## Welding wires

The alloys and dimensions of Lampert’s welding wires have been specially selected to complement the PUK, and are ideally suited to welding with PUK precision welding devices.

### Welding wires for gold alloys

All welding wires for gold and platinum alloys consist of standard jewellery alloy with the requisite degree of fineness. For typical applications in jewellery production and repair, the welding wires must be processed such that these are very thin, in order that the wires can be applied controlled and with low power.

<table>
<thead>
<tr>
<th>Wire</th>
<th>Gold Alloy Code</th>
<th>Gold Content</th>
<th>Wire Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Au 750 Y</td>
<td>Yellow gold Au 750/000</td>
<td>18K</td>
<td>0.25 mm</td>
<td>500 mm x 0.25 mm (19.7” x 0.01”)</td>
</tr>
<tr>
<td>Au 585 Y</td>
<td>Yellow gold Au 585/000</td>
<td>14K</td>
<td>0.25 mm</td>
<td>500 mm x 0.25 mm (19.7” x 0.01”)</td>
</tr>
<tr>
<td>Au 750 Pd</td>
<td>White gold Au 750/000</td>
<td>18K</td>
<td>0.25 mm</td>
<td>500 mm x 0.25 mm (19.7” x 0.01”)</td>
</tr>
</tbody>
</table>

### Welding wire for platinum

When welding Pt alloys, in particular with cast platinum, small pores and/or brittleness can arise if welding repeatedly takes place in the same place. This can be avoided in general terms through the application of „fresh metal“ with welding wire. When welding on platinum, a clean welding area and optimum shielding gas coverage are very important.

<table>
<thead>
<tr>
<th>Wire</th>
<th>Platinum Code</th>
<th>Platinum Content</th>
<th>Wire Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pt 960 C</td>
<td>Platinum Pt 960/000</td>
<td>500 mm x 0.5 mm (19.7” x 0.01)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Special welding wire for silver alloys

Excellent coloring for working on (sterling) silver. Excellent flow properties. Excellent welding results with no centerline-cracking. Excellent ductility of the welded area. The wire Silver JSS has a lower standard (Ag 760) and a lower melting point (765 °C / 1409 °F) than pure or sterling silver (Ag 925).

<table>
<thead>
<tr>
<th>Wire</th>
<th>Silver Code</th>
<th>Silver Content</th>
<th>Wire Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver JSS</td>
<td>Silver Ag 780/000</td>
<td>2000 mm x 0.25 mm (78.5” x 0.01”)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silver JSS</td>
<td>Silver Ag 760/000</td>
<td>2000 mm x 0.35 mm (78.5” x 0.014”)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silver JSS</td>
<td>Silver Ag 760/000</td>
<td>2000 mm x 0.45 mm (78.5” x 0.018”)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Welding wire for silver alloys

The welding wire for silver alloys is alloyed with a high content of fine silver, in order to positively influence the flowing characteristics and the ductility of the welding wire. However, the wire is the same colour as sterling silver (925/000). The fineness of the welding wire is 940/000.

<table>
<thead>
<tr>
<th>Wire</th>
<th>Silver Code</th>
<th>Silver Content</th>
<th>Wire Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag 940 B</td>
<td>Silver Ag 940/000</td>
<td>2000 mm x 0.25 mm (78.7” x 0.01”)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ag 940 B</td>
<td>Silver Ag 940/000</td>
<td>1000 mm x 0.35 mm (33.37” x 0.014”)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Welding wire for titanium

Unalloyed titanium wire (grade 2) for homogeneous welding on weldable titanium qualities. The wire is outstanding due to its high crack resistance. When welding on titanium, a clean welding area and optimum shielding gas coverage (with Argon 4.6 or higher) are very important.

