Unibraze 4130

Specifications: AISI 4130

Description: **Unibraze 4130** is used to weld high strength low alloy steels and tool steels like AISI 4130, 4140, 4150, 4340, 8620 and 8630 as well as for overlays where moderate hardness is required. Normal preheat of 400°F and inter-pass temperatures of 800°F is recommended. After welding is completed slow cool to prevent cracking.

Typical Chemistry

C	Mn	Si	Fe	Cr	Mo
.31	.52	.28	Bal	.93	.20

Typical All Weld Metal Properties

(*for weld metal oil quenched from 1550°F & tempered at 1050°F)*

Tensile Strength	145,000 psi (1000 MPa)
Yield Strength	130,000 psi (900 MPa)
Elongation	11%
Hardness	32 RC

Note: Mechanical properties are influenced by preheat, inter-pass temperature and PWHT.

Recommended Parameters

Process	Diameter	Volts	Amps	GAS
TIG	.035”	10-12	50-70	100% Argon
	045”	10-12	70-100	100% Argon
	1/16”	12-15	100-125	100% Argon
	3/32”	15-20	125-175	100% Argon
	1/8”	15-20	175-250	100% Argon
MIG – Spray Transfer	.035”	28-32	165-200	98% Argon+2% Oxygen
	.045”	30-34	180-220	75% Argon +25% CO_2
	1/16”	30-34	230-260	100% CO_2
MIG – Short Circuit Transfer	.035”	22-25	100-140	100% CO_2 *
	.045”	23-26	120-150	75% Argon + 25% CO_2 **

*with 100% CO_2 shielding gas the weld metals undergoes short circuit or globular transfer

**Only facilitates short circuit or globular transfer.