
1.2 mm (.045 in.)	100 A	96 %	0.91 kg/h (2.0 lbs/h)

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Deposition Data

Diameter	Amps	Efficiency (Per)	Deposition Rate
1.2 mm (.045 in.)	250 A	93 %	3.36 kg/h (7.4 lbs/h)
1.6 mm (1/16 in.)	275 A	93 %	3.31 kg/h (7.3 lbs/h)
1.6 mm (1/16 in.)	300 A	98 %	4.08 kg/h (9.0 lbs/h)
0.9 mm (.035 in.)	100 A	96 %	1.22 kg/h (2.7 lbs/h)
1.2 mm (.045 in.)	125 A	96 %	1.27 kg/h (2.8 lbs/h)
0.9 mm (.035 in.)	100 A	93 %	1.18 kg/h (2.6 lbs/h)
1.2 mm (.045 in.)	150 A	96 %	1.59 kg/h (3.5 lbs/h)
0.9 mm (.035 in.)	150 A	93 %	1.81 kg/h (4.0 lbs/h)
0.8 mm (.030 in.)	150 A	96 %	1.81 kg/h (4.0 lbs/h)
1.2 mm (.045 in.)	125 A	98 %	1.27 kg/h (2.8 lbs/h)
1.2 mm (.045 in.)	200 A	93 %	2.40 kg/h (5.3 lbs/h)
0.8 mm (.030 in.)	150 A	98 %	1.86 kg/h (4.1 lbs/h)
0.9 mm (.035 in.)	200 A	96 %	2.72 kg/h (6.0 lbs/h)
1.2 mm (.045 in.)	250 A	98 %	3.58 kg/h (7.8 lbs/h)
1.6 mm (1/16 in.)	350 A	98 %	5.13 kg/h (11.3 lbs/h)
1.6 mm (1/16 in.)	400 A	96 %	6.21 kg/h (13.7 lbs/h)
0.8 mm (.030 in.)	75 A	96 %	0.86 kg/h (1.9 lbs/h)
1.6 mm (1/16 in.)	250 A	98 %	2.95 kg/h (6.5 lbs/h)
0.9 mm (.035 in.)	150 A	98 %	1.90 kg/h (4.2 lbs/h)
1.6 mm (1/16 in.)	300 A	93 %	3.86 kg/h (8.5 lbs/h)
1.2 mm (.045 in.)	200 A	98 %	2.54 kg/h (5.6 lbs/h)
1.2 mm (.045 in.)	100 A	98 %	0.95 kg/h (2.1 lbs/h)
1.6 mm (1/16 in.)	350 A	93 %	4.85 kg/h (10.7 lbs/h)
1.2 mm (.045 in.)	150 A	93 %	1.54 kg/h (3.4 lbs/h)
1.2 mm (.045 in.)	350 A	93 %	5.67 kg/h (12.5 lbs/h)
1.6 mm (1/16 in.)	450 A	93 %	7.48 kg/h (16.5 lbs/h)
0.8 mm (.030 in.)	75 A	98 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	125 A	93 %	1.22 kg/h (2.7 lbs/h)
1.2 mm (.045 in.)	250 A	96 %	3.45 kg/h (7.6 lbs/h)
0.9 mm (.035 in.)	200 A	98 %	2.81 kg/h (6.2 lbs/h)
0.8 mm (.030 in.)	200 A	93 %	2.95 kg/h (6.5 lbs/h)
0.9 mm (.035 in.)	80 A	96 %	0.95 kg/h (2.1 lbs/h)
1.6 mm (1/16 in.)	400 A	93 %	6.03 kg/h (13.3 lbs/h)
1.2 mm (.045 in.)	100 A	93 %	0.86 kg/h (1.9 lbs/h)
1.6 mm (1/16 in.)	275 A	96 %	3.45 kg/h (7.6 lbs/h)
1.6 mm (1/16 in.)	450 A	96 %	7.76 kg/h (17.1 lbs/h)
1.6 mm (1/16 in.)	350 A	96 %	6.21 kg/h (11.0 lbs/h)
1.2 mm (.045 in.)	350 A	96 %	5.85 kg/h (12.9 lbs/h)
0.8 mm (.030 in.)	200 A	98 %	3.08 kg/h (6.8 lbs/h)
1.6 mm (1/16 in.)	450 A	98 %	7.89 kg/h (17.4 lbs/h)
0.9 mm (.035 in.)	200 A	93 %	2.68 kg/h (5.9 lbs/h)
0.9 mm (.035 in.)	80 A	98 %	1.00 kg/h (2.2 lbs/h)
0.8 mm (.030 in.)	100 A	93 %	1.13 kg/h (2.5 lbs/h)
0.9 mm (.035 in.)	100 A	98 %	1.22 kg/h (2.7 lbs/h)
0.8 mm (.030 in.)	200 A	96 %	3.04 kg/h (6.7 lbs/h)
1.2 mm (.045 in.)	350 A	98 %	5.99 kg/h (13.2 lbs/h)
0.8 mm (.030 in.)	150 A	93 %	1.77 kg/h (3.9 lbs/h)

