

Coreweld W

Coreweld W is a metal cored wire designed for single or multipass welding on weathering grade steels. Coreweld W was designed specifically to meet the demand for weld deposits that color match the low alloy, high strength weathering grade steels, such as A588 and A242.

Specifications

Classifications	ASME SFA 5.36 AWS A5.36 : E90T15-M21A2-W2 ASME SFA 5.28 AWS A5.28 : E80C-W4 H4
Approvals	DB
Industry	Ship/Barge Building Industrial and General Fabrication Mobile Equipment Railcars Civil Construction Bridge Construction

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

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
75% Ar - 25% CO₂			
As Welded	642 MPa (93 ksi)	718 MPa (104 ksi)	26 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
75% Ar - 25% CO₂		
As Welded	-29 °C (-20 °F)	31 J (23 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Cu
75% Ar - 25% CO₂							
0.06	1.2	0.7	0.019	0.01	0.7	0.6	0.6

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Efficiency (%)	TTW Dist.	Deposition Rate
75% Ar - 25% CO₂						
1.4 mm (.052 in.)	340 A	31 V	1020 cm/min (400 in./min)	99 %	15.8 mm (5/8 in.)	5.1 kg/h (11.2 lbs/h)
1.2 mm (.045 in.)	390 A	32 V	1650 cm/min (650 in./min)	99 %	15.8 mm (5/8 in.)	7.5 kg/h (16.5 lbs/h)
1.2 mm (.045 in.)	170 A	24 V	510 cm/min (200 in./min)	94 %	15.8 mm (5/8 in.)	2.4 kg/h (5.2 lbs/h)
1.6 mm (1/16 in.)	370 A	28 V	700 cm/min (280 in./min)	96 %	19.1 mm (3/4 in.)	5.7 kg/h (12.5 lbs/h)
1.4 mm (.052 in.)	310 A	27 V	890 cm/min (350 in./min)	98 %	15.8 mm (5/8 in.)	4.9 kg/h (10.7 lbs/h)
1.6 mm (1/16 in.)	510 A	33 V	1210 cm/min (480 in./min)	99 %	19.1 mm (3/4 in.)	9.4 kg/h (20.7 lbs/h)
1.4 mm (.052 in.)	280 A	28 V	760 cm/min (300 in./min)	97 %	15.8 mm (5/8 in.)	4.2 kg/h (9.2 lbs/h)
1.6 mm (1/16 in.)	290 A	27 V	510 cm/min (200 in./min)	95 %	19.1 mm (3/4 in.)	4.0 kg/h (8.8 lbs/h)

