

# ESAB 71

ESAB 71 is a general purpose, all-position flux cored wire and can be used with either, 100% CO<sub>2</sub> or 75% Ar/25% CO<sub>2</sub> shielding gas.

<b>Classifications</b>	AWS A5.20 : E71T-1C/T-1M/T-9C/T-9M AWS A5.36 : E71T1-C1A2-CS1 AWS A5.36 : E71T1-M21A2-CS1 ASME SFA 5.36 ASME SFA 5.20
<b>Approvals</b>	CWB ABS 3YSA
<b>Industry</b>	Civil Construction Industrial and General Fabrication Mobile Equipment Railcars Ship and Offshore Yards

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

## Typical Tensile Properties

Yield Strength	Tensile Strength	Elongation
<b>100% CO<sub>2</sub></b>		
<b>75% Ar - 25% CO<sub>2</sub></b>		
<b>75% Ar - 25% CO<sub>2</sub></b>		

## Typical Charpy V-Notch Properties

Testing Temperature	Impact Value
<b>100% CO<sub>2</sub></b>	
-29 °C (-20 °F)	30 J (22 ft-lb)
-18 °C (0 °F)	51 J (38 ft-lb)
<b>75% Ar - 25% CO<sub>2</sub></b>	
-29 °C (-20 °F)	41 J (30 ft-lb)
-18 °C (0 °F)	49 J (36 ft-lb)

## Typical Weld Metal Analysis %

C	Mn	Si	S	P
0.02	1.3	0.5	0.013	0.010

## Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate	Deposition Efficiency %
<b>100% CO<sub>2</sub></b>					
1.6 mm (1/16 in.)	450 A	31 V	1219 cm/min (480 in./min)	8.0 kg/h (17.6 lb/h)	84.9 %
1.6 mm (1/16 in.)	411 A	29 V	1067 cm/min (420 in./min)	7.0 kg/h (15.4 lb/h)	84.9 %
1.6 mm (1/16 in.)	384 A	28 V	965 cm/min (380 in./min)	6.4 kg/h (14.0 lb/h)	84.9 %
1.6 mm (1/16 in.)	340 A	27 V	813 cm/min (320 in./min)	5.4 kg/h (11.8 lb/h)	84.8 %
1.6 mm (1/16 in.)	309 A	26 V	711 cm/min (280 in./min)	4.7 kg/h (10.3 lb/h)	84.8 %
1.6 mm (1/16 in.)	209 A	24 V	406 cm/min (160 in./min)	2.7 kg/h (5.9 lb/h)	84.7 %
1.4 mm (.052 in.)	377 A	30 V	1473 cm/min (580 in./min)	7.0 kg/h (15.5 lb/h)	89.9 %
1.4 mm (.052 in.)	346 A	28 V	1245 cm/min (490 in./min)	5.9 kg/h (13.0 lb/h)	87.2 %
1.4 mm (.052 in.)	306 A	27 V	1016 cm/min (400 in./min)	4.8 kg/h (10.5 lb/h)	84.5 %
1.4 mm (.052 in.)	258 A	26 V	787 cm/min (310 in./min)	3.6 kg/h (8.0 lb/h)	81.8 %
1.4 mm (.052 in.)	188 A	24 V	508 cm/min (200 in./min)	2.2 kg/h (4.9 lb/h)	78.5 %



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Deposition Data					
Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate	Deposition Efficiency %
1.4 mm (.052 in.)	160 A	24 V	406 cm/min (160 in./min)	1.7 kg/h (3.8 lb/h)	77.3 %
1.2 mm (.045 in.)	309 A	30 V	1473 cm/min (580 in./min)	5.1 kg/h (11.2 lb/h)	89.9 %
1.2 mm (.045 in.)	274 A	29 V	1245 cm/min (490 in./min)	4.3 kg/h (9.4 lb/h)	87.2 %
1.2 mm (.045 in.)	237 A	27 V	1016 cm/min (400 in./min)	3.4 kg/h (7.6 lb/h)	84.5 %
1.2 mm (.045 in.)	196 A	26 V	787 cm/min (310 in./min)	2.6 kg/h (5.7 lb/h)	81.8 %
1.2 mm (.045 in.)	152 A	24 V	559 cm/min (220 in./min)	1.8 kg/h (3.9 lb/h)	79.1 %