



# Unibraze 410-16

**CLASSIFICATIONS:** AWS A5.4/ASME SFA 5.4 Class E410-16 UNS W41010

**DESCRIPTION:** Unibraze 410-16 is an air hardened 12% Cr steel electrode for welding alloys of similar composition. It is used for surfacing of carbon steels to resist corrosion, erosion or abrasion. Preheat and interpass temperature of not less than 400°F during welding and requires post-weld treatment to obtain required ductility. It has a smooth-running arc that results in a uniform bead that is flat to slightly convex.

## Typical Chemistry:

|                                | C          | Cr             | Ni         | Mo         | Mn         | Si         | P          | S          | Cu         |
|--------------------------------|------------|----------------|------------|------------|------------|------------|------------|------------|------------|
| <b>AWS/<br/>ASME</b>           | .12<br>max | 11.0 –<br>13.5 | .70<br>max | .75<br>mas | 1.0<br>max | .90<br>max | .04<br>max | .03<br>max | .75<br>max |
| <b>Typical<br/>(As welded)</b> | .08        | 12.0           | .20        | .01        | .70        | .40        | .02        | .01        | .06        |

## Typical Mechanical Properties

|                         |            |
|-------------------------|------------|
| <b>Tensile Strength</b> | 92,500 psi |
| <b>Yield Strength</b>   | 78,000 psi |
| <b>Elongation</b>       | 21 %       |

## Typical Welding Parameters

| Dia.  | Amps<br>Flat | Amps<br>Vertical and<br>Overhead |
|-------|--------------|----------------------------------|
| 3/32" | 70-90        | 60-85                            |
| 1/8"  | 85-110       | 80-90                            |
| 5/32" | 110-140      | 100-120                          |
| 3/16" | 120-160      | 110-130                          |

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 products.