

Coreweld 70

COREWELD 70 is a metal cored wire that combines the high deposition rates of a flux cored wire with the high efficiencies of solid wire. The wire exhibits low levels of spatter, slag and fumes.

Specifications	
Classifications	AWS A5.36 : E70T15-M20A2-CS1-H4 AWS A5.36 : E70T15-M21A2-CS1-H4 AWS A5.18 : E70C-6M-H4
Approvals	CWB : CSA W48 E491C-6M-H4 DB
Industry	Industrial and General Fabrication Automotive Railcars Mobile Equipment Ship/Barge Building Bridge Construction Civil Construction Pipeline Power Generation

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

Typical Tensile Properties				
Condition	Yield Strength	Tensile Strength	Elongation	Reduction in Area
75% Ar - 25% CO₂				
As Welded	460 MPa	550 MPa	28 %	67 %
92% Ar - 8% CO₂				
As Welded	545 MPa	585 MPa	26 %	65 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
75% Ar - 25% CO₂		
As Welded	-29 °C	54 J
As Welded	-18 °C	68 J
92% Ar - 8% CO₂		
As Welded	-18 °C	81 J
As Welded	-29 °C	68 J

Typical Weld Metal Analysis %				
C	Mn	Si	S	P
75% Ar - 25% CO₂				
0.06	1.4	0.6	0.019	0.010
92% Ar - 8% CO₂				
0.06	1.5	0.6	0.019	0.009

Deposition Data					
Diameter	Current	Voltage	Wire Feed Speed	Deposition Efficiency (%)	Deposition Rate
0.9 mm	200 A	27 V	1199 cm/min	92 %	3.0 kg/h
0.9 mm	250 A	29 V	1727 cm/min	92 %	4.3 kg/h
1.2 mm	250 A	28 V	838 cm/min	90 %	3.6 kg/h
1.2 mm	275 A	30 V	1092 cm/min	94 %	5.0 kg/h
1.2 mm	300 A	32 V	1179 cm/min	94 %	5.3 kg/h

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Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Efficiency (%)	Deposition Rate
1.2 mm	350 A	32 V	1300 cm/min	96 %	5.8 kg/h
1.4 mm	275 A	29 V	665 cm/min	92 %	3.4 kg/h
1.4 mm	300 A	29 V	792 cm/min	93 %	4.4 kg/h
1.4 mm	325 A	30 V	833 cm/min	93 %	4.6 kg/h
1.6 mm	300 A	30 V	460 cm/min	89 %	3.9 kg/h
1.6 mm	350 A	30 V	612 cm/min	94 %	5.4 kg/h
1.6 mm	400 A	32 V	744 cm/min	94 %	6.6 kg/h
1.6 mm	450 A	34 V	846 cm/min	94 %	7.4 kg/h
2.4 mm	400 A	31 V	292 cm/min	95 %	5.2 kg/h
2.4 mm	450 A	31 V	350 cm/min	97 %	6.6 kg/h
2.4 mm	500 A	32 V	394 cm/min	97 %	7.5 kg/h
2.4 mm	550 A	32 V	500 cm/min	98 %	9.5 kg/h
2.0 mm	350 A	27 V	406 cm/min	94 %	5.3 kg/h
2.0 mm	400 A	28 V	470 cm/min	95 %	6.0 kg/h
2.0 mm	450 A	28 V	533 cm/min	97 %	7.2 kg/h
2.0 mm	500 A	29 V	711 cm/min	97 %	9.3 kg/h

Recommended Welding Parameters

Current	Wire Diameter	TTW Dist.	Voltage	Wire Feed Speed
75% Ar - 25% CO₂				
400-580 A	2.0 mm	19-31.75 mm	28-34 V	292-500 cm/min
130-260 A	0.9 mm	9.5-19 mm	23-29 V	813-1727 cm/min
300-500 A	1.6 mm	9.5-19 mm	26-34 V	460-846 cm/min
200-400 A	1.4 mm	9.5-19 mm	26-32 V	665.5-833 cm/min
150-350 A	1.2 mm	9.5-19 mm	24-32 V	838-1453 cm/min
350-550 A	2.4 mm	19-31.75 mm	27-33 V	406-711 cm/min