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Deposition Data

Diameter	Amps	Efficiency (Per)	Deposition Rate
1.6 mm (1/16 in.)	275 A	98 %	3.49 kg/h (7.7 lbs/h)
1.2 mm (.045 in.)	200 A	96 %	2.49 kg/h (5.5 lbs/h)
1.2 mm (.045 in.)	300 A	96 %	4.53 kg/h (10.0 lbs/h)
0.8 mm (.030 in.)	100 A	98 %	1.18 kg/h (2.6 lbs/h)
0.8 mm (.030 in.)	75 A	93 %	0.82 kg/h (1.8 lbs/h)
0.9 mm (.035 in.)	150 A	96 %	1.86 kg/h (4.1 lbs/h)
1.6 mm (1/16 in.)	250 A	96 %	2.90 kg/h (6.4 lbs/h)
0.9 mm (.035 in.)	250 A	93 %	3.90 kg/h (8.6 lbs/h)
0.9 mm (.035 in.)	250 A	98 %	4.08 kg/h (9.0 lbs/h)
0.9 mm (.035 in.)	80 A	93 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	300 A	98 %	4.63 kg/h (10.2 lbs/h)
1.6 mm (1/16 in.)	400 A	98 %	6.35 kg/h (14.0 lbs/h)
1.2 mm (.045 in.)	150 A	98 %	1.63 kg/h (3.6 lbs/h)
0.8 mm (.030 in.)	100 A	96 %	1.18 kg/h (2.6 lbs/h)
1.2 mm (.045 in.)	300 A	93 %	4.40 kg/h (9.7 lbs/h)
0.9 mm (.035 in.)	250 A	96 %	3.09 kg/h (8.8 lbs/h)
1.6 mm (1/16 in.)	250 A	93 %	2.81 kg/h (6.2 lbs/h)
1.6 mm (1/16 in.)	300 A	96 %	3.99 kg/h (8.8 lbs/h)
1.2 mm (.045 in.)	100 A	96 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	250 A	93 %	3.36 kg/h (7.4 lbs/h)
1.6 mm (1/16 in.)	275 A	93 %	3.31 kg/h (7.3 lbs/h)
1.6 mm (1/16 in.)	300 A	98 %	4.08 kg/h (9.0 lbs/h)
0.9 mm (.035 in.)	100 A	96 %	1.22 kg/h (2.7 lbs/h)
1.2 mm (.045 in.)	125 A	96 %	1.27 kg/h (2.8 lbs/h)
0.9 mm (.035 in.)	100 A	93 %	1.18 kg/h (2.6 lbs/h)
1.2 mm (.045 in.)	150 A	96 %	1.59 kg/h (3.5 lbs/h)
0.9 mm (.035 in.)	150 A	93 %	1.81 kg/h (4.0 lbs/h)
0.8 mm (.030 in.)	150 A	96 %	1.81 kg/h (4.0 lbs/h)
1.2 mm (.045 in.)	125 A	98 %	1.27 kg/h (2.8 lbs/h)
75% Ar - 25% CO2			
1.2 mm (.045 in.)	200 A	93 %	2.40 kg/h (5.3 lbs/h)
0.8 mm (.030 in.)	150 A	98 %	1.86 kg/h (4.1 lbs/h)
0.9 mm (.035 in.)	200 A	96 %	2.72 kg/h (6.0 lbs/h)
1.2 mm (.045 in.)	250 A	98 %	3.58 kg/h (7.8 lbs/h)
1.6 mm (1/16 in.)	350 A	98 %	5.13 kg/h (11.3 lbs/h)
1.6 mm (1/16 in.)	400 A	96 %	6.21 kg/h (13.7 lbs/h)
0.8 mm (.030 in.)	75 A	96 %	0.86 kg/h (1.9 lbs/h)
1.6 mm (1/16 in.)	250 A	98 %	2.95 kg/h (6.5 lbs/h)
0.9 mm (.035 in.)	150 A	98 %	1.90 kg/h (4.2 lbs/h)
1.6 mm (1/16 in.)	300 A	93 %	3.86 kg/h (8.5 lbs/h)
1.2 mm (.045 in.)	200 A	98 %	2.54 kg/h (5.6 lbs/h)
1.2 mm (.045 in.)	100 A	98 %	0.95 kg/h (2.1 lbs/h)
1.6 mm (1/16 in.)	350 A	93 %	4.85 kg/h (10.7 lbs/h)
1.2 mm (.045 in.)	150 A	93 %	1.54 kg/h (3.4 lbs/h)
1.2 mm (.045 in.)	350 A	93 %	5.67 kg/h (12.5 lbs/h)
1.6 mm (1/16 in.)	450 A	93 %	7.48 kg/h (16.5 lbs/h)
0.8 mm (.030 in.)	75 A	98 %	0.91 kg/h (2.0 lbs/h)

