



Product Data Sheet AWS NSW 310-16

I. APPLICATIONS:

Fabrication of stainless steel structures and assemblies in the chemical, petrochemical, power industries.

Product	Grade
Plate	BS 970 : Pt.1 : 1991 310S31 BS 1449 : Pt.2 : 1983 310S24 BS 1501 : Pt.3 : 1990 310S16
AISI stainless steel	310

II. DESCRIPTION:

A rutile coated manual metal arc electrode for the welding of 310 austenitic stainless steel. NSS-310 deposits 25%Cr-20% Ni weld metal which offers high temperature ductility and excellent resistance to oxidation at working temperatures of up to 1200°C. NSS-310 produces a smooth, even metal transfer with low spatter and a self releasing slag. The finished welds exhibit a slightly concave shape with good cosmetic appearance which requires little or no post weld dressing. The electrode is ideal for both fillet and butt welding applications. The smaller diameter electrodes can be used for vertical up and overhead welding.

Suitable for use with AC (minimum OCV of 70V) and DC+.

III. NOTES ON WELDING:

Prepare and fit the work carefully, cleaning the joints of all foreign material. Use AC (minimum OCV of 70V) or DC+ current. Proceed with the lowest current possible and short arc without allowing coating to touch molten pool. Short and intermittent welding is to be preferred to avoid overheating and distortion. Avoid excessive weaving. Electrodes should be coated. Discard exposed core wire by striking or scratch welding on a scrap plate until exposed core wire is consumed. Use dry electrodes to prevent blow hole in deposit. If necessary re-dry at 300°C for 2 hours before use.



IV. TYPICAL CHEMICAL COMPOSITION OF WELD METAL (%):

C	Mn	Si	Ni	Cr	P	S
0.1	2.19	0.41	20.75	25.98	0.018	0.010

V. TYPICAL MECHANICAL PROPERTIES OF WELD METAL:

Tensile Strength N/mm ² (Ksi)	Elongation %
581 (84)	41

VI. WELDING POSITIONS: ALL POSITIONS

VII. SIZES AVAILABLE AND RECOMMENDED CURRENTS (AC or DC +):

Diameter (mm)	2.5	3.2	4.0	5.0	
Length (mm)	300	350	350	350	
Current Range	F	50-80	70-110	100-150	130-180
	V, OH	45-75	65-105	95-140	-