DURAMAX®
Inspiring the future generations of welders

Product
Data Sheet

DURAMAX STAINLESS ELECTRODE DM310Nb-16

Classification: **E310Nb-16 AWS A5.4 / ASME SFA 5.4**

Description, Characteristics & Applications:

DURAMAX E310NB-16 electrodes deposit weld metal that is similar in composition to that of type 310, with an addition of niobium (columbium) and a reduction in carbon content. Electrodes are primarily used for welding steels clad with type 347or for the overlay of carbon steels.

DM310Nb- 16's exceptional resistance to oxidation and high temperature toughness make this electrode well suited for welding in chemical processing plants.

Typical Chemical Composition (%)

C	Cr	Ni	Mo	Mn	Si	P	S	Cu	Nb
0.12 max	25.0-28.0	20.0-22.5	0.75 max	1.0-2.5	0.75 max	0.03 max	0.03 max	0.75 max	0.70-1.00

Deposited Chemical Composition (%) (Typical)

C	Cr	Ni	Mo	Mn	Si	P	S	Cu	Nb
0.09	26.40	21.40	0.62	2.00	0.52	0.02	0.01	0.10	0.79

Typical Mechanical Properties as Welded

Tensile Strength (n/mm^2)	Yield Strength (n/mm^2)	Elongation (%)	Hardness	Ferrite WRC (FN)	CVN Impacts (J) @ +20 °C
550 Min	300 Min	25% Min	-------	-------	60 - 90 J

Typical Welding Parameters DCEP or AC

Diameter	Type of Current	Amperage Range		Voltage Range
		Flat	Out of Position	
3/32"	DCEP or AC	70 - 80	65 - 80	20 - 23
1/8"	DCEP or AC	80 - 110	75 - 95	21 - 24
5/32"	DCEP or AC	120 - 160	100 - 120	22 - 25
3/16"	DCEP or AC	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 or AC
DCEP = DC, Electrode Positive (reverse polarity) has the most weld penetration.
AC: medium weld penetration (can have more spatter)
WELDING POSITIONS: All Positions

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