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Deposition Data

Diameter	Amps	Efficiency (Per)	Deposition Rate
1.2 mm (.045 in.)	125 A	93 %	1.22 kg/h (2.7 lbs/h)
1.2 mm (.045 in.)	250 A	96 %	3.45 kg/h (7.6 lbs/h)
0.9 mm (.035 in.)	200 A	98 %	2.81 kg/h (6.2 lbs/h)
0.8 mm (.030 in.)	200 A	93 %	2.95 kg/h (6.5 lbs/h)
0.9 mm (.035 in.)	80 A	96 %	0.95 kg/h (2.1 lbs/h)
1.6 mm (1/16 in.)	400 A	93 %	6.03 kg/h (13.3 lbs/h)
1.2 mm (.045 in.)	100 A	93 %	0.86 kg/h (1.9 lbs/h)
1.6 mm (1/16 in.)	275 A	96 %	3.45 kg/h (7.6 lbs/h)
1.6 mm (1/16 in.)	450 A	96 %	7.76 kg/h (17.1 lbs/h)
1.6 mm (1/16 in.)	350 A	96 %	6.21 kg/h (11.0 lbs/h)
1.2 mm (.045 in.)	350 A	96 %	5.85 kg/h (12.9 lbs/h)
0.8 mm (.030 in.)	200 A	98 %	3.08 kg/h (6.8 lbs/h)
1.6 mm (1/16 in.)	450 A	98 %	7.89 kg/h (17.4 lbs/h)
0.9 mm (.035 in.)	200 A	93 %	2.68 kg/h (5.9 lbs/h)
0.9 mm (.035 in.)	80 A	98 %	1.00 kg/h (2.2 lbs/h)
0.8 mm (.030 in.)	100 A	93 %	1.13 kg/h (2.5 lbs/h)
0.9 mm (.035 in.)	100 A	98 %	1.22 kg/h (2.7 lbs/h)
0.8 mm (.030 in.)	200 A	96 %	3.04 kg/h (6.7 lbs/h)
1.2 mm (.045 in.)	350 A	98 %	5.99 kg/h (13.2 lbs/h)
0.8 mm (.030 in.)	150 A	93 %	1.77 kg/h (3.9 lbs/h)
1.6 mm (1/16 in.)	275 A	98 %	3.49 kg/h (7.7 lbs/h)
1.2 mm (.045 in.)	200 A	96 %	2.49 kg/h (5.5 lbs/h)
1.2 mm (.045 in.)	300 A	96 %	4.53 kg/h (10.0 lbs/h)
0.8 mm (.030 in.)	100 A	98 %	1.18 kg/h (2.6 lbs/h)
0.8 mm (.030 in.)	75 A	93 %	0.82 kg/h (1.8 lbs/h)
0.9 mm (.035 in.)	150 A	96 %	1.86 kg/h (4.1 lbs/h)
1.6 mm (1/16 in.)	250 A	96 %	2.90 kg/h (6.4 lbs/h)
0.9 mm (.035 in.)	250 A	93 %	3.90 kg/h (8.6 lbs/h)
0.9 mm (.035 in.)	250 A	98 %	4.08 kg/h (9.0 lbs/h)
0.9 mm (.035 in.)	80 A	93 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	300 A	98 %	4.63 kg/h (10.2 lbs/h)
1.6 mm (1/16 in.)	400 A	98 %	6.35 kg/h (14.0 lbs/h)
1.2 mm (.045 in.)	150 A	98 %	1.63 kg/h (3.6 lbs/h)
0.8 mm (.030 in.)	100 A	96 %	1.18 kg/h (2.6 lbs/h)
1.2 mm (.045 in.)	300 A	93 %	4.40 kg/h (9.7 lbs/h)
0.9 mm (.035 in.)	250 A	96 %	3.09 kg/h (8.8 lbs/h)
1.6 mm (1/16 in.)	250 A	93 %	2.81 kg/h (6.2 lbs/h)
1.6 mm (1/16 in.)	300 A	96 %	3.99 kg/h (8.8 lbs/h)
1.2 mm (.045 in.)	100 A	96 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	250 A	93 %	3.36 kg/h (7.4 lbs/h)
1.6 mm (1/16 in.)	275 A	93 %	3.31 kg/h (7.3 lbs/h)
1.6 mm (1/16 in.)	300 A	98 %	4.08 kg/h (9.0 lbs/h)
0.9 mm (.035 in.)	100 A	96 %	1.22 kg/h (2.7 lbs/h)
1.2 mm (.045 in.)	125 A	96 %	1.27 kg/h (2.8 lbs/h)
0.9 mm (.035 in.)	100 A	93 %	1.18 kg/h (2.6 lbs/h)
1.2 mm (.045 in.)	150 A	96 %	1.59 kg/h (3.5 lbs/h)
0.9 mm (.035 in.)	150 A	93 %	1.81 kg/h (4.0 lbs/h)

