

C-76	A BALANCED RUTILE-AMPHOTERIC OXIDE FLUX COATED MMA ELECTRODE DEPOSITING A NICKEL BASED ALLOY HIGH IN BOTH CHROMIUM				DATA SHEET NO. 141							
SPECIFICATION	AWS A5.13											
CLASSIFICATION	ENiCrMo-5 (nearest)											
PRODUCT DESCRIPTION	The metallurgically engineered chemically neutral flux containing the major alloying elements is extruded onto a pure nickel core wire. The blend of silicates used during electrode production ensures both coating strength and resistance to subsequent moisture absorption. Metal recovery is some 150% with respect to weight of the core wire.											
WELDING FEATURES OF THE ELECTRODE	Suitable for use on both AC and DC. Welds with a very stable, directional but low penetrating arc. Weld beads are exceptionally smooth and evenly rippled. Slag is normally self detaching and fillet welds slightly concave. The slag is fairly fluid allowing full control of run-out length and the smaller diameters are suited for positional welding.											
APPLICATIONS AND MATERIALS TO BE WELDED	Extensively used to surface dies used in the drop forging industry when a combination of resistance to oxidation at elevated temperature is needed combined with thermal stability. Good initial hardness and the ability to work harden. It is of particular value when such dies need to be precision machined and extra ductility is needed at elevated temperature.											
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Fe	Mo	V	W	Ni
	MIN	-	-	-	-	-	14	-	14	-	3.0	
	MAX	0.12	1.0	1.0	-	-	18	0.4	18	7.0	5.0	
	TYPICAL	0.02	0.23	0.8	0.01	0.01	16	0.2	16.5	1.0	4.0	Bal.
WELD METAL PROPERTIES (ALL WELD METAL)	PROPERTY	UNITS		TYPICAL		OTHERS						
	Tensile strength	N/mm ²		780		Hardness as welded 240-260 HV						
	0.2% Proof stress	N/mm ²		550								
	Elongation on 4d	%		20		Will work hardened rapidly to 450 HV						
	Reduction of Area (RA)	%		22								
	Impact energy 20 °C	J		60								
WELDING AMPERAGE AC or DC+	Ø (mm)	3.2		4.0		5.0						
	MIN	90		130		170						
	MAX	130		180		200						
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.											

