## General Information

<table>
<thead>
<tr>
<th>Production process</th>
<th>Universal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Red</td>
</tr>
<tr>
<td>Color shade</td>
<td>Red</td>
</tr>
<tr>
<td>Typology</td>
<td>Master alloy for gold</td>
</tr>
</tbody>
</table>

### Commercial Composition

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>5.00</td>
</tr>
<tr>
<td>Copper</td>
<td>92.00</td>
</tr>
<tr>
<td>Zinc</td>
<td>3.00</td>
</tr>
</tbody>
</table>

### Melting Temperatures

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Value [°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidus</td>
<td>985.0</td>
</tr>
<tr>
<td>Solidus</td>
<td>950.0</td>
</tr>
<tr>
<td>Melting range</td>
<td>35.0</td>
</tr>
</tbody>
</table>

### Color Coordinates

<table>
<thead>
<tr>
<th>Coordinate</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>L*</td>
<td>85.0</td>
</tr>
<tr>
<td>a*</td>
<td>9.6</td>
</tr>
<tr>
<td>b*</td>
<td>14.3</td>
</tr>
<tr>
<td>c*</td>
<td>16.9</td>
</tr>
</tbody>
</table>

### Physical Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value [g/cm³]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>11.1</td>
</tr>
</tbody>
</table>

### Mechanical Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value [MPa]</th>
</tr>
</thead>
<tbody>
<tr>
<td>As cast hardness [HV 0.2]</td>
<td>100.0</td>
</tr>
<tr>
<td>Hardness after annealing [HV 0.2]</td>
<td>120.0</td>
</tr>
<tr>
<td>Hardness after 70% area red. [HV 0.2]</td>
<td>240.0</td>
</tr>
<tr>
<td>Tensile strength (Rm) [Mpa]</td>
<td>414.0</td>
</tr>
<tr>
<td>Yield strength (Rp0.2) [MPa]</td>
<td>208.0</td>
</tr>
<tr>
<td>Elongation at rupture (A) [%]</td>
<td>29.0</td>
</tr>
</tbody>
</table>

### Product Applications

- Casting without stones
- Sheet production
- TIG tube production
- Massive chain production
- Stamping production
- Casting in closed systems
- Wire production
- Continuous casting

### Related Products List

- **GFRED**: Red gold flash solution for bath plating 0.8 g/l (ready-to-use)
- **LSR490**: Master alloy for soldering of 375-585-750‰ (9-14-18 Kt) red gold
ALL-PURPOSE MASTER ALLOY FOR 375-585-750‰ (9-14-18 KT) RED GOLD

CASTING PROCESSING PARAMETERS

<table>
<thead>
<tr>
<th>Pre-mixing temperature [°C]</th>
<th>1105.0</th>
</tr>
</thead>
</table>

CASTING TEMPERATURES

<table>
<thead>
<tr>
<th>Flask from [°C]</th>
<th>Flask to [°C]</th>
<th>Metal from [°C]</th>
<th>Metal to [°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0.5 mm</td>
<td>660.0</td>
<td>720.0</td>
<td>1085.0</td>
</tr>
<tr>
<td>0.5 - 1.2 mm</td>
<td>580.0</td>
<td>650.0</td>
<td>1065.0</td>
</tr>
<tr>
<td>&gt; 1.2 mm</td>
<td>460.0</td>
<td>600.0</td>
<td>1045.0</td>
</tr>
</tbody>
</table>

Trees without stones

Remove the flask within 1 minute after pouring, then quench immediately in water.

Stone-in-place casting trees

Let the flask cool down for 30-45 minutes, then quench in water.

Pickling

Dip in RADIAL solution (50 g/l conc. at 60°C for 2 min.), or in sulphuric acid (10% conc. at 50°C for 5 min.)

MECHANICAL WORKING PARAMETERS

<table>
<thead>
<tr>
<th>Pre-mixing temperature [°C]</th>
<th>1105.0</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Reductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheet - area or thickness (%)</td>
</tr>
<tr>
<td>Wire - diameter (%)</td>
</tr>
</tbody>
</table>

POURING TEMPERATURES

<table>
<thead>
<tr>
<th>Temperatures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countinous</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>1085.0</td>
</tr>
</tbody>
</table>

MECHANICAL WORKING ANNEALING

<table>
<thead>
<tr>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp. from [°C]</td>
</tr>
<tr>
<td>&lt;1 mm</td>
</tr>
<tr>
<td>1 - 5 mm</td>
</tr>
<tr>
<td>&gt;5 mm</td>
</tr>
</tbody>
</table>

Mechanical working quenching

Quench directly in a 50% water/50% alcohol solution or in water