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Deposition Data

Diameter	Amps	Efficiency (Per)	Deposition Rate
0.8 mm (.030 in.)	150 A	96 %	1.81 kg/h (4.0 lbs/h)
1.2 mm (.045 in.)	125 A	98 %	1.27 kg/h (2.8 lbs/h)
92% Ar - 8% CO₂			
1.2 mm (.045 in.)	200 A	93 %	2.40 kg/h (5.3 lbs/h)
0.8 mm (.030 in.)	150 A	98 %	1.86 kg/h (4.1 lbs/h)
0.9 mm (.035 in.)	200 A	96 %	2.72 kg/h (6.0 lbs/h)
1.2 mm (.045 in.)	250 A	98 %	3.58 kg/h (7.8 lbs/h)
1.6 mm (1/16 in.)	350 A	98 %	5.13 kg/h (11.3 lbs/h)
1.6 mm (1/16 in.)	400 A	96 %	6.21 kg/h (13.7 lbs/h)
0.8 mm (.030 in.)	75 A	96 %	0.86 kg/h (1.9 lbs/h)
1.6 mm (1/16 in.)	250 A	98 %	2.95 kg/h (6.5 lbs/h)
0.9 mm (.035 in.)	150 A	98 %	1.90 kg/h (4.2 lbs/h)
1.6 mm (1/16 in.)	300 A	93 %	3.86 kg/h (8.5 lbs/h)
1.2 mm (.045 in.)	200 A	98 %	2.54 kg/h (5.6 lbs/h)
1.2 mm (.045 in.)	100 A	98 %	0.95 kg/h (2.1 lbs/h)
1.6 mm (1/16 in.)	350 A	93 %	4.85 kg/h (10.7 lbs/h)
1.2 mm (.045 in.)	150 A	93 %	1.54 kg/h (3.4 lbs/h)
1.2 mm (.045 in.)	350 A	93 %	5.67 kg/h (12.5 lbs/h)
1.6 mm (1/16 in.)	450 A	93 %	7.48 kg/h (16.5 lbs/h)
0.8 mm (.030 in.)	75 A	98 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	125 A	93 %	1.22 kg/h (2.7 lbs/h)
1.2 mm (.045 in.)	250 A	96 %	3.45 kg/h (7.6 lbs/h)
0.9 mm (.035 in.)	200 A	98 %	2.81 kg/h (6.2 lbs/h)
0.8 mm (.030 in.)	200 A	93 %	2.95 kg/h (6.5 lbs/h)
0.9 mm (.035 in.)	80 A	96 %	0.95 kg/h (2.1 lbs/h)
1.6 mm (1/16 in.)	400 A	93 %	6.03 kg/h (13.3 lbs/h)
1.2 mm (.045 in.)	100 A	93 %	0.86 kg/h (1.9 lbs/h)
1.6 mm (1/16 in.)	275 A	96 %	3.45 kg/h (7.6 lbs/h)
1.6 mm (1/16 in.)	450 A	96 %	7.76 kg/h (17.1 lbs/h)
1.6 mm (1/16 in.)	350 A	96 %	6.21 kg/h (11.0 lbs/h)
1.2 mm (.045 in.)	350 A	96 %	5.85 kg/h (12.9 lbs/h)
0.8 mm (.030 in.)	200 A	98 %	3.08 kg/h (6.8 lbs/h)
1.6 mm (1/16 in.)	450 A	98 %	7.89 kg/h (17.4 lbs/h)
0.9 mm (.035 in.)	200 A	93 %	2.68 kg/h (5.9 lbs/h)
0.9 mm (.035 in.)	80 A	98 %	1.00 kg/h (2.2 lbs/h)
0.8 mm (.030 in.)	100 A	93 %	1.13 kg/h (2.5 lbs/h)
0.9 mm (.035 in.)	100 A	98 %	1.22 kg/h (2.7 lbs/h)
0.8 mm (.030 in.)	200 A	96 %	3.04 kg/h (6.7 lbs/h)
1.2 mm (.045 in.)	350 A	98 %	5.99 kg/h (13.2 lbs/h)
0.8 mm (.030 in.)	150 A	93 %	1.77 kg/h (3.9 lbs/h)
1.6 mm (1/16 in.)	275 A	98 %	3.49 kg/h (7.7 lbs/h)
1.2 mm (.045 in.)	200 A	96 %	2.49 kg/h (5.5 lbs/h)
1.2 mm (.045 in.)	300 A	96 %	4.53 kg/h (10.0 lbs/h)
0.8 mm (.030 in.)	100 A	98 %	1.18 kg/h (2.6 lbs/h)
0.8 mm (.030 in.)	75 A	93 %	0.82 kg/h (1.8 lbs/h)
0.9 mm (.035 in.)	150 A	96 %	1.86 kg/h (4.1 lbs/h)
1.6 mm (1/16 in.)	250 A	96 %	2.90 kg/h (6.4 lbs/h)

