



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

**SECTION
6**

WI-0304 DS82 ND-2209, Rev. 1, Date 01.04.2009

ND-2209	FOR WELDING DUPLEX STAINLESS STEELS THAT NEED A MATCHING MICROSTRUCTURE IN THE AS WELDED CONDITION - NAMELY 55 TO 65 AUSTENITE 35 TO 45 FERRITE					DATA SHEET NO. 82					
	SPECIFICATION	AWS A5.4			BS EN 1600						
CLASSIFICATION	E2209-17			E 22 9 3 N L R							
PRODUCT DESCRIPTION	Rutile based flux formulated electrode for welding ferritic-austenitic stainless steel. 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	For welding standard 22% Chrome-Duplex Stainless Steels. Typical examples being: ASTM A182 Gr F 51 A890 Grade 4A EN X 2 CrNiMoN 22 5 3 Proprietary alloys include Sandvick SAF 2205, Avesta 2205, Bohler A903, Sumitomo SM 22Cr, Nippon NK Cr22.										
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N
	MIN	-	0.5	-	-	-	21.5	8.5	2.5	-	0.08
	MAX	0.04	2.0	1.0	0.03	0.04	23.5	10.5	3.5	0.75	0.20
	TYPICAL	0.02	0.8	0.6	0.01	0.02	22	9.0	3.1	0.1	0.14
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		690		730		PRE _N 34 TO 38		
	0.2% Proof stress		N/mm ²		-		600				
	Elongation on 4d		%		20		28				
	Reduction of Area (RA)		%		-		40				
Impact energy 20°C		J		-		42					
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.										