



Unibraze 7014 (E7014)

DESCRIPTION:

UNIBRAZE 7014 is a versatile, all-position electrode that you can use with either AC or DC (electrode negative or electrode positive) power. It has a rutile base with an iron powder addition that serves to increase welder-appeal with its outstanding deposition rate and speed of travel. UNIBRAZE 7014 also produces a weld bead that is excellent in both strength and appearance with slag coverage that is easy to remove.

APPLICATIONS:

Frames, heavy sheet metal, and machine bases.

FEATURES:

- Smooth, stable arc
- Iron powder added to coating
- Slag detaches easily
- All-position

BENEFITS:

- Easy to use, good control
- Increased deposition rate, faster travel
- Fast clean-up, good bead appearance
- Welds in the flat, horizontal, vertical and overhead positions

TYPICAL WELD METAL PROPERTIES**(Chem Pad):

Weld Metal Analysis

Carbon (C)	0.06
Manganese (Mn)	0.54
Phosphorus (P)	0.026
Sulphur (S)	0.013
Silicon (Si)	0.35

AWS Spec (max)

not required
1.25
not required
not required
.90

TYPICAL MECHANICAL PROPERTIES**(AW):

Tensile Strength	79,000 psi (545 MPa)
Yield Strength	68,100 psi (470 MPa)
Elongation % in 2"	27.5%
Reduction of Area	33% to 55%

AWS Spec (min)

70,000 psi
58,000 psi
17%
not required

TYPICAL CHARPY-V-NOTCH IMPACT VALUES:

Not applicable

TYPE OF CURRENT: AC, DCEP or DCEN

CONFORMANCES AND APPROVALS:

- AWS A5.1, E7014, ASME SFA5.1, F-3, A-1
- ABS E7014
- CWB E4914

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 particular purpose with respect to its product.



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RECOMMENDED WELDING PROCEDURES:

- GENERAL:** Electrode negative, work positive (DCEN); AC; or electrode positive, work negative (DCEP)
- ARC LENGTH:** Short (1/8" or less)
- FLAT:** Angle electrode 10-15° from 90° with higher heat than E6012 electrodes
- VERTICAL-UP:** Use slight whipping or weaving technique
- VERTICAL-DOWN:** Use higher amperage and faster travel, staying ahead of puddle
- OVERHEAD:** Use slight whipping motion
- STORAGE:** 60°F to 100°F, (20° to 40°C) and below 50% relative humidity or holding oven @ 100° to 120°F (38° to 49°C)
- RECONDITIONING:** 250°F to 300°F, (121° to 149°C) for one hour @ temperature

RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Minimum Amps	Optimum* Amps	Maximum Amps
Inches	mm				
3/32	2.4	DCEN, AC or DCEP	79	80	90
1/8	3.2	DCEN, AC or DCEP	120	130	145
5/32	4.0	DCEN, AC or DCEP	140	200	210
3/16	4.8	DCEN, AC or DCEP	180	240	280

*For out-of-position welding, reduce amperage shown by 15%.

TYPICAL DEPOSITION DATA (at optimum):

Diameter		Type of Power	Amps	Volts	Deposition Rate lbs/hr	Deposition Efficiency*%
Inches	mm					
3/32	2.4	DCEN	80	18-22	1.49	64.8
1/8	3.2	DCEN	130	19-23	2.39	61.7
5/32	4.0	DCEN	200	20-24.5	3.91	60.7
3/16	4.8	DCEN	240	25-27	5.29	66.1

*Allowance made for 2" stub loss included.

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