



# Unibraze 409Nb

**CLASSIFICATIONS:** AWS A5.9/ASME SFA 5.9 Class ER409Nb      UNS S40940

**DESCRIPTION:** Unibraze 409Nb is a ferritic stainless steel welding wire used to weld 409 and 409Ti base metals. The addition of niobium improves corrosion resistance and promotes a ferritic micro-structure. For the best results, welding in a low heat input procedure is required. Unibraze 409Nb is not recommended for multi-pass applications.

**TYPICAL CHEMISTRY:**

C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu	Nb + Ta	FN (WRC)
.08 max	10.5-13.5	.60 max	.50 max	.80 max	1.0 max	.04 max	.03 max		.75 max	10xC - .75	0

**TYPICAL MECHANICAL PROPERTIES:**

Tensile Strength	67,000 psi (460MPa)
Yield Strength	50,500 psi (350 MPa)
Elongation	26%

**TYPICAL WELDING PARAMETERS:**

	Shielding Gas	Gas Flow	Diameter	Voltage	Amperage
MIG	98/99% Ar +2/1% O 97% Ar + 3% CO <sub>2</sub>	30 to 50 CFH	.035" (.9mm)	26-29	160 /210
			.045" (1.14mm)	28-32	180/250
			.062" (1.6mm)	29-33	200/280
TIG	100% Ar		1/16" (1.6mm)	14-18	90/130
			3/32" (2.4mm)	15-20	120/175
			1/8" (3.2mm)	15-20	150/220
SUBARC	Suitable Flux		3/32" (2.4mm)	28-33	275/350
			1/8" (3.2mm)	29-32	350/450

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.