

Select Ni3S

Description:

Select Ni3S is a metal cored, low alloy steel electrode for submerged arc welding. It contains nominally 3% nickel to produce good low temperature toughness. This electrode is intended for single and multiple pass welding of carbon and low alloy steels in the flat and horizontal fillet positions. It should be used for submerged arc welding, with neutral fluxes only.

Classifications:

- ECNi3 per AWS A5.23, SFA 5.23

Characteristics:

Select Ni3S is designed to deposit a ductile deposit with good low temperature toughness. This wire allows for better control of bead penetration than solid wire. The penetration pattern of a metal cored electrode is broader and slightly shallower, reducing the tendency for burn through on root passes or poorly fit up joints. The cored wire design also results in higher deposition rates than solid wire when run at the same current level.

Applications:

Select Ni3S is ideal for those applications involving the welding of carbon and certain low alloy steels, in applications where low temperature toughness is required. Typical applications include offshore oil equipment, shipbuilding and other cold weather, structural applications.

Typical Weld Metal Properties (with OP121TT Flux):

Ultimate Tensile Strength (psi)	72,400
Yield Strength (psi)	56,800
Percent Elongation	34
CVN (ft•lb f) @ -150° F.	72

Typical Deposit Chemistry

<u>Wt%</u>	<u>C</u>	<u>Mn</u>	<u>P</u>	<u>S</u>	<u>Si</u>	<u>Ni</u>
	.06	0.74	.010	.010	0.23	2.90

Recommended Welding Parameters:

	<u>Amps</u>	<u>Volts</u>	<u>Wire Feed Speed (ipm)</u>	<u>ESO (in)</u>
5/64"	250	26-27	90	¾"-1¼"
	350	29-30	160	
	500	32-33	290	
3/32"	275	28-29	80	1-1¼"
	450	32-33	155	
	600	37-38	245	
1/8"	300	28-29	45	1"-1¼"
	550	32-33	105	
	750	37-38	180	
5/32"	425	31-32	45	1¼"-1½"
	700	37-38	105	
	900	31-42	180	

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Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. Select-Arc disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.