



WA. ALLOY CO.

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

USA 312-16 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;

312 electrodes produce a weld deposit (as welded) with the highest tensile and yield strength of any stainless arc electrode. As a result, it is one of the most widely used stainless steel electrodes for arc welding. It is used to weld dissimilar steels, abrasion resistant steels, high yield steels and for joining high temperature alloys to carbon or low alloy steels. 312 electrodes produce ductile, crack resistant, porosity-free, weld deposits with greater root penetration and better slag control in tight places. 312 is also used for Mn steels, hardening steels, armor steels, spring steels, and as a wear resistant build-up and buffer layer for hardfacing. This electrode may be used in all positions.

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	0.120	Phosphorus	0.030
Manganese	1.700	Sulfur	0.020
Silicon	0.600	Nickel	9.00
Chromium	29.500		

Elongation 30%
Yield Strength (psi) 85,000
Tensile Strength (psi) 120,000

Iron balance and all single values are maximum percentages

AVAILABLE SIZES: TF312-16 = 1/16", 5/64", 3/32", 1/8", 5/32", 3/16"

SPECIFICATIONS; ANSI/AWS A5.4 E312-15 or E312-16
ASME SFA 5.4 E312-15 or E312-16



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2018 DC

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