

1. Composition

Au + Pt group-metals	81.60%
Pd	75.00%
Ag	6.40%
Au	6.10%
Ga	6.00%
In	5.90%
Ru	0.50%
Sn	0.10%

2. Physical Properties

Melting range	1135-1340°C
Density	11.7 g/cm ³
Young's Modulus	120 GPa
Linear Coeff. of thermal expansion (25-500°C)	13.7 x 10 ⁻⁶ K ⁻¹
Linear Coeff. of thermal expansion (25-600°C)	14.0 x 10 ⁻⁶ K ⁻¹
Colour	white

3. Mechanical Properties

	as cast	after firing ISO 22674: 950°C/10'air & Geller Creation CC
Condition		
Hardness HV5	260	255
Tensile strength (Rm)		830 MPa
0.2% Proof stress (Rp 0.2%)		530 MPa
Elongation		34 %
Schwickerath crack initiation test		41 MPa

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.

(Project, 8, 23.04.1993, Laboratoires Prof. Craig & Wataha, University of Michigan, Ann Arbor, Michigan, USA)

Sensitization test according to ISO 10993-10:

The sensitization test has not been realised.

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

The AMES test has not been realised.

Results:

The alloy did not show any cytotoxic potential.

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 $1.1\mu\text{g}/\text{cm}^2 \times 7\text{d}$ 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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