

ARCTEC® STAINLESS STEEL ELECTRODES



a quality welding alloy

ARCTEC® E310-16 AWS A5.4 Class E310-16

DESCRIPTION AND APPLICATION:

Arctec® E310-16 is primarily intended for welding type 310 stainless steel. The deposit exhibits the same chemical and oxidation resistant qualities as the base metal. It is considered standard practice to weld types 410, 430 and 502 with type 310 or 309 where field welding is done and where it is not possible to preheat or anneal after welding.

Typical Mechanical Properties: Tensile Strength: 85,000 to 95,000 psi (586 to 655 MPa) Elongation 35 to 45% - 2"

Typical Deposit Analysis:

C	Cr	Ni	Mn	Si	
%	.15	26.0	21.0	1.8	.40

WELDING PROCESS: SMAW

POLARITY: DC Reverse or AC

Recommended Amperage:

Diameter	1.5 mm 1/16"	2.0 mm 5/64"	2.50 mm 3/32"	3.25 mm 1/8"	4.0 mm 5/32"	5.0 mm 3/16"
Amperage	30-50	40-60	60-80	80-100	110-140	140-180

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DESCRIPTION AND APPLICATION:

Arctec® E312-16 are found to be valuable in welding dissimilar metals, especially if is stainless steel, high in nickel. This alloy gives a two-phase weld deposit with substantial amounts of ferrite in an austenitic matrix. Even with considerable dilution by austenite-forming elements the microstructure remains two-phase and thus highly resistant to weld metal cracks and fissures. Applications should be limited to service temperatures below 800° F (420° C) to avoid formation of secondary brittle phases.

Typical Mechanical Properties: Tensile Strength: 111,000 psi (758 MPa) Elongation 25% - 2"

Typical Deposit Analysis:

C	Cr	Ni	Mn	Si	
%	.12	29.0	9.5	1.7	.50

WELDING PROCESS: SMAW

POLARITY: DC Reverse or AC

Recommended Amperage:

Diameter	1.5 mm 1/16"	2.0 mm 5/64"	2.50 mm 3/32"	3.25 mm 1/8"	4.0 mm 5/32"	5.0 mm 3/16"
Amperage	30-50	40-60	60-80	80-100	110-140	140-180

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Subject to change without notice

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