



WA. ALLOY CO.

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

USA 309H-16 Coated Electrode

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
www.weldingwire.com



American Welding Society
Sustaining Company Member



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	0.53	Copper	0.03
Manganese	2.09	Phosphorus	0.021
Silicon	1.55	Sulfur	0.005
Chromium	24.71	Nickel	12.12
Molybdenum	0.35	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

EAST COAST
7010-G Reames Rd
Charlotte, NC 28216
Tel (888) 522-8296
Fax (704)598-6673

GULF COAST
4755 Alpine Drive #100A
Stafford, TX 77477
Tel (877) 711-9274
Fax (281)313-6332

WEST COAST
8535 Utica Ave
Rancho Cucamonga, CA 91730
Tel(800)830-9033
Fax (909)291-4586



2017 DC

Warehouse Distribution Center – Portland, Oregon & Boston, Massachusetts

Head Office – Puyallup, Washington

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