♦ INTRODUCTION

Aufhauser C624 Aluminum Bronze A-3 contains a higher iron content than the C618 (Aluminum Bronze A-2). The higher iron content gives “A-3” greater strength, while maintaining good ductility.

♦ APPLICATIONS

- Overlaying pistons and depositing bearing surface applications.
- Joining Aluminum Bronze castings of similar composition.

♦ CHEMICAL COMPOSITION

<table>
<thead>
<tr>
<th>Copper</th>
<th>Aluminum</th>
<th>Iron</th>
<th>Manganese</th>
<th>Silicon</th>
<th>Tin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remainder</td>
<td>10.0-11.5</td>
<td>2.0-4.5</td>
<td>0.30*</td>
<td>0.25*</td>
<td>0.20*</td>
</tr>
</tbody>
</table>

*Max (Other) Note: Copper contains Silver. Copper + Named elements = 99.5% min.

♦ PHYSICAL and MECHANICAL PROPERTIES

- Melting Point: 1900°F (1038°C)
- Solidification: 1880°F (1027°C)
- Density, at 68°F: 0.269 lb/in³
- Electrical Conductivity, at 68°F: 12 %IACS
- Thermal Conductivity, at 68°F: 34.0 Btu · ft/(hr · ft² · °F)
- Electrical Resistivity, at 68°F: 86.4 ohms-cmil/ft
- Specific Gravity: 7.45
- Specific Heat Capacity, at 68°F: 0.09 Btu/lb/°F
- Tensile Strength: 90,000 psi
- Yield Strength: 40,000 psi
- Elongation, in 2 in.: 20%
- Brinell Hardness: 155 - 175

Hardness will vary depending on weld quality and welder expertise.

♦ SPECIFICATIONS MEET or EXCEED

- AWS A5.7 Class ERCuAl-A3
- UNS C62400

♦ STANDARD SIZES AND DIAMETERS

<table>
<thead>
<tr>
<th>Size</th>
<th>Cast  (12” spool)</th>
<th>Helix (12” spool)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/32 or 1/8 x 36” rod</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>0.035” dia. x 30 lb. spl</td>
<td>15-40”</td>
<td>&lt; 1”</td>
</tr>
<tr>
<td>0.045” dia. x 30 lb. spl</td>
<td>15-40”</td>
<td>&lt; 1”</td>
</tr>
<tr>
<td>0.062” dia. x 30 lb. Spl</td>
<td>15-40”</td>
<td>&lt; 1”</td>
</tr>
</tbody>
</table>