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Deposition Data

Diameter	Amps	Efficiency (Per)	Deposition Rate
0.9 mm (.035 in.)	250 A	93 %	3.90 kg/h (8.6 lbs/h)
0.9 mm (.035 in.)	250 A	98 %	4.08 kg/h (9.0 lbs/h)
0.9 mm (.035 in.)	80 A	93 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	300 A	98 %	4.63 kg/h (10.2 lbs/h)
1.6 mm (1/16 in.)	400 A	98 %	6.35 kg/h (14.0 lbs/h)
1.2 mm (.045 in.)	150 A	98 %	1.63 kg/h (3.6 lbs/h)
0.8 mm (.030 in.)	100 A	96 %	1.18 kg/h (2.6 lbs/h)
1.2 mm (.045 in.)	300 A	93 %	4.40 kg/h (9.7 lbs/h)
0.9 mm (.035 in.)	250 A	96 %	3.09 kg/h (8.8 lbs/h)
1.6 mm (1/16 in.)	250 A	93 %	2.81 kg/h (6.2 lbs/h)
1.6 mm (1/16 in.)	300 A	96 %	3.99 kg/h (8.8 lbs/h)
1.2 mm (.045 in.)	100 A	96 %	0.91 kg/h (2.0 lbs/h)
1.2 mm (.045 in.)	250 A	93 %	3.36 kg/h (7.4 lbs/h)
1.6 mm (1/16 in.)	275 A	93 %	3.31 kg/h (7.3 lbs/h)
1.6 mm (1/16 in.)	300 A	98 %	4.08 kg/h (9.0 lbs/h)
0.9 mm (.035 in.)	100 A	96 %	1.22 kg/h (2.7 lbs/h)
1.2 mm (.045 in.)	125 A	96 %	1.27 kg/h (2.8 lbs/h)
0.9 mm (.035 in.)	100 A	93 %	1.18 kg/h (2.6 lbs/h)
1.2 mm (.045 in.)	150 A	96 %	1.59 kg/h (3.5 lbs/h)
0.9 mm (.035 in.)	150 A	93 %	1.81 kg/h (4.0 lbs/h)
0.8 mm (.030 in.)	150 A	96 %	1.81 kg/h (4.0 lbs/h)
1.2 mm (.045 in.)	125 A	98 %	1.27 kg/h (2.8 lbs/h)

Welding Parameters

Amps	Wire Diameter	Volts	Wire Feed Speed
Short Arc Transfer			
45-90 A	0.6 mm (.023 in.)	14-16 V	381-965 cm/min (150-380 in./min)
70 A	0.6 mm (.023 in.)	15 V	762 cm/min (300 in./min)
110 A	0.6 mm (.023 in.)	23 V	1143 cm/min (450 in./min)
100-125 A	0.6 mm (.023 in.)	23-25 V	1016-1575 cm/min (400-620 in./min)
160-200 A	0.8 mm (.030 in.)	24-26 V	1270-1651 cm/min (500-650 in./min)
60-140 A	0.8 mm (.030 in.)	14-16 V	381-889 cm/min (150-350 in./min)
100 A	0.8 mm (.030 in.)	15 V	559 cm/min (220 in./min)
180 A	0.8 mm (.030 in.)	25 V	1321 cm/min (520 in./min)
90-160 A	0.9 mm (.035 in.)	15-19 V	457-762 cm/min (180-300 in./min)
200 A	0.9 mm (.035 in.)	26 V	1219 cm/min (480 in./min)
180-230 A	0.9 mm (.035 in.)	25-27 V	1016-1397 cm/min (400-550 in./min)

