

USA 2594-16 Coated Electrode

U.S. ALLOY CO.
dba Washington Alloy
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American Welding Society
Sustaining Company Member



ALLOY DESCRIPTION AND APPLICATION;

2594-16 is a super duplex stainless steel coated electrode used for welding matching or similar alloys such as ASTM A890, UNS S31260(DP-3), S32750 (2507), S32760 J93380 (Zeron 100), S32550(Ferralium 255). Also found for welding UNS S32550, J93370, and J03372 when used without sulfurous and sulfuric service conditions. It may also be used to weld carbon and low alloy steels to duplex as well as root runs on UNS S32205 & J92250. Interpass temperature 300° F max and heat input of 10-30 kJ/in.; Heat Input = Voltage x Amperage x 6 7/8 Travel Speed (inch/Minute) x 100. Weld metal should have very good resistance to stress corrosion cracking and pitting with an austenite & 45-55 % ferrite matrix. Over alloyed with 2-3% Nickel which yields a weld bead with superior austenite/ferrite duplex properties.

TYPICAL WELDING PROCEDURES; DCEP & AC

Diameter	Amps	Vertical/Overhead	Volts
3/32"	65-90	60-80	24-28
1/8"	80-115	75-95	26-30
5/32"	110-150	100-125	27-32

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	0.04	Molybdenum	3.50-4.50
Manganese	0.50-2.0	Phosphorus	0.04
Silicon	1.00	Sulfur	0.03
Chromium	24.00-27.00	Nitrogen	0.20-0.30
Nickel	8.00-10.50	Copper	0.75
	Elongation	15%	
	Yield Strength (psi)	N/A	
	Tensile Strength (psi)	110,000	

Iron balance and all single values are maximum percentages

AVAILABLE SIZES: TF 2594-16 = 3/32", 1/8", 5/32"

Other sizes available – please inquire

SPECIFICATIONS; ANSI/AWS A5.4 E2594-16
ASME SFA 5.4 E2594-16



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