



Unibraze 99 Electrodes

Specification: AWS A5.15 ENi-CI / ASME SFA 5.15 ENi-CI UNS W82001

Description: Unibraze 99 (commercially pure nickel core wire) is recommended for welding thin cast iron sections where high dilution can be expected. It is used to weld damaged cast iron housings, and especially for cast iron subject to wear. It is also used to join cast iron with steel, copper and copper alloys. Unibraze 99 has a smooth arc and low penetration. The deposit shows no porosity, splash or undercuts. Both the metal deposited and the transition zone are machinable. The slag is removed easily.

Chemical Analysis % (all weld metal)

	C	Mn	Si	S	Fe	Ni	Cu	Al
AWS/ASME	<2.0	<2.5	.<.40	,.03	<8.0	>85.0	<2.5	<1.0

Mechanical Properties (all weld metal)

Tensile Strength	40,000–65,000 psi
Yield Strength	38,000-60,000 psi
Elongation	3-6%
Hardness(HB)	135-218

Welding Instructions: Unibraze 99 electrodes can be used in flat, vertical and overhead positions. AC or DC current can be used, although DC is preferred. Preheat and post heat treatment is not required when welding ductile or gray iron, but preheat may be advantageous in pressure boundary welds, or where there are different thicknesses in the same area.

Welding Parameters (flat or downhand*)

Diameter	Amps (AC)	Amps (DC)
3/32"	50-90	40-80
1/8"	90-120	80-120
5/32"	120-150	100-140
3/16"	130-170	120-170

**for overhead welding reduce downhand current 5-15 amps; for vertical reduce downhand 10-20 amps*

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 specific purpose with respect to its products.