Material Data Sheet
(1379) - PtIr3%

1. Composition
Pt 97.00%
Ir 3.00%

2. Physical Properties
Melting range 1770-1770°C
Density 21.5 g/cm³
Colour platin
Young's Modulus 145 GPa

3. Mechanical Properties

<table>
<thead>
<tr>
<th>Condition</th>
<th>cold worked</th>
<th>soft</th>
<th>after firing</th>
<th>hardened</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameters</td>
<td>75% KV</td>
<td>1000°C/1h/Wasser</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardness HV5</td>
<td>135</td>
<td>95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tensile strength (Rm)</td>
<td>385 MPa</td>
<td>205 MPa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2% Proof stress (Rp 0.2%)</td>
<td>385 MPa</td>
<td>105 MPa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elongation</td>
<td>4.8 %</td>
<td>45.8 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Handling

thermal treatments: Up from 800°C recrystallisation begins.

This alloy could not be hardened.

Surface-conditioning: For any thermal treatments, the surface would not change even under oxygen ambient. A surface treatment with acid washing should therefore not be necessary.

Remarks Application/indications:
PtIr3% is a highly corrosion resistant, biocompatible alloy with medium mechanical strength. It is suitable for use in the medical field.

Processing: The alloy is easily cold worked and is suitable as a material for a micro-mechanical manufacturing.

5. Certification

Manufacture and delivery are constantly monitored according to the quality management system standard according to ISO 9001.

The data and specifications on this page are the results of controlled and well defined tests. The actual values may depend on the specific conditions.
6. Graphs

Cold work curve

Annealing curve

Cendres+Métaux SA

Dr. Niklaus Baltzer
Head of Materials Development

Dr. Flavio Campana
Head of Material Testing

The data and specifications on this page are the results of controlled and well-defined tests. The actual values may depend on the specific conditions.