

1. Composition

Au + Pt group-metals	97.00%
Au	85.50%
Pt	9.90%
Pd	1.50%
In	1.10%
Cu	0.80%
Zn	0.50%
Ag	0.40%
Fe	0.20%
Ir	0.10%

2. Physical Properties

Melting range	1045-1170°C
Density	18.4 g/cm ³
Young's Modulus	90 GPa
Linear Coeff. of thermal expansion (25-500°C)	14.5 x 10 ⁻⁶ K ⁻¹
Linear Coeff. of thermal expansion (25-600°C)	14.7 x 10 ⁻⁶ K ⁻¹
Colour	yellow

3. Mechanical Properties

	as cast	after firing ISO 950°C	soft 900°C/30/H2O	hardened 900°C/30/H2O & 500°C/15/air
Condition				
Hardness HV5	160	195	105	210
Tensile strength (Rm)	530 MPa	615 MPa	355 MPa	650 MPa
0.2% Proof stress (Rp 0.2%)	375 MPa	500 MPa	170 MPa	595 MPa
Elongation	15 %	12 %	31 %	5 %
Schwickerath crack initiation test		63 MPa		

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.
(Project, 445000, 21.12.1993, CCR, DE-6101 Rossdorf, Germany)

Sensitization test according to ISO 10993-10:

The allergic sensitization of the alloy was tested with the maximization test.
(Project 359954, 10.03.1994, RCC, Itingen/Basel, Switzerland)

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 DIN 13927 showed that a total of $2.0\mu\text{g}/\text{cm}^2 \times 7\text{d}$ 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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