


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	<p>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.</p> <p>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.</p>																																																						
WELDING FEATURES OF THE ELECTRODE	<p>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.</p>																																																						
APPLICATIONS AND MATERIALS TO BE WELDED	<p>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:</p> <table border="0" data-bbox="555 1106 1182 1171"> <tr> <td>ASTM</td> <td>316</td> <td>316L</td> <td>316LN</td> <td>CF3N</td> <td>CF8M</td> <td></td> <td></td> </tr> <tr> <td>UNS</td> <td>S31603</td> <td></td> <td>S31600</td> <td></td> <td>S31653</td> <td></td> <td></td> </tr> </table> <p>NSB-316L electrodes are used 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.</p>							ASTM	316	316L	316LN	CF3N	CF8M			UNS	S31603		S31600		S31653																																		
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WELD METAL ANALYSIS COMPOSITION % BY Wt.	<table border="0" data-bbox="451 1301 1543 1503"> <tr> <td></td> <td>C</td> <td>Mn</td> <td>Si</td> <td>S</td> <td>P</td> <td>Cr</td> <td>Ni</td> <td>Mo</td> <td>Cu</td> <td>Fe</td> <td>FN</td> </tr> <tr> <td>MIN</td> <td>-</td> <td>0.5</td> <td>-</td> <td>-</td> <td>-</td> <td>17</td> <td>11</td> <td>2.0</td> <td>-</td> <td></td> <td>3</td> </tr> <tr> <td>MAX</td> <td>0.04</td> <td>2.5</td> <td>1.0</td> <td>0.03</td> <td>0.04</td> <td>20</td> <td>14</td> <td>3.0</td> <td>0.75</td> <td></td> <td>10</td> </tr> <tr> <td>TYPICAL</td> <td>0.01</td> <td>1.2</td> <td>0.7</td> <td>0.01</td> <td>0.01</td> <td>18.0</td> <td>12</td> <td>2.7</td> <td>0.26</td> <td>Bal.</td> <td>6</td> </tr> </table>								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
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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.																																																						