DURAMAX STAINLESS ELECTRODE DM317-16

Classification: **E317-16** **AWS A5.4 / ASME SFA 5.4**

Description, Characteristics & Applications:

DURAMAX E317-16 Rutile semi-basic stainless steel electrode suitable for the welding of austenitic stainless steels with 16-20% Cr, 10-14% Ni and 3-4% Mo. (AISI 317). The use of these steels are limited to corrosion conditions in the presence of sulphuric and sulphurous acid and their salts. Excellent weldability, smooth arc, finely rippled weld bead, self releasing slag.

DM317-16 is usually used for welding alloys of similar composition and are utilized in severely corrosive environments (such as those containing halogens) where crevice and pitting corrosion are of concern, such as food processing plants, paper industries, chemical processing facilities, and marine applications.

Typical Chemical Composition (%)

AWS Spec.	C	Cr	Ni	Mo	Mn	Si	P	S	Cu	
A5.4	0.08 max	18.0-21.0	12.0-14.0	3.0 - 4.0	0.5 - 2.5	1.00 max	0.04 max	0.03 max	0.75 max	
Typical	0.054	18.9	12.95	3.35	1.55	0.52	0.018	0.02	0.14	

Typical Mechanical Properties as Welded

Tensile Strength (n/mm²)	Yield Strength (n/mm²)	Elongation (%)	Hardness	Ferrite WRC (FN)	CVN Impacts (J) @ °C
520 Min	----	30% Min	-------	8 FN	-----

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
USE LESS AMPS ON THIN METAL; MORE AMPS ON THICK METAL