DURAMAX STAINLESS ELECTRODE DM385-16

Classification: **E385-16** **AWS A5.4 / ASME SFA 5.4**

Description, Characteristics & Applications:

DURAMAX E385-16 is used for welding materials of similar chemical composition (UNS Number N08904). These materials are used in the fabrication of equipment and vessels for handling and storage of sulfuric acid and phosphoric acid. DM385-16 weld metal is fully austenitic and, as such, the low melting constituents, such as carbon, silicon, and phosphorous, should be kept low. Welding must be done with low heat input, using a stringer beat technique. Can be used to join Type 317L material where improved corrosion resistance in specific media is needed. It can also be used to join Type 904L base metals to other grades of stainless.

Typical Chemical Composition (%)

AWS Spec.	C	Cr	Ni	Mo	Mn	Si	P	S	Cu	
A5.4	0.03 max	19.5-21.5	24.0-26.0	4.2 - 5.2	1.0 - 2.5	0.90 max	0.03 max	0.02 max	1.2 - 2.0	
Typical	0.015	20.5	25.2	4.60	2.10	0.45	0.018	0.009	1.70	

Typical Mechanical Properties as Welded

Tensile Strength (n/mm²)	Yield Strength (n/mm²)	Elongation (%)	Hardness	Ferrite WRC (FN)	CVN Impacts (J) @ °C
610	450	32% Min	-------	------	------

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