

### 1. Composition

Au + Pt group-metals	26.05%
Ag	65.00%
Pd	23.00%
Cu	6.45%
Au	3.00%
In	2.00%
Zn	0.50%
Ir	0.05%

### 2. Physical Properties

Melting range	975-1070°C
Density	10.8 g/cm <sup>3</sup>
Young's Modulus	95 GPa
Colour	white

### 3. Mechanical Properties

	as cast	soft	hardened
Condition		700°C/10'/H2O	450°C/15'/air
Hardness HV5	175	135	230
Tensile strength (Rm)	580 MPa		
0.2% Proof stress (Rp 0.2%)	390 MPa	250 MPa	400 MPa
Elongation	22 %.	20 %.	7 %.

### 4. Biological tests

#### Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.  
(Project, 100559G, 24.02.2010, BSL Bioservice, DE-82152 Planegg, FRG)

#### Sensitization test according to ISO 10993-10:

The allergic sensitization of the alloy was tested with the maximization test.  
(Project 81E509, 30.08.1995, BIOMATECH, Rue Pasteur, 38670 CHASSE SUR RHONE, France)

#### Mutagenicity test (AMES) according to ISO 10993-3:

The mutagenicity was tested with the «Reverse Mutation Assay» using bacteria Salmonella typhimurium.  
(Project 101031, 15.04.2010, BSL Bioservice, DE-82152 Planegg, FRG)

#### Results:

The alloy showed neither a cytotoxic nor a mutagenic potential nor did it cause any allergic sensitization.

## 5. Certification

This casting alloy corresponds to the standard ISO 22674/Type 4.

Corrosion testing according to standard ISO 10271 showed that a total of  $5.1\mu\text{g}/\text{cm}^2 \times 7\text{d}$  was released (limit:  $200\mu\text{g}/\text{cm}^2 \times 7\text{d}$ ).

Manufacture, packing and delivery are constantly monitored according to the quality management system standards according to ISO 9001 and ISO 13485.

### Cendres + Métaux SA



Dr. Carmen Krüger

Head of Materials Development



Dr. Flavio Campana

Head of Material Testing