NIMROD 182

INCONEL™ TYPE MMA ELECTRODE FOR DOWNHAND WELDING AND SURFACING

PRODUCT DESCRIPTION

MMA electrode – This electrode is made on a nearly matching core wire with a basic slag system designed to produce optimum operability and weld metal soundness for downhand/HV welding.
Optimised for DC+ operability primarily for surfacing and cladding applications.
Recovery is about 120% with respect to core wire, 65% with respect to whole electrode.

SPECIFICATIONS

AWS A5.11M	ENiCrFe-3	(3.2mm will not necessarily satisfy 3G usability criteria)
BS EN ISO 14172	E Ni 6182	

ASME IX QUALIFICATION

QW432 F-No 43

WELDING POSITIONS (ISO/ASME)

PA/1G PB/2F PC/2G

CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si	S	P	Cr	Ni	Nb	Fe	Cu	Ti	Co *	Ta *
min.	--	5.0	--	--	--	13.0	61	1.0	2.0	--	--	--	--
max.	0.10	9.5	1.0	0.015	0.02	17.0	bal	2.5	9.0	0.50	1.0	0.12	0.30
Typical	0.05	6	0.5	0.01	0.01	16	~ 65	1.5	< 8	0.1	0.1	< 0.05	0.05

* Co and Ta maximums only when specified at time of order.

ALL-WELD MECHANICAL PROPERTIES

As-welded		Min.	Typical
Tensile strength (MPa)		550	660
0.2% proof strength (MPa)		360	420
Elongation (%)	4d	30	40
	5d	27	37
Reduction of area (%)		--	38
Impact ISO-V(J)	-196°C	--	100
Hardness (HV)		--	190

OPERATING PARAMETERS, DC +VE

Diameter (mm)	3.2	4.0	5.0
min. A	70	100	130
max. A	110	155	210

PACKAGING DATA

Diameter (mm)	3.2	4.0	5.0
Length (mm)	300	350	330
kg/carton	12.0	14.1	14.1
Pieces/carton	375	249	165

STORAGE

3 hermetically sealed ring-pull metal tins per carton, with unlimited shelf life.
Direct use from tin is satisfactory for longer than a working shift of 8h.
Excessive exposure of electrodes to humid conditions will cause some moisture pick-up and increase the risk of porosity.
For electrodes that have been exposed:
Redry 200 – 300°C/1-2h to restore to as-packed condition. Maximum 380° C, 3 cycles, 10h total.
Storage of redried electrodes at 50 – 200°C in holding oven or heated quiver: no limit, but maximum 6 weeks recommended.
Recommended ambient storage conditions for opened tins (using plastic lid): < 60% RH, > 18°C.

FUME DATA

Fume composition, wt % typical

Fe	Mn	Cr	Ni	Mo	Cu	F	OES (mg/m³)
2	13	5	10	0.2	0.1	15	1