

1. Composition

Au + Pt group-metals	64.49%
Pd	52.29%
Ag	23.00%
Au	12.00%
In	10.00%
Sn	2.00%
Ga	0.50%
Ru	0.20%
B	0.01%

2. Physical Properties

Melting range	1200-1305°C
Density	11.8 g/cm ³
Young's Modulus	130 GPa
Linear Coeff. of thermal expansion (25-500°C)	14.3 x10 ⁻⁶ K ⁻¹
Linear Coeff. of thermal expansion (25-600°C)	14.6 x10 ⁻⁶ K ⁻¹
Colour	white

3. Mechanical Properties

Condition	as cast	after firing ISO 22674: 980°C/5/vac & Geller Creation CC
Hardness HV5	305	260
Tensile strength (Rm)	935 MPa	865 MPa
0.2% Proof stress (Rp 0.2%)	710 MPa	645 MPa
Elongation	5 %.	9 %.
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, 116090, 20.12.2011, 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 116091A, 19.03.2012, 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 $0.6\mu\text{g}/\text{cm}^2\cdot 7\text{d}$ was released (limit: $200\mu\text{g}/\text{cm}^2\cdot 7\text{d}$).

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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