



Unibrazed W

CLASSIFICATIONS: AWS A5.14/ASME SFA 5.14 Class ERNiMo-3

UNS N10004

DESCRIPTION: Unibrazed W filler metal is designed for welding of similar nickel-molybdenum alloys. This “superalloy” is most commonly used for dissimilar combinations of cobalt and nickel base alloys used in high temperature service applications. The weld deposit of Unibrazed W exhibits good mechanical properties up to 1800°F, however, it does exhibit poor oxidation resistance above 1400°F and it should not be used for service application in excess of 750 hours. Unibrazed W is used in the aerospace industry for jet engine repair and maintenance, gas turbine parts, rotor hubs, and chemical process industries.

TYPICAL CHEMISTRY:

C	Cr	Ni	Mo	Mn	Si	P	S	Fe	Cu	Co	V	W	Others
.012 max	4.0- 6.0	Bal	23.0- 26.0	1.0 max	1.0 max	.04 max	.03 max	4.0- 7.0	.50 max	2.5 max	.60 max	1.0 max	.50 max

TYPICAL MECHANICAL PROPERTIES:

Tensile Strength	100,000 psi
Yield Strength	Not reported
Elongation	Not reported

TYPICAL WELDING PARAMETERS:

	Diameter	Voltage	Amperage	Shielding Gas
MIG	.035" (.9mm)	26-29	150/190	75% Ar/25% He
	.045" (1.14mm)	28-32	180/220	
	.062" (1.6mm)	29-33	200/250	
TIG	.035" (.9mm)	12-15	60-90	100% Ar
	.045" (1.14mm)	13-16	80-110	
	1/16" (1.6mm)	14-18	90-130	
	3/32" (2.4mm)	15-20	120-175	
	1/8" (3.2mm)	15-20	150-220	

Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.