<table>
<thead>
<tr>
<th>Wire</th>
<th>Titanium</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium</td>
<td>fine titanium</td>
<td>1000 mm x 0.30 mm (39.37” x 0.012”)</td>
</tr>
</tbody>
</table>
Welding wire for tin

The welding wire from fine tin 99.9% is suitable for repairs on objects from tin and tin alloys. The high purity of the wire guarantees a very ductile and therefore stable and clean weld. It is advisable to process the welding wire with an increased gas flow and larger gas nozzle (art. no. 100 150-4).

Tin - fine tin 99.9% - 100 g x 0.75 mm (3.52 oz x 0.029")

304 328

Welding wire for steels

The welding wire CMS is a highly stable, austenitic welding metal. It is suitable for welding CrNi steels such as 1.4301, 1.4401, 1.4453 and 1.4571.

Steel CMS - stainless steel 1000 mm x 0.40 mm (39.37" x 0.016")

304 320

The welding wire GS2 is suitable for applications with a higher hardness on tools subject to heavy wear and pressure. It is also good for platings on unalloyed and low-alloyed steels. Hardness up to 58HRC.

Steel GS2 - 1000 mm x 0.20 mm (39.37" x 0.008")

304 321

The welding wire GS55 is a martensitic chromium steel with good stability and wear resistance. It is suitable with shock and impact stress and is heat treatable. For highly wear-resistant application welding on tools. Hardness up to 61HRC.

Steel GS55 - 1000 mm x 0.20 mm (39.37" x 0.008")

304 322

Welding wires for steels

The welding wire GS55 is a martensitic chromium steel with good stability and wear resistance. It is suitable with shock and impact stress and is heat treatable. For highly wear-resistant application welding on tools. Hardness up to 61HRC.

Steel GS55 - 1000 mm x 0.20 mm (39.37" x 0.008")

304 322

Welding wires for repairs and alloys that are difficult to weld

This Pd/Ag/Cu welding wire with a high portion of palladium is particularly well-suited for repair welds on alloys that are only weldable to a limited degree with themselves or with each other. The welding wire stands out due to its excellent adhesion properties and exceptional toughness. It is therefore frequently used as a „bridging metal“ between alloys that are difficult to weld (colour grey).

PdAg 500 - Palladium-silver PdAg 500/000 - 500 mm x 0.25 mm (19.7" x 0.01")

304 331 NEW

PdAg 500 - Palladium-silver PdAg 500/000 - 500 mm x 0.40 mm (19.7" x 0.016")

304 330

Welding wire nickel-based alloy

For joints and deposition welding on identical or similar materials e.g. Hastelloy, Alloy 600, Inconel, etc. When welding on nickel-based alloys, a clean welding area and optimum shielding gas coverage (with Argon 4.6 or higher) are very important.

NiCrMo15 - nickel-based alloy - 1000 mm x 0.40 mm (39.37" x 0.016")

304 329 NEW

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Welding wires for aluminium

Welding wire **ALMG3** for applications on Al-Mg alloys up to 3% magnesium e.g. AlMg3. The welding metal can be anodised.

**ALMG3** - 2000 mm x 0.5 mm (78.70” x 0.02”)

Welding wire **ALSI** for connections and application on aluminium-silicon alloys up to 12% Si, and for different types of aluminium alloys together.

**ALSI** <12% - 2000 mm x 0.5 mm (78.70” x 0.02”)

**ATTENTION** - cleanliness is the most important preparation for welding:

It is very important that the welding area is carefully cleaned for successful welding. Dirt, oxides, oil or wax layers make good welding results impossible. The welding spots must be metallically clean. Depending on the contamination, chemical cleaning products or machining processes are highly suited for cleaning the welding areas. With minor soiling and adhesions it is also advisable to clean with an ultrasonic device.

**Masking Tape**

The masking tape protects and prevents damage to stones and other sensitive areas from temporary heat radiation from the welding arc. In addition, the masking tape avoids contamination and adhesion on the gemstone which can be difficult to remove.
Further information about our welding equipment as well as components and accessories can be found on our website: www.lampert.info