



WASHINGTON ALLOY'S Quality Management System is Certified to **ISO 9001:2008** Cert # 05-R0925

USA 309H-16 Coated Electrode

U.S. ALLOY CO.
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ALLOY DESCRIPTION AND APPLICATION;

309H electrodes contain higher carbon over 309 for the welding of austenitic, high carbon 24% Cr – 12% Ni stainless steels such as AISI-309-H. The weld deposit of this electrode contains a 0.04 - 0.08% carbon, which provides higher tensile and creep strengths at elevated temperatures. 309H electrodes have a high deposition rate resulting in excellent efficiency. This electrode may be used in all positions and may be used joint welds in construction parts for applications like industrial furnaces/ovens, chemical engineering and cryogenic applications. It is also used for joining of dissimilar material

TYPICAL WELDING PROCEDURES; DCEP & AC

Diameter	Amps	Diameter	Amps
1/16"	15-40	1/8"	75-110
5/64"	30-50	5/32"	100-140
3/32"	50-75	3/16"	160-200

Arc Length = short arc, Flat use 15° angle from 90°, Vertical up & Overhead use weaving techniques within puddle

Procedures may vary with change in position, base metals, filler metals, equipment and other changes. When welding vertical reduce amperage 10-20%

TYPICAL CHEMISTRY (%) & WELD METAL PROPERTIES

Carbon	0.051	Copper	0.11
Manganese	1.91	Phosphorus	0.028
Silicon	0.73	Sulfur	0.008
Chromium	24.10	Nickel	12.20
Molybdenum	0.40	Niobium	0.02
	Elongation		40%
	Yield Strength (psi)		57,000
	Tensile Strength (psi)		89,800

Iron balance and all single values are maximum percentages

AVAILABLE SIZES: TF309H-16 = 3/32", 1/8"

SPECIFICATIONS; ANSI/AWS A5.4 E309H-16
ASME SFA 5.4 E309H-16

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