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Welding_Parameters

Amps	Wire Diameter	Volts	Wire Feed Speed
130 A	0.9 mm (.035 in.)	17 V	635 cm/min (250 in./min)
260-340 A	1.2 mm (.045 in.)	25-30 V	762-1270 cm/min (300-500 in./min)
130-200 A	1.2 mm (.045 in.)	17-19 V	318-508 cm/min (125-200 in./min)
160 A	1.2 mm (.045 in.)	18 V	381 cm/min (150 in./min)
300 A	1.2 mm (.045 in.)	27 V	889 cm/min (350 in./min)
160 A	1.4 mm (.052 in.)	18 V	356 cm/min (140 in./min)
150-200 A	1.4 mm (.052 in.)	17-20 V	343-483 cm/min (135-190 in./min)
275-400 A	1.4 mm (.052 in.)	26-33 V	673-991 cm/min (265-390 in./min)
325 A	1.4 mm (.052 in.)	28 V	787 cm/min (310 in./min)
290-400 A	1.6 mm (1/16 in.)	26-36 V	457-711 cm/min (180-280 in./min)
340 A	1.6 mm (1/16 in.)	27 V	508 cm/min (200 in./min)

Spray Transfer Optimum

45-90 A	0.6 mm (.023 in.)	14-16 V	381-965 cm/min (150-380 in./min)
70 A	0.6 mm (.023 in.)	15 V	762 cm/min (300 in./min)
110 A	0.6 mm (.023 in.)	23 V	1143 cm/min (450 in./min)
100-125 A	0.6 mm (.023 in.)	23-25 V	1016-1575 cm/min (400-620 in./min)
160-200 A	0.8 mm (.030 in.)	24-26 V	1270-1651 cm/min (500-650 in./min)
60-140 A	0.8 mm (.030 in.)	14-16 V	381-889 cm/min (150-350 in./min)
100 A	0.8 mm (.030 in.)	15 V	559 cm/min (220 in./min)
180 A	0.8 mm (.030 in.)	25 V	1321 cm/min (520 in./min)
90-160 A	0.9 mm (.035 in.)	15-19 V	457-762 cm/min (180-300 in./min)
200 A	0.9 mm (.035 in.)	26 V	1219 cm/min (480 in./min)
180-230 A	0.9 mm (.035 in.)	25-27 V	1016-1397 cm/min (400-550 in./min)
130 A	0.9 mm (.035 in.)	17 V	635 cm/min (250 in./min)
260-340 A	1.2 mm (.045 in.)	25-30 V	762-1270 cm/min (300-500 in./min)
130-200 A	1.2 mm (.045 in.)	17-19 V	318-508 cm/min (125-200 in./min)

