Coreweld C6

Coreweld C6 was developed and "fine-tuned" especially for hand-held, automatic and robotic welding in the automotive industry, as well as rail car manufacturing, structural welding and other similar applications. Never before has there been such a perfect pairing of filler metal and industry requirements for quality, productivity and profitability.

Specifications	
Classifications	AWS A5.36 : E70T15-M20A2-CS1-H4 AWS A5.36 : E70T15-M21A4-CS1-H4 AWS A5.18 : E70C-6MD H4
Approvals	ABS CWB : CSA W48 E491C-6M-H4
Industry	Mobile Equipment Railcars Industrial and General Fabrication Bridge Construction Civil Construction Automotive Ship/Barge Building

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

Tensile_Properties				
Testing Condition	**Yield Strength**	**Tensile Strength**	**Elongation**	**Reduction in Area**
75% Ar - 25% CO2				
As Welded	505 MPa	595 MPa	27 %	64 %
90% Ar - 10% CO2				
As Welded	545 MPa	595 MPa	25 %	63 %

Charpy Testing		
Testing Condition	**Testing Temp**	**Impact Value**
75% Ar - 25% CO2		
As Welded	-29 °C	76 J
As Welded	-40 °C	58 J
90% Ar - 10% CO2		
As Welded	-29 °C	76 J

Typical Weld Metal Analysis %				
C	**Mn**	**Si**	**S**	**P**
90% Ar 10% CO2				
0.04	1.6	0.8	0.017	0.015
75% Ar 25% CO2				
0.04	1.6	0.7	0.016	0.012

Deposition Data						
Diameter	**Amps**	**Volts**	**Wire Feed Speed**	**Efficiency (Per)**	**TTW Dist**	**Deposition Rate**
75% Ar - 25% CO2						
1.4 mm	190 A	24 V	440 cm/min	94 %	16 mm	2.5 kg/h
1.2 mm	360 A	33 V	1400 cm/min	99 %	16 mm	6.3 kg/h
1.4 mm	240 A	27 V	640 cm/min	95 %	16 mm	3.5 kg/h
1.4 mm	310 A	27 V	890 cm/min	98 %	16 mm	4.9 kg/h
1.4 mm	410 A	36 V	1330 cm/min	99 %	16 mm	7.1 kg/h
1.6 mm	230 A	26 V	380 cm/min	91 %	19 mm	2.81 kg/h
1.6 mm	290 A	26 V	510 cm/min	95 %	19 mm	4.0 kg/h

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Deposition Data						
Diameter	**Amps**	**Volts**	**Wire Feed Speed**	**Efficiency (Per)**	**TTW Dist**	**Deposition Rate**
1.2 mm	260 A	28 V	890 cm/min	97 %	16 mm	4.1 kg/h
1.4 mm	340 A	31 V	1020 cm/min	99 %	16 mm	5.1 kg/h
1.2 mm	170 A	24 V	510 cm/min	94 %	16 mm	2.4 kg/h
1.4 mm	190 A	26 V	440 cm/min	94 %	16 mm	2.5 kg/h
1.6 mm	430 A	29 V	890 cm/min	99 %	19 mm	7.2 kg/h
1.2 mm	230 A	25 V	760 cm/min	96 %	16 mm	3.5 kg/h
1.6 mm	510 A	33 V	1210 cm/min	99 %	19 mm	9.4 kg/h
1.2 mm	290 A	29 V	1020 cm/min	98 %	16 mm	4.6 kg/h
1.4 mm	280 A	28 V	760 cm/min	97 %	16 mm	4.2 kg/h
1.2 mm	390 A	32 V	1650 cm/min	99 %	16 mm	7.5 kg/h
1.2 mm	330 A	29 V	1270 cm/min	99 %	16 mm	5.8 kg/h
1.6 mm	430 A	32 V	890 cm/min	99 %	19 mm	7.2 kg/h
1.6 mm	510 A	36 V	1210 cm/min	99 %	19 mm	9.4 kg/h
1.2 mm	200 A	27 V	640 cm/min	95 %	16 mm	3.0 kg/h
1.6 mm	340 A	29 V	640 cm/min	98 %	19 mm	5.6 kg/h
1.2 mm	330 A	32 V	1270 m/min	99 %	16 mm	5.8 kg/h
1.4 mm	370 A	30 V	1140 cm/min	99 %	16 mm	6.2 kg/h
1.4 mm	420 A	32 V	1400 cm/min	99 %	16 mm	7.5 kg/h
1.6 mm	230 A	24 V	380 cm/min	91 %	19 mm	2.81 kg/h
1.6 mm	290 A	27 V	510 cm/min	95 %	19 mm	4.0 kg/h
1.6 mm	370 A	28 V	700 cm/min	96 %	19 mm	5.7 kg/h
1.2 mm	290 A	27 V	1020 cm/min	98 %	16 mm	4.6 kg/h
1.4 mm	240 A	25 V	640 cm/min	95 %	16 mm	3.5 kg/h
90% Ar - 10% CO2						
1.4 mm	190 A	24 V	440 cm/min	94 %	16 mm	2.5 kg/h
1.2 mm	360 A	33 V	1400 cm/min	99 %	16 mm	6.3 kg/h
1.4 mm	240 A	27 V	640 cm/min	95 %	16 mm	3.5 kg/h
1.4 mm	310 A	27 V	890 cm/min	98 %	16 mm	4.9 kg/h
1.4 mm	410 A	36 V	1330 cm/min	99 %	16 mm	7.1 kg/h
1.6 mm	230 A	26 V	380 cm/min	91 %	19 mm	2.81 kg/h
1.6 mm	290 A	26 V	510 cm/min	95 %	19 mm	4.0 kg/h
1.2 mm	260 A	28 V	890 cm/min	97 %	16 mm	4.1 kg/h
1.4 mm	340 A	31 V	1020 cm/min	99 %	16 mm	5.1 kg/h
1.2 mm	170 A	24 V	510 cm/min	94 %	16 mm	2.4 kg/h
1.4 mm	190 A	26 V	440 cm/min	94 %	16 mm	2.5 kg/h
1.6 mm	430 A	29 V	890 cm/min	99 %	19 mm	7.2 kg/h
1.2 mm	230 A	25 V	760 cm/min	96 %	16 mm	3.5 kg/h
1.6 mm	510 A	33 V	1210 cm/min	99 %	19 mm	9.4 kg/h
1.2 mm	290 A	29 V	1020 cm/min	98 %	16 mm	4.6 kg/h
1.4 mm	280 A	28 V	760 cm/min	97 %	16 mm	4.2 kg/h
1.2 mm	390 A	32 V	1650 cm/min	99 %	16 mm	7.5 kg/h
1.2 mm	330 A	29 V	1270 cm/min	99 %	16 mm	5.8 kg/h
1.6 mm	430 A	32 V	890 cm/min	99 %	19 mm	7.2 kg/h
1.6 mm	510 A	36 V	1210 cm/min	99 %	19 mm	9.4 kg/h
1.2 mm	200 A	27 V	640 cm/min	95 %	16 mm	3.0 kg/h
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1.4 mm	370 A	30 V	1140 cm/min	99 %	16 mm	6.2 kg/h
1.4 mm	420 A	32 V	1400 cm/min	99 %	16 mm	7.5 kg/h
1.6 mm	230 A	24 V	380 cm/min	91 %	19 mm	2.81 kg/h
1.6 mm	290 A	27 V	510 cm/min	95 %	19 mm	4.0 kg/h
1.6 mm	370 A	28 V	700 cm/min	96 %	19 mm	5.7 kg/h
1.2 mm	290 A	27 V	1020 cm/min	98 %	16 mm	4.6 kg/h
1.4 mm	240 A	25 V	640 cm/min	95 %	16 mm	3.5 kg/h

