

Coreshield 8-Ni1 H5

Coreshield 8-Ni1 H5 is a self-shielded flux cored wire designed to produce welds with low diffusible hydrogen and robust mechanical properties. It is welder friendly and has excellent all-position welding operability. Using DCEN polarity, it produces nice weld beads by either up-hill or down-hill welding to suit for a wider range of WPS requirements. Coreshield 8-Ni1 H5 is especially suited for making root passes or handling poor fit-up, and it features a diffusible hydrogen content lower than 5.0 ml/100g. Coreshield 8-Ni1 H5 can be ideally used in critical steel applications, such as offshore TKY joints, pipe structures, bridges, storage tanks and other applications where cold-cracking resistance is preferred.

Specifications	
Classifications	ASME SFA 5.36 ASME SFA 5.29 AWS A5.36 : E71T8-A4-Ni1 AWS A5.29 : E71T8-Ni1-J
Approvals	ABS : E71T1-8Ni1 ABS : 4YSA H5 CE : EN 13479
Industry	Offshore Oil Bridge Construction Mobile Equipment Civil Construction Industrial and General Fabrication Ship/Barge Building

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

Welding Current	DC-
Diffusible Hydrogen	<5 ml/100g
Alloy Type	Low Alloy 1%Ni

Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
As Welded	447 MPa (65 ksi)	536 MPa (78 ksi)	30 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
As Welded	-29 °C (-20 °F)	150 J (110 ft-lb)
As Welded	-40 °C (-40 °F)	146 J (108 ft-lb)

Typical Weld Metal Analysis %									
C	Mn	Si	S	P	Ni	Cr	Mo	V	Al
0.02	1.4	0.35	0.008	0.008	1.00	0.04	0.01	0.008	0.75

Typical Weld Metal Analysis %	
Cu	Nb
0.04	0.003

Deposition Data				
Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
2.0 mm (5/64 in.)	120 A	20 V	127 cm/min (50 in./min)	0.83 kg/h (1.83 lbs/h)
2.0 mm (5/64 in.)	170 A	21 V	190.5 cm/min (75 in./min)	1.38 kg/h (3.04 lbs/h)
2.0 mm (5/64 in.)	210 A	23 V	254 cm/min (100 in./min)	1.92 kg/h (4.24 lbs/h)

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Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
2.0 mm (5/64 in.)	250 A	24 V	317.5 cm/min (125 in./min)	2.35 kg/h (5.19 lbs/h)
2.0 mm (5/64 in.)	280 A	25 V	381 cm/min (150 in./min)	2.83 kg/h (6.23 lbs/h)

Recommended Welding Parameters

Current	Wire Diameter	TTW Dist.	Voltage	Wire Feed Speed
120-280 A	2.0 mm (5/64 in.)	19-25.4 mm (3/4-1 in.)	20-25 V	127-381 cm/min (50-150 in./min)