



**MANUFACTURERS OF A DIVERSE RANGE OF
ADVANCED WELDING CONSUMABLES**

**SECTION
8**

WI-0304 DS100 NSB-385 Rev. 1, Date 01.04.2013

NSB-385	FOR WELDING FULLY AUSTENITIC STEELS CONTAINING A NOMINAL 20Cr-25Ni-5Mo and 2Cu WHEN GOOD CORROSION RESISTANCE IS SPECIFIED				DATA SHEET NO. 100							
	SPECIFICATION	AWS A5.4		BS EN ISO 3581-A								
CLASSIFICATION	E385-16		E 20 25 5 Cu N L R									
PRODUCT DESCRIPTION	<p>A unique rutile based flux formulated with very low levels of acid and amphoteric minerals combined 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>The electrode is used to best advantage on DC+ but is also stable on AC. Weld beads are smooth and slag detachability is good. Because weld metal silicon is low by design to reduce solidification cracking (a feature common to all ferrite free austenitic alloys), the weld profile is more u-convex than normal.</p>											
APPLICATIONS AND MATERIALS TO BE WELDED	<p>This electrode ensures good resistance to corrosion against sulphuric, phosphoric and other organic and inorganic acids. When welding ASTM N08904, BS1449 904513 and BS1504-364 C11.</p> <p>Proprietary alloys include Uddleholm 904L, Sandvik 2RK65, Cronifer 1925LC(UDM), 254 SLX (Avesta), Uranus B6 and B6M. Can also be used to weld copper free variants of above and lower alloyed variants such as 317L, 317LN, 317LM.</p> <p>Applications include pipes and process vessels, pumps and valves used in fertilizer plants.</p>											
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Ni	Mo	Nb	Cu	N
	MIN	-	1.0	-	-	-	19.5	24	4.2	-	1.2	
	MAX	0.03	2.5	0.9	0.02	0.03	21.5	26	5.2	0.5	2.0	
	TYPICAL	0.02	1.6	0.4	0.01	0.02	21.0	25	5.0	0.1	1.3	0.08
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	630			H.V. 190~200				
	0.2% Proof stress		N/mm ²		420							
	Elongation on 4d		%	30	38							
	Reduction of Area (RA)		%	-	52							
Impact energy -196°C		J	-	60								
WELDING AMPERAGE AC or DC+	Ø (mm)	2.6		3.2		4.0						
	MIN	60		75		100						
	MAX	90		120		155						
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.											