

1. Composition

Au + Pt group-metals	97.40%
Au	84.00%
Pt	10.90%
Pd	2.40%
Zn	2.20%
Fe	0.20%
Ag	0.20%
Ir	0.10%

2. Physical Properties

Melting range	1055-1185°C
Density	18.7 g/cm ³
Young's Modulus	100 GPa
Linear Coeff. of thermal expansion (25-500°C)	14.2 x 10 ⁻⁶ K ⁻¹
Linear Coeff. of thermal expansion (25-600°C)	14.6 x 10 ⁻⁶ K ⁻¹
Colour	pale yellow

3. Mechanical Properties

Condition	as cast	after firing ISO 960°C	soft 800°C	hardened 800°C/30/H2O & 500°C/20/air
Hardness HV5	205	240	130	210
Tensile strength (Rm)	655 MPa	755 MPa	420 MPa	645 MPa
0.2% Proof stress (Rp 0.2%)	525 MPa	670 MPa	245 MPa	485 MPa
Elongation	7 %.	6 %.	18 %.	6 %.
Schwickerath crack initiation test		65 MPa		

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.
(Project, 001408, 01.11.2000, 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 001409, 01.11.2000, 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/DIS 10271 showed that a total of 1.5µg/cm² × 7d was released (limit: 200µg/cm² × 7d).

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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