


NSB-316	FOR WELDING AUSTENITIC STAINLESS STEELS CONTAINING A NOMINAL 19Cr-12Ni-2.5Mo					DATA SHEET NO. 72																	
	SPECIFICATION	AWS A5.4		BS EN 1600		JIS Z 3221																	
CLASSIFICATION	E316-16		E 19 12 2 R		D316-16																		
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" style="width: 100%;"> <tr> <td style="text-align: center;">ASTM 316</td> <td style="text-align: center;">CF10M</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">UNS 310 S51</td> <td style="text-align: center;">316 S53</td> <td style="text-align: center;">S316 C16</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							ASTM 316	CF10M							UNS 310 S51	316 S53	S316 C16					
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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		0.08	2.5	1.0	0.03	0.04	20	14	3.0	0.75		8											
TYPICAL		0.02	1.2	0.6	0.01	0.02	18	12	2.8	0.3	Bal.	5											
WELD METAL PROPERTIES (ALL WELD METAL)	<u>PROPERTY</u>		<u>UNITS</u>		<u>MINIMUM</u>		<u>TYPICAL</u>		<u>OTHERS</u>														
	Tensile strength		N/mm ²		520		590		H.V. 210														
	0.2% Proof stress		N/mm ²		-		460																
	Elongation on 4d		%		30		35																
	Reduction of Area (RA)		%		-		34																
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.																						