

1. Composition

Au + Pt group-metals	98.00%
Au	84.50%
Pt	13.30%
Zn	1.90%
Rh	0.10%
Ir	0.10%
Fe	0.10%

2. Physical Properties

Melting range	1045-1205°C
Density	18.9 g/cm ³
Young's Modulus	90 GPa
Linear Coeff. of thermal expansion (25-500°C)	14.2 x10 ⁻⁶ K ⁻¹
Linear Coeff. of thermal expansion (25-600°C)	14.6 x10 ⁻⁶ K ⁻¹
Colour	pale yellow

3. Mechanical Properties

	as cast	after firing ISO 950°C/15' air
Condition		
Hardness HV5	205	230
Tensile strength (Rm)	575 MPa	715 MPa
0.2% Proof stress (Rp 0.2%)	465 MPa	640 MPa
Elongation	6 %.	5 %.
Schwickerath crack initiation test		60 MPa

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.
(Project, 040654, 13.04.2004, 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 040655, 06.05.2004, BSL Bioservice, DE-82152 Planegg, FRG)

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

The AMES test has not been realised.

Results:

The alloy showed no cytotoxic potential nor did it cause any allergic sensitization.

5. Certification

This metal-ceramic alloy corresponds to the standards ISO 22674/Type 4 and ISO 9693.

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.

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