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Welding_Parameters

Amps	Wire Diameter	Volts	Wire Feed Speed
160 A	1.2 mm (.045 in.)	18 V	381 cm/min (150 in./min)
300 A	1.2 mm (.045 in.)	27 V	889 cm/min (350 in./min)
160 A	1.4 mm (.052 in.)	18 V	356 cm/min (140 in./min)
150-200 A	1.4 mm (.052 in.)	17-20 V	343-483 cm/min (135-190 in./min)
275-400 A	1.4 mm (.052 in.)	26-33 V	673-991 cm/min (265-390 in./min)
325 A	1.4 mm (.052 in.)	28 V	787 cm/min (310 in./min)
290-400 A	1.6 mm (1/16 in.)	26-36 V	457-711 cm/min (180-280 in./min)
340 A	1.6 mm (1/16 in.)	27 V	508 cm/min (200 in./min)
Spray Transfer			
45-90 A	0.6 mm (.023 in.)	14-16 V	381-965 cm/min (150-380 in./min)
70 A	0.6 mm (.023 in.)	15 V	762 cm/min (300 in./min)
110 A	0.6 mm (.023 in.)	23 V	1143 cm/min (450 in./min)
100-125 A	0.6 mm (.023 in.)	23-25 V	1016-1575 cm/min (400-620 in./min)
160-200 A	0.8 mm (.030 in.)	24-26 V	1270-1651 cm/min (500-650 in./min)
60-140 A	0.8 mm (.030 in.)	14-16 V	381-889 cm/min (150-350 in./min)
100 A	0.8 mm (.030 in.)	15 V	559 cm/min (220 in./min)
180 A	0.8 mm (.030 in.)	25 V	1321 cm/min (520 in./min)
90-160 A	0.9 mm (.035 in.)	15-19 V	457-762 cm/min (180-300 in./min)
200 A	0.9 mm (.035 in.)	26 V	1219 cm/min (480 in./min)
180-230 A	0.9 mm (.035 in.)	25-27 V	1016-1397 cm/min (400-550 in./min)
130 A	0.9 mm (.035 in.)	17 V	635 cm/min (250 in./min)
260-340 A	1.2 mm (.045 in.)	25-30 V	762-1270 cm/min (300-500 in./min)
130-200 A	1.2 mm (.045 in.)	17-19 V	318-508 cm/min (125-200 in./min)
160 A	1.2 mm (.045 in.)	18 V	381 cm/min (150 in./min)
300 A	1.2 mm (.045 in.)	27 V	889 cm/min (350 in./min)
160 A	1.4 mm (.052 in.)	18 V	356 cm/min (140 in./min)

