

This alloy corresponds to the standards ISO 22674/Type 4 and ISO 9693-1. It can be applied as a dental Laser wire corresponding to the standard ISO 28319.

### 1. Composition

Au + Pt group-metals	96.90%
Au	76.80%
Pd	18.60%
Sn	2.90%
Pt	1.35%
Zn	0.20%
Ir	0.15%

### 2. Physical Properties

Melting range	1165-1290°C
Density	16.9 g/cm <sup>3</sup>
Young's Modulus	115 GPa
Linear Coeff. of thermal expansion (25-500°C)	13.7 x10 <sup>-6</sup> K <sup>-1</sup>
Linear Coeff. of thermal expansion (25-600°C)	13.9 x10 <sup>-6</sup> K <sup>-1</sup>
Colour	white

### 3. Mechanical Properties

	as cast	after firing ISO 960°C/15' air
Condition		
Hardness HV5	205	235
Tensile strength (Rm)	670 MPa	785 MPa
0.2% Proof stress (Rp 0.2%)	455 MPa	630 MPa
Elongation	13 %.	10 %.
Schwickerath crack initiation test		47 MPa

### 4. Biological tests

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

The cytotoxic effect of the alloy was tested with the extract test.  
(Project, 052016A, 03.08.2005, 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 050647, 17.05.2005, BSL Bioservice, DE-82152 Planegg, FRG)

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

The mutagenicity was tested with the «Reverse Mutation Assay» using bacteria Salmonella typhimurium.  
(Project 072425, 01.09.2007, 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 alloy corresponds to the standards ISO 22674/Type 4 and ISO 9693-1. It can be applied as a dental Laser wire corresponding to the standard ISO 28319.

Corrosion testing according to standard ISO 10271 showed that a total of  $0.1 \mu\text{g}/\text{cm}^2 \times 7\text{d}$  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



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