



# Unibraze 80S-Ni1

## (ER80S-Ni1)

Unibraze 80S-Ni1 wire deposits weld metal containing a nominal 1% nickel, similar to an E8018-C3 coated electrode. It is used for welding low alloy high-strength steels that require toughness at temperatures as low as -50°F (-46°C).

### **Typical Chemical Composition (Max. Values)**

|            |             |
|------------|-------------|
| Carbon     | 0.12        |
| Sulphur    | 0.025       |
| Manganese  | 1.25        |
| Phosphorus | 0.025       |
| Copper     | 0.35        |
| Chromium   | 0.15        |
| Molybdenum | 0.35        |
| Silicon    | 0.40 – 0.80 |
| Nickel     | 0.80 – 1.10 |
| Vanadium   | 0.05        |
| Others     | 0.50        |

### **Typical Mechanical Properties**

|                        |                  |
|------------------------|------------------|
| Tensile Strength       | 87,000 psi, min. |
| Yield Strength         | 73,950 psi, min. |
| Elongation in 2"       | 25% min          |
| Charpy Impacts @ -50°F | 44.22 ft. lbs.   |

### **Specifications**

AWS A5.28 / ASME SFA5.28 Class ER80S-Ni1

### **Standard Sizes**

MIG: .035" (.9mm), .045" (1.2mm)

TIG: 1/16" (1.6mm), 3/32" (2.4mm), 1/8" (3.2mm)