Bare Wire Cobalt

Alloy: WW Cobalt #1 Bare Wire / Rod
Conforms to Certification: AWS A5.21  ASME SFA A5.21
Class: ERCoCr-C

Alloy: ERCoCr-C
Weld Process: GTAW (tig)

AWS Chemical Composition Requirements

- C = 2.0 - 3.0
- Mn = 1.0 max
- Si = 2.0 max
- Cr = 26 - 33
- Ni = 3.0 max
- Mo = 1.0 max
- Fe = 3.0 max
- W = 11.0 - 14.0
- Co = Remainder
- Other = 0.50 max

Deposited Chemical Composition % (Typical)

- C = 2.4
- Mn = 0.06
- Si = 1.2
- Cr = 31.0
- Ni = 2.2
- Mo = 0.10
- Fe = 2.3
- Co = Balance

Deposited All Weld Metal Properties % (AW)

- Hardness (2 layer) HRC 53 – 54

Deposited Charpy-V-Notch Impact Properties %
Not Applicable

Recommended Operation of Welding Rods

GTAW (tig)

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Amps DCEN</th>
<th>Volts</th>
<th>Shielding Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>90 – 120</td>
<td>20 – 40</td>
<td>argon</td>
</tr>
<tr>
<td>5/32</td>
<td>120 – 140</td>
<td>20 – 40</td>
<td>argon</td>
</tr>
<tr>
<td>3/16</td>
<td>140 – 180</td>
<td>20 – 40</td>
<td>argon</td>
</tr>
</tbody>
</table>

Application

Type #1 bare wire/rod has the highest hardness of the cobalt alloys and is used to elevate temperature wear applications. Machine with carbide tools or grinding. It bonds well with stainless and other weldable grades of steel.