



## Unibraze 6010 (E6010)

### **DESCRIPTION:**

UNIBRAZE 6010 is a quick-starting, cellulosic mild steel electrode that provides you with outstanding arc stability, penetration and wash-in. It's ideal for welding in all positions and produces an X-ray quality weld with light slag that's easy to remove. UNIBRAZE 6010 can be used to weld the following API 5L steels: Grade A, B, X-42, X-46, X-52, X-56 and for the root pass on material up to X-80.

### **APPLICATIONS:**

Construction and shipbuilding, general purpose fabrication, maintenance welding, out-of-position X-ray welds, pipe welding and vertical and overhead plate welding.

### **FEATURES:**

- Quick-starting efficiency
- All-position
- Excellent vertical down
- Excellent arc stability
- Superior arc drive
- Excellent wash-in
- Light slag

### **BENEFITS:**

- Easy arc striking and increased welding efficiency
- Welds in flat, horizontal, vertical and overhead positions
- Faster travel speeds
- Welding accuracy and efficiency
- Excellent penetration
- Easy weld lay-in and smooth bead appearance
- Quick and easy cleaning of weld bead

### **TYPICAL WELD METAL PROPERTIES\*\*(Chem Pad):**

Weld Metal Analysis		AWS Spec (max)
Carbon (C)	0.06	not required
Manganese (Mn)	0.40	not required
Silicon (Si)	0.20	not required

### **TYPICAL MECHANICAL PROPERTIES\*\*(AW):**

		AWS Spec (min)
Tensile Strength	76,000 psi (524 MPa)	60,000 psi
Yield Strength	61,000 psi (421 MPa)	48,000 psi
Elongation % in 2"	26%	22%
Reduction of Area	64%	not required

### **TYPICAL CHARPY V-NOTCH IMPACT VALUES\*\*(AW):**

		AWS Spec (min)
Avg. at -20°F (-29°C)	34 ft•lbs (46 Joules)	20 ft•lbs

### **TYPE OF CURRENT: DCEP**

### **CONFORMANCES AND APPROVALS:**

- AWS A5.1, E6010, ASME SFA 5.1, F-3, A-1, E6010
- ABS E6010
- Lloyd's Grade 3m

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 positive, work negative (DCEP)  
**ARC LENGTH:** Average length (1/8" to 1/4")  
**FLAT:** Stay ahead of puddle and use slight whipping motion  
**VERTICAL-UP:** Slight whipping or weaving technique  
**VERTICAL-DOWN:** Use higher amperage and faster travel, staying ahead of puddle  
**OVERHEAD:** Use similar technique as for vertical-up, multi-pass for build-up  
**PIPE:** Use downhill travel  
**STORAGE:** Dry at room temperature  
**RECONDITIONING:** Not recommended

### RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Minimum Amps	Optimum* Amps	Maximum Amps
Inches	mm				
3/32	2.4	AC or DCEP	60	60	90
1/8	3.2	AC or DCEP	80	100	125
5/32	4.0	AC or DCEP	130	140	160
3/16	4.8	AC or DCEP	160	180	190

\*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	AC	60	25	1.62	66.5
1/8	3.2	AC	100	24	2.57	67.2
5/32	4.0	AC	140	25	3.28	65.7
3/16	4.8	AC	180	25	3.86	69.1

\*Allowance made for 2" stub loss included.

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