AN ISO 9001:2015 COMPANY
CERTIFICATE NO.: C755336

S3Ni1Mo DATA SHEET

Pinnacle Alloys S3Ni1Mo
AWS CLASS S3Ni1Mo (EG)
CODE AND SPECIFICATION DATA:
AWS A5.23 ASME SFA 5.23 (EG)

DESCRIPTION:

Pinnacle Alloys S3Ni1Mo is a copper-coated solid wire for submerged arc welding with 1% Ni and 0.5% Mo content to be used for welding high yield strength steels, with tensile strength higher than 100,080 psi (690 MPa). It has good impact strength at low temperatures. Pinnacle Alloys S3Ni1Mo is suitable for the metal working industry, offshore fabrication, and the chemical and petrochemical industries. It also has applications in fabrications of HSLA (high-strength low-alloy) steels, which may be used for industrial machinery construction, cranes, and other highly stressed structural components.

BASE MATERIALS TO BE WELDED:

- A514
- A517
- API 5LX X65
- API 5LX X70
- API 5LX X80
- API 5A L80
- HY80
- HY90
- HY100

DIAMETERS: 3/32”, 1/8”, 5/32”

WELDING POSITIONS: Flat and flat-frontal

WELDING GUIDELINES: Preheat and interpass temperature 300°F (150°C). PWHT is not required. To obtain the best mechanical properties results, it is advised to use with low heat input (follow the steel producer recommendations).

TYPICAL DEPOSIT COMPOSITION (Wt %):

Carbon (C)	0.10
Copper (Cu)	0.15
Manganese (Mn)	1.50
Molybdenum (Mo)	0.50
Nickel (Ni)	1.00
Phosphorous (P)	0.01
Silicon (Si)	0.15
Sulfur (S)	0.01

TYPICAL MECHANICAL PROPERTIES:

Ultimate Tensile Strength (psi)	105,880 psi (730 MPa)
Yield Strength (psi)	91,380 psi (630 MPa)
Percent Elongation	20%
CVN (ft•lb$_f$) @ -40°F (-40°C)	37 ft•lbs (50 Joules)

* Tested with INEFLUX BLKV

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TYPICAL WELDING PARAMETERS:

	Diameter	Amperage	Volts	Flux
SUBMERGED ARC	3/32”	250-400	28-32	Pinnacle Alloys
	1/8”	400-600	30-34	
	5/32”	400-600	30-34	

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 the use in the field. The manufacturer disclaims any warranty of merchantability of fitness for any particular purpose with respect to its products.

CAUTION: Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standards A49.1, “Safety in Welding and Cutting,” published by the American Welding Society, 550 NW LeJune Road, Miami, FL 33126: OSHA Safety and Health Standards 29 CRF 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210.

Pinnacle Alloys MSDS sheet may be obtained at www.pinnaclealloys.com.