Unibraze 630

CLASSIFICATIONS: AWS A5.9/ASME SFA 5.9 Class ER630 UNS S17480

DESCRIPTION: Unibraze 630 (17-4PH) is a precipitation hardening stainless steel used for welding of materials of similar chemical composition. Mechanical properties of Unibraze 630 are greatly influenced by heat treatment.

TYPICAL CHEMISTRY:

C	Cr	Ni	Mo	Mn	Si	P	S	Cu	Nb +Ta	FN (WRC)
.05 max	16.0-16.75	4.5-5.0	.75 max	.25-.75	.75 max	.03 max	.03 max	3.25-4.0	.15-.30	0

TYPICAL MECHANICAL PROPERTIES:
(Post weld heat treatment between 1875°F and 1925°F for 1 hour, followed by precipitation hardening between 1135°F and 1165°F for 4 hours.)

Tensile Strength	150,000 psi (10300 MPa)
Yield Strength	135,000 psi (930 MPa)
Elongation	10%

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 to 33 29 to 32	275/350 350/450

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