Unibraze 316/316H

CLASSIFICATIONS: AWS A5.9/ASME SFA 5.9 Class ER316/316H UNS S31680

DESCRIPTION: Unibraze 316 is used to weld wrought and cast forms of similar composition. The presence of molybdenum increases creep resistance at elevated temperatures. The higher carbon content provides higher strength at high temperatures. When a lower ferrite level of this nominal composition is achieved, it reduces the rate of corrosion in certain media and is suitable for cryogenic temperatures.

TYPICAL CHEMISTRY:

C	Cr	Ni	Mo	Mn	Si	P	S	Cu
.04-.08	18.0-20.0	11.0-14.0	2.0-3.0	1.0-2.5	.30-.65	.03 max	.03 max	.75 max

TYPICAL MECHANICAL PROPERTIES:

Tensile Strength	88,500 psi (610 MPa)
Yield Strength	59,000 psi (410 MPa)
Elongation	35%

TYPICAL WELDING PARAMETERS:

	Shielding Gas	Gas Flow	Diameter	Voltage	Amperage
MIG	98/99% Ar +2/1% O 97%Ar + 3% CO_2	30 to 50 CFH	.035" (.9mm) .045" (1.14mm) .062" (1.6mm)	26-29 28-32 29-33	160 /210 180/250 200/280
TIG	100% Ar		1/16" (1.6mm) 3/32" (2.4mm) 1/8" (3.2mm)	14-18 15-20 15-20	90/130 120/175 150/220
SUBARC	Suitable Flux		3/32" (2.4mm) 1/8" (3.2mm)	28-33 29-32	275/350 350/450

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