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Diameter	Current	Voltage	Wire Feed Speed	Deposition Efficiency (%)	TTW Dist.	Deposition Rate
1.4 mm (.052 in.)	370 A	30 V	1140 cm/min (450 in./min)	99 %	15.8 mm (5/8 in.)	6.2 kg/h (13.6 lbs/h)
1.2 mm (.045 in.)	330 A	32 V	1270 cm/min (500 in./min)	99 %	15.8 mm (5/8 in.)	5.8 kg/h (12.7 lbs/h)
1.2 mm (.045 in.)	360 A	33 V	1400 cm/min (550 in./min)	99 %	15.8 mm (5/8 in.)	6.3 kg/h (13.9 lbs/h)
1.2 mm (.045 in.)	230 A	25 V	760 cm/min (300 in./min)	96 %	15.8 mm (5/8 in.)	3.5 kg/h (7.7 lbs/h)
1.2 mm (.045 in.)	290 A	27 V	1020 cm/min (400 in./min)	98 %	15.8 mm (5/8 in.)	4.6 kg/h (10.2 lbs/h)
1.2 mm (.045 in.)	290 A	29 V	1020 cm/min (400 in./min)	98 %	15.8 mm (5/8 in.)	4.6 kg/h (10.2 lbs/h)
1.6 mm (1/16 in.)	340 A	29 V	640 cm/min (250 in./min)	98 %	19.1 mm (3/4 in.)	5.6 kg/h (12.3 lbs/h)
1.4 mm (.052 in.)	410 A	36 V	1330 cm/min (530 in./min)	99 %	15.8 mm (5/8 in.)	7.1 kg/h (15.7 lbs/h)
1.6 mm (1/16 in.)	430 A	32 V	890 cm/min (350 in./min)	99 %	19.1 mm (3/4 in.)	7.2 kg/h (15.9 lbs/h)
1.2 mm (.045 in.)	330 A	29 V	1270 cm/min (500 in./min)	99 %	15.8 mm (5/8 in.)	5.8 kg/h (12.7 lbs/h)
1.2 mm (.045 in.)	200 A	27 V	640 cm/min (250 in./min)	95 %	15.8 mm (5/8 in.)	3.0 kg/h (6.5 lbs/h)
1.4 mm (.052 in.)	240 A	25 V	640 cm/min (250 in./min)	95 %	15.8 mm (5/8 in.)	3.5 kg/h (7.7 lbs/h)
1.4 mm (.052 in.)	240 A	27 V	640 cm/min (250 in./min)	95 %	15.8 mm (5/8 in.)	3.5 kg/h (7.7 lbs/h)
1.4 mm (.052 in.)	190 A	24 V	440 cm/min (180 in./min)	94 %	15.8 mm (5/8 in.)	2.5 kg/h (5.5 lbs/h)
1.6 mm (1/16 in.)	230 A	24 V	380 cm/min (150 in./min)	91 %	19.1 mm (3/4 in.)	2.8 kg/h (6.2 lbs/h)
1.6 mm (1/16 in.)	430 A	29 V	890 cm/min (350 in./min)	99 %	19.1 mm (3/4 in.)	7.2 kg/h (15.9 lbs/h)
1.2 mm (.045 in.)	260 A	28 V	890 cm/min (350 in./min)	97 %	15.8 mm (5/8 in.)	4.1 kg/h (9.1 lbs/h)
1.6 mm (1/16 in.)	510 A	36 V	1210 cm/min (480 in./min)	99 %	19.1 mm (3/4 in.)	9.4 kg/h (20.7 lbs/h)
1.4 mm (.052 in.)	420 A	32 V	1400 cm/min (550 in./min)	99 %	15.8 mm (5/8 in.)	7.5 kg/h (16.6 lbs/h)
1.6 mm (1/16 in.)	290 A	26 V	510 cm/min (200 in./min)	95 %	19.1 mm (3/4 in.)	4.0 kg/h (8.8 lbs/h)
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90% Ar - 10% CO2						
1.4 mm (.052 in.)	340 A	31 V	1020 cm/min (400 in./min)	99 %	15.8 mm (5/8 in.)	5.1 kg/h (11.2 lbs/h)
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1.6 mm (1/16 in.)	370 A	28 V	700 cm/min (280 in./min)	96 %	19.1 mm (3/4 in.)	5.7 kg/h (12.5 lbs/h)
1.4 mm (.052 in.)	310 A	27 V	890 cm/min (350 in./min)	98 %	15.8 mm (5/8 in.)	4.9 kg/h (10.7 lbs/h)
1.6 mm (1/16 in.)	510 A	33 V	1210 cm/min (480 in./min)	99 %	19.1 mm (3/4 in.)	9.4 kg/h (20.7 lbs/h)
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Recommended Welding Parameters

Current	Wire Diameter	TTW Dist.	Voltage	Wire Feed Speed
75% Ar - 25% CO₂				
150-350 A	1.2 mm (.045 in.)	9.5-19.1 mm (3/8-3/4 in.)	24-32 V	838-1453 cm/min (330-572 in./min)
200-400 A	1.4 mm (.052 in.)	9.5-19.1 mm (3/8-3/4 in.)	26-32 V	665.5-833 cm/min (262-328 in./min)