Welding_Parameters				
Amps	**Wire Diameter**	**TTW Dist**	**Volts**	**Wire Feed Speed**
75% Ar - 25% CO2				
230-430 A	1.6 mm	19 mm	24-29 V	381-1219 cm/min
200-260 A	1.2 mm	16 mm	27-28 V	635-889 cm/min
230-340 A	1.6 mm	19 mm	26-29 V	381-635 cm/min
190-310 A	1.4 mm	16 mm	24-27 V	457-889 cm/min
330-390 A	1.2 mm	16 mm	29-32 V	1270-1651 cm/min
260-330 A	1.2 mm	16 mm	26-29 V	889-1270 cm/min
310-360 A	1.2 mm	16 mm	30-33 V	1143-1397 cm/min
430-510 A	1.6 mm	19 mm	30-33 V	889-1219 cm/min
370-420 A	1.4 mm	16 mm	30-32 V	1143-1397 cm/min
190-420 A	1.4 mm	16 mm	24-32 V	457-1346 cm/min
430-510 A	1.6 mm	19 mm	32-36 V	889-1219 cm/min
340-410 A	1.4 mm	16 mm	31-36 V	1016-1346 cm/min
370-430 A	1.6 mm	19 mm	28-30 V	711-889 cm/min
280-340 A	1.4 mm	16 mm	28-31 V	762-1016 cm/min
260-310 A	1.2 mm	16 mm	28-30 V	889-1143 cm/min
230-370 A	1.6 mm	19 mm	24-28 V	381-711 cm/min
190-280 A	1.4 mm	16 mm	29-28 V	457-762 cm/min
170-390 A	1.2 mm	16 mm	24-32 V	640-1397 cm/min
170-260 A	1.2 mm	16 mm	24-26 V	508-889 cm/min
340-430 A	1.6 mm	19 mm	29-32 V	635-889 cm/min
310-370 A	1.4 mm	16 mm	27-30 V	889-1143 cm/min
90% Ar - 10% CO2				
230-430 A	1.6 mm	19 mm	24-29 V	381-1219 cm/min
200-260 A	1.2 mm	16 mm	27-28 V	635-889 cm/min
230-340 A	1.6 mm	19 mm	26-29 V	381-635 cm/min
190-310 A	1.4 mm	16 mm	24-27 V	457-889 cm/min
330-390 A	1.2 mm	16 mm	29-32 V	1270-1651 cm/min
260-330 A	1.2 mm	16 mm	26-29 V	889-1270 cm/min
310-360 A	1.2 mm	16 mm	30-33 V	1143-1397 cm/min
430-510 A	1.6 mm	19 mm	30-33 V	889-1219 cm/min
370-420 A	1.4 mm	16 mm	30-32 V	1143-1397 cm/min
190-420 A	1.4 mm	16 mm	24-32 V	457-1346 cm/min
430-510 A	1.6 mm	19 mm	32-36 V	889-1219 cm/min
340-410 A	1.4 mm	16 mm	31-36 V	1016-1346 cm/min
370-430 A	1.6 mm	19 mm	28-30 V	711-889 cm/min
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260-310 A	1.2 mm	16 mm	28-30 V	889-1143 cm/min
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170-260 A	1.2 mm	16 mm	24-26 V	508-889 cm/min
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