

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.

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

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
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 Rate	TTW Dist.	Deposition Efficiency %
75% Ar - 25% CO₂						
1.2 mm (.045 in.)	170 A	24 V	510 cm/min (200 in./min)	2.4 kg/h (5.2 lb/h)	15.8 mm (5/8 in.)	94 %
1.2 mm (.045 in.)	230 A	25 V	760 cm/min (300 in./min)	3.5 kg/h (7.7 lb/h)	15.8 mm (5/8 in.)	96 %
1.2 mm (.045 in.)	290 A	27 V	1020 cm/min (400 in./min)	4.6 kg/h (10.2 lb/h)	15.8 mm (5/8 in.)	98 %
1.2 mm (.045 in.)	330 A	29 V	1270 cm/min (500 in./min)	5.8 kg/h (12.7 lb/h)	15.8 mm (5/8 in.)	99 %
1.2 mm (.045 in.)	390 A	32 V	1650 cm/min (650 in./min)	7.5 kg/h (16.5 lb/h)	15.8 mm (5/8 in.)	99 %
1.4 mm (.052 in.)	190 A	24 V	440 cm/min (180 in./min)	2.5 kg/h (5.5 lb/h)	15.8 mm (5/8 in.)	94 %
1.4 mm (.052 in.)	240 A	25 V	640 cm/min (250 in./min)	3.5 kg/h (7.7 lb/h)	15.8 mm (5/8 in.)	95 %
1.4 mm (.052 in.)	310 A	27 V	890 cm/min (350 in./min)	4.9 kg/h (10.7 lb/h)	15.8 mm (5/8 in.)	98 %
1.4 mm (.052 in.)	370 A	30 V	1140 cm/min (450 in./min)	6.2 kg/h (13.6 lb/h)	15.8 mm (5/8 in.)	99 %
1.4 mm (.052 in.)	420 A	32 V	1400 cm/min (550 in./min)	7.5 kg/h (16.6 lb/h)	15.8 mm (5/8 in.)	99 %
1.6 mm (1/16 in.)	230 A	24 V	380 cm/min (150 in./min)	2.8 kg/h (6.2 lb/h)	19.1 mm (3/4 in.)	91 %
1.6 mm (1/16 in.)	290 A	26 V	510 cm/min (200 in./min)	4.0 kg/h (8.8 lb/h)	19.1 mm (3/4 in.)	95 %
1.6 mm (1/16 in.)	370 A	28 V	700 cm/min (280 in./min)	5.7 kg/h (12.5 lb/h)	19.1 mm (3/4 in.)	96 %
1.6 mm (1/16 in.)	430 A	29 V	890 cm/min (350 in./min)	7.2 kg/h (15.9 lb/h)	19.1 mm (3/4 in.)	99 %

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Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate	TTW Dist.	Deposition Efficiency %
1.6 mm (1/16 in.)	510 A	33 V	1210 cm/min (480 in./min)	9.4 kg/h (20.7 lb/h)	19.1 mm (3/4 in.)	99 %
90% Ar - 10% CO₂						
1.2 mm (.045 in.)	200 A	27 V	640 cm/min (250 in./min)	3.0 kg/h (6.5 lb/h)	15.8 mm (5/8 in.)	95 %
1.2 mm (.045 in.)	260 A	28 V	890 cm/min (350 in./min)	4.1 kg/h (9.1 lb/h)	15.8 mm (5/8 in.)	97 %
1.2 mm (.045 in.)	290 A	29 V	1020 cm/min (400 in./min)	4.6 kg/h (10.2 lb/h)	15.8 mm (5/8 in.)	98 %
1.2 mm (.045 in.)	330 A	32 V	1270 cm/min (500 in./min)	5.8 kg/h (12.7 lb/h)	15.8 mm (5/8 in.)	99 %
1.2 mm (.045 in.)	360 A	33 V	1400 cm/min (550 in./min)	6.3 kg/h (13.9 lb/h)	15.8 mm (5/8 in.)	99 %
1.4 mm (.052 in.)	190 A	26 V	440 cm/min (180 in./min)	2.5 kg/h (5.5 lb/h)	15.8 mm (5/8 in.)	94 %
1.4 mm (.052 in.)	240 A	27 V	640 cm/min (250 in./min)	3.5 kg/h (7.7 lb/h)	15.8 mm (5/8 in.)	95 %
1.4 mm (.052 in.)	280 A	28 V	760 cm/min (300 in./min)	4.2 kg/h (9.2 lb/h)	15.8 mm (5/8 in.)	97 %
1.4 mm (.052 in.)	340 A	31 V	1020 cm/min (400 in./min)	5.1 kg/h (11.2 lb/h)	15.8 mm (5/8 in.)	99 %
1.4 mm (.052 in.)	410 A	36 V	1330 cm/min (530 in./min)	7.1 kg/h (15.7 lb/h)	15.8 mm (5/8 in.)	99 %
1.6 mm (1/16 in.)	230 A	26 V	380 cm/min (150 in./min)	2.8 kg/h (6.2 lb/h)	19.1 mm (3/4 in.)	91 %
1.6 mm (1/16 in.)	290 A	27 V	510 cm/min (200 in./min)	4.0 kg/h (8.8 lb/h)	19.1 mm (3/4 in.)	95 %
1.6 mm (1/16 in.)	340 A	29 V	640 cm/min (250 in./min)	5.6 kg/h (12.3 lb/h)	19.1 mm (3/4 in.)	98 %
1.6 mm (1/16 in.)	430 A	32 V	890 cm/min (350 in./min)	7.2 kg/h (15.9 lb/h)	19.1 mm (3/4 in.)	99 %
1.6 mm (1/16 in.)	510 A	36 V	1210 cm/min (480 in./min)	9.4 kg/h (20.7 lb/h)	19.1 mm (3/4 in.)	99 %

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