Unibraze 310T-1

(Modified Chemistry)

Classification: EN ISO 17633-A T 25 2 P C1 2 /EN ISO 17633-A T 25 2P M21 2

Description: Unibraze 310T-1 is a gas-shielded, all position, flux cored, stainless steel electrode used to weld AISI 301, 302, 304, 305, and 308 stainless steels, and carbon steels to stainless steels utilizing 100% CO_2 or mixed gas. It is also used for welding and repair of high alloy heads and corrosion resistant castings of similar composition. The increased Mn content in this modified chemistry provides excellent weldability and improved crack resistance.

Chemical Composition: (100% CO_2) ***Does not meet AWS****

	C	Cr	Ni	Mo	Mn*	Si	P	S	Cu
ISO 17633-A	.06 - .20	25.0 – 28.0	18.0-22.0	.30 max	1.0 – 5.0	1.2 max	.03 max	.025 max	.50 max
Typical	.12	26.62	20.14	.13	4.40*	.71	.019	.01	.21

****AWS A5.9 Mn =1.0-2.5***

Mechanical Properties: (100% CO_2)

	Requirement	***Typical Results***
Tensile Strength	79,770 psi min. (550 MPa)	86,152 psi (594 MPa)
Yield Strength	50,700 psi (350 MPa)	55,695 (384 MPa)
Elongation	20% min.	38%

***NOTE*:** Strength will be slightly higher with Ar + 20~25% CO_2

Optimum Welding Parameters: DC+ (100% CO_2)

Diameter	Amps	Volts	WFS (IPM)	ESO	Deposition Rate (lbs/hr)
.035”	150	26	500	5/8” –3/4”	5.4
.035”	165	27	600	5/8” –3/4”	6.3
.045”	160	26	300	5/8” –3/4”	6.3
.045”	200	28	425	5/8” –3/4”	9.2
1/16”	215	27	195	¾” – 1”	7.0
1/16”	250	28	240	¾” – 1”	8.6

NOTE: Lower by ~2 volts when using Ar + 20~25% CO_2

Radiographic, Face and Fillet Weld Tests: Meets requirements of specification.

Unibraze Corporation 1050 Penner Crest Houston, TX 77055 1-800-364-6900 www.unibraze.com