

NIMROD 190

MMA (SMAW)

NICKEL-COPPER MMA ELECTRODE FOR MONEL ALLOY 400

PRODUCT DESCRIPTION

Special basic carbonate-fluoride-rutile flux system on matching 400 core wire to give low levels of residuals. Deoxidation system designed to ensure sound deposits. The raised levels of manganese and titanium help suppress hot cracking and porosity. Analysis is optimised to give the highest as-welded ductility and strength attainable in weld metal of this type. The smaller electrode sizes are particularly suitable for fixed pipework welds demanding qualification in the ASME 6G position. Recovery is about 110% with respect to core wire, 65% with respect to whole electrode.

CLASSIFICATIONS

AWS A5.11M ENiCu-7
ISO 14172 E Ni 4060

ASME IX QUALIFICATION

QW432 F-No 42

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G

CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si *	S	P	Ni	Cu	Ti	Fe	Al
min.	--	1.0	--	--	--	62.0	27.0	--	0.5	--
max.	0.15	4.0	1.5	0.015	0.02	69.0	34.0	1.0	2.5	0.5
Typical	0.08	3.5	1.2	0.005	0.01	63	30	0.9	1	0.03

* DIN maximum 1.0% Si

ALL-WELD MECHANICAL PROPERTIES

As welded	Min.	Typical
Tensile strength (MPa)	480	520
0.2% proof strength (MPa)	200	320
Elongation [%] 4d	30	40
5d	27	35
Reduction of area [%]	--	40
Impact ISO-V(J) -30°C	--	110
Hardness (HV)	--	160-180

OPERATING PARAMETERS, DC +VE

Diameter (mm)	2.5	3.2	4.0
min. A	60	70	90
max. A	80	110	145

PACKAGING DATA

	Diameter (mm)	Length (mm)	Item number	No of pieces		Weight (kg)	
				can	box	can	box
METAL CAN	2.5	300	NIM190-25	CONSULT US			
	3.2	350	NIM190-32				
	4.0	350	NIM190-40				

Redrying : 200 – 250°C/1-2h to restore to as-packed condition. Maximum 350° C, 3 cycles, 10h total.

FUME DATA (WT % TYPICAL)

Fe	Mn	Ni	Cu	F	OES (mg/m ³)
1	7	4	16	8	1.2

All information in this data sheet is accurate to the best of our knowledge at the time of printing. Please refer to www.specialalloys.eu for any updated information.