DURAMAX®
Inspiring the future generations of welders

Product
Data Sheet

DURAMAX NICKEL ALLOY ELECTRODE DMNA182

Classification: **ENiCrFe-3 AWS A5.11 / ASME SFA 5.11**

Description, Characteristics & Applications:

DURAMAX NA182 (ENiCrFe-3) has a nominal composition (wt.-%) of 65 Ni, 15 Cr, 8 Fe, 7.5 Mn, 2 Nb + Ta. Electrodes of this classification are used for welding nickel-chromium-iron alloys, for welding the clad side of joints on steel clad with nickel-chromium- iron alloy and for surfacing steel with nickel-chromium-iron weld metal, when comparatively high manganese contents are not detrimental. The electrodes may be used for applications at temperatures ranging from cryogenic to around 900°F. These electrodes can also be used for welding steel to other nickel-base alloys. DMNA182 is designed for welding in harsh, corrosive environments, such as desalination plants, petrochemical facilities and power generation plants, and in temperature critical conditions, such as furnace equipment and pipe work.

Typical Chemical Composition (%)

C	Mn	Fe	P	S	Si	Cu	Ni	Ti	Cr	Nb+Ta	TOE
0.10 max	5.0-9.5	10.0 max	0.03 max	0.015 max	1.0 max	0.50 max	59.0 min	1.0 max	130-17.0	1.0-2.5	0.50 max

Deposited Chemical Composition (%) (Typical)

C	Mn	Fe	P	S	Si	Cu	Ni	Ti	Cr	Nb+Ta	TOE
0.038	6.09	8.52	0.018	.004	0.27	0.001	68.20	0.08	14.99	1.44	<0.50

Typical Mechanical Properties as Welded

Tensile Strength (n/mm^2)	Yield Strength (n/mm^2)	Elongation (%)	Hardness	Ferrite WRC (FN)	CVN Impacts (J) @ °C
550 Min	370 Typical	30% Min	-------	-------	-------

Typical Welding Parameters DCEP or AC

Diameter	Type of Current	Amperage Range		Voltage Range
		Flat	Out of Position	
3/32"	DCEP	70 - 80	65 - 80	20 - 23
1/8"	DCEP	80 - 110	75 - 95	21 - 24
5/32"	DCEP	120 - 160	Not recommended	22 - 25
3/16"	DCEP	170 - 190	Not recommended	23 - 25

NOTE: Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of material being welded.

POLARITY: DCEP
DCEP: DC, Electrode Positive (reverse polarity) has the most weld penetration
USE LESS AMPS ON THIN METAL; MORE AMPS ON THICK METALS

If additional information is needed visit us on the web at www.duramaxwelding.com

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