NSB-316L

FOR WELDING LOW CARBON AUSTENITIC STAINLESS STEELS CONTAINING A NOMINAL 19Cr-12Ni-2.5Mo

DATA SHEET NO. 71

SPECIFICATION	AWS A5.4	BS EN 1600	JIS Z 3221
CLASSIFICATION	E316L-16	E 19 12 3 L R	D316L-16

PRODUCT DESCRIPTION

A metallurgically advanced rutile based flux formulated with balanced additions of chemically basic, amphoteric and acid minerals, together with small alloy additions to compensate for arc losses.

The flux is concentrically extruded onto a fully alloyed core wire and bound by a blend of silicates that assures both coating strength and resistance to subsequent moisture absorption.

WELDING FEATURES OF THE ELECTRODE

This unique flux formulation ensures excellent arc stability, ease of initial arc strike and re-strike minimal spatter on AC and virtually none on DC+. The resultant weld seams are smooth, evenly rippled and free from undercut while slag detachability is excellent. Metal recovery is some 103% with respect to core wire weight.

APPLICATIONS AND MATERIALS TO BE WELDED

Applications for the electrode are to be found in the Chemical, Petro-Chemical and Cryogenic Processing and Storage Industries as well as the Food, Brewery and Pharmaceutical Industries using the following materials:

ASTM	316	316L	316LN	CF3N	CF8M
UNS	S31603		S31600		S31653

NSB-316L electrodes are use for their good resistance to corrosion and pitting against many acids on Austenitic Stainless Steels with 1.5 to 3.0 Mo plus Nb and Ti stabilised versions.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Fe	FN
MIN	-	0.5	-	-	-	17	11	2.0	-		3
MAX	0.04	2.5	1.0	0.03	0.04	20	14	3.0	0.75		10
TYPICAL	0.01	1.2	0.7	0.01	0.01	18.0	12	2.7	0.26	Bal.	6

WELD METAL PROPERTIES (ALL WELD METAL)

PROPERTY	UNITS	MINIMUM	TYPICAL	OTHERS
Tensile strength	N/mm^2	490	550	
0.2% Proof stress	N/mm^2	-	485	
Elongation on 4d	%	30	42	
Reduction of Area (RA)	%	-	55	
Impact energy 20°C	J	-	70	

WELDING AMPERAGE AC or DC+

Ø (mm)	2.0	2.6	3.2	4.0	5.0
MIN	35	65	80	120	160
MAX	80	100	125	170	210

OTHER DATA

Electrodes that have become damp should be re-dried at 150°C for 1 hour

RELATED PRODUCTS

Please contact our Technical Department for detail.