

Dual Shield 88-C3

Dual Shield 88-C3 is a 1% nickel flux cored wire developed for low temperature impact toughness. It is an excellent choice for welding weathering grade steel, such as Cor-Ten® where W grade electrodes are not desirable. Dual Shield 88-C3 wire is recommended for welding high strength steels in the 70-80 ksi (483-552 MPa) tensile range. The weld metal analysis is similar to an E8018-C3 low hydrogen electrode.

Classifications	AWS A5.29 : E80T1-Ni1C AWS A5.36 : E80T1-C1A2-Ni1 ASME SFA 5.29 ASME SFA 5.36
Approvals	MIL E-24403/1 MIL 80T1-Ni1C
Industry	Barges Bridge Construction Civil Construction General Cast Iron Repair and Fabrication Power Generation Railcars Ship/Barge Building

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

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Reduction in Area	Elongation
100% CO₂				
As Welded	517 MPa (75 ksi)	593 MPa (86 ksi)	60 %	28 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
100% CO₂		
As Welded	-29 °C (-20 °F)	49 J (36 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni
0.087	1.0	0.29	0.015	0.009	0.95

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate	Deposition Efficiency %
100% CO₂					
2.4 mm (3/32 in.)	350 A	30 V	315 cm/min (124 in./min)	4.35 kg/h (9.6 lb/h)	84 %
2.4 mm (3/32 in.)	400 A	30 V	422 cm/min (166 in./min)	5.76 kg/h (12.7 lb/h)	85 %
2.4 mm (3/32 in.)	450 A	31 V	500 cm/min (197 in./min)	6.8 kg/h (15 lb/h)	86 %
2.4 mm (3/32 in.)	500 A	32 V	602 cm/min (237 in./min)	8.39 kg/h (18.5 lb/h)	86 %
2.4 mm (3/32 in.)	550 A	34 V	706 cm/min (278 in./min)	9.66 kg/h (21.3 lb/h)	88 %