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Welding_Parameters

Amps	Wire Diameter	Volts	Wire Feed Speed
150-200 A	1.4 mm (.052 in.)	17-20 V	343-483 cm/min (135-190 in./min)
275-400 A	1.4 mm (.052 in.)	26-33 V	673-991 cm/min (265-390 in./min)
325 A	1.4 mm (.052 in.)	28 V	787 cm/min (310 in./min)
290-400 A	1.6 mm (1/16 in.)	26-36 V	457-711 cm/min (180-280 in./min)
340 A	1.6 mm (1/16 in.)	27 V	508 cm/min (200 in./min)
Short Arc Transfer Optimum			
45-90 A	0.6 mm (.023 in.)	14-16 V	381-965 cm/min (150-380 in./min)
70 A	0.6 mm (.023 in.)	15 V	762 cm/min (300 in./min)
110 A	0.6 mm (.023 in.)	23 V	1143 cm/min (450 in./min)
100-125 A	0.6 mm (.023 in.)	23-25 V	1016-1575 cm/min (400-620 in./min)
160-200 A	0.8 mm (.030 in.)	24-26 V	1270-1651 cm/min (500-650 in./min)
60-140 A	0.8 mm (.030 in.)	14-16 V	381-889 cm/min (150-350 in./min)
100 A	0.8 mm (.030 in.)	15 V	559 cm/min (220 in./min)
180 A	0.8 mm (.030 in.)	25 V	1321 cm/min (520 in./min)
90-160 A	0.9 mm (.035 in.)	15-19 V	457-762 cm/min (180-300 in./min)
200 A	0.9 mm (.035 in.)	26 V	1219 cm/min (480 in./min)
180-230 A	0.9 mm (.035 in.)	25-27 V	1016-1397 cm/min (400-550 in./min)
130 A	0.9 mm (.035 in.)	17 V	635 cm/min (250 in./min)
260-340 A	1.2 mm (.045 in.)	25-30 V	762-1270 cm/min (300-500 in./min)
130-200 A	1.2 mm (.045 in.)	17-19 V	318-508 cm/min (125-200 in./min)
160 A	1.2 mm (.045 in.)	18 V	381 cm/min (150 in./min)
300 A	1.2 mm (.045 in.)	27 V	889 cm/min (350 in./min)
160 A	1.4 mm (.052 in.)	18 V	356 cm/min (140 in./min)
150-200 A	1.4 mm (.052 in.)	17-20 V	343-483 cm/min (135-190 in./min)
275-400 A	1.4 mm (.052 in.)	26-33 V	673-991 cm/min (265-390 in./min)
325 A	1.4 mm (.052 in.)	28 V	787 cm/min (310 in./min)

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Welding_Parameters

Amps	Wire Diameter	Volts	Wire Feed Speed
290-400 A	1.6 mm (1/16 in.)	26-36 V	457-711 cm/min (180-280 in./min)
340 A	1.6 mm (1/16 in.)	27 V	508 cm/min (200 in./min)