

Dual Shield 9000-C1

Dual Shield 9000-C1 is an all-position flux cored electrode which produces a 2.5% Ni deposit. The analysis is very similar to the Dual Shield T-90C1 except that this product has out-of-position capability. Dual Shield 9000-C1 is used for welding of 2-3% Ni steels and castings used in applications requiring good toughness at subzero temperatures. Shielding gas 100% CO₂ and 75% Ar - Remainder CO₂ may be used.

Specifications

Classifications	SFA/AWS A5.29 : E91T1-Ni2C SFA/AWS A5.29 : E91T1-Ni2M
Industry	Process Ship and Offshore Yards

Alloy Type	Low Alloy 2.5% Ni
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Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
M21 Shielding Gas			
As Welded	610 MPa (88 ksi)	680 MPa (99 ksi)	24 %
C1 Shielding Gas			
As Welded	580 MPa (84 ksi)	665 MPa (96 ksi)	25 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
M21 Shielding Gas		
As Welded	-40 °C (-40 °F)	45 J (33 ft-lb)
C1 Shielding Gas		
As Welded	-18 °C (0 °F)	52 J (38 ft-lb)
As Welded	-40 °C (-40 °F)	41 J (30 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni
0.07	1.20	0.50	0.010	0.013	2.50

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	TTW Dist.	Deposition Rate
1.2 mm (0.045 in.)	150-310 A	28-34 V	5.08-15.24 m/min (200-600 in./min)	(0.4, in.)	1.91-5.31 kg/h (4.2-11.7 lbs/h)
1.6 mm (1/16 in.)	245-475 A	29-36 V	5.08-11.43 m/min (200-450 in./min)	16.0 mm (0.6, in.)	3.7-8.19 kg/h (8.2-18.1 lbs/h)