

1. Composition

Au + Pt group-metals	73.00%
Pd	40.85%
Au	32.00%
Ag	19.00%
Sn	5.00%
In	3.00%
Ru	0.15%

2. Physical Properties

Melting range	1215-1290°C
Density	13.1 g/cm ³
Young's Modulus	125 GPa
Linear Coeff. of thermal expansion (25-500°C)	14.2 x10 ⁻⁶ K ⁻¹
Linear Coeff. of thermal expansion (25-600°C)	14.5 x10 ⁻⁶ K ⁻¹
Colour	white

3. Mechanical Properties

	as cast	after firing ISO 960°C/15' air
Condition		
Hardness HV5	225	240
Tensile strength (Rm)	800 MPa	820 MPa
0.2% Proof stress (Rp 0.2%)	510 MPa	555 MPa
Elongation	17 %.	17 %.
Schwickerath crack initiation test		56 MPa

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.
(Project, 052016B, 03.08.2005, 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 052017B, 06.09.2005, BSL Bioservice, DE-82152 Planegg, FRG)

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

The mutagenicity was tested with the «Reverse Mutation Assay» using bacteria Salmonella typhimurium.
(Project 072423, 22.08.2007, BSL Bioservice, DE-82152 Planegg, FRG)

Results:

The alloy showed neither a cytotoxic nor a mutagenic 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 $\mu\text{g}/\text{cm}^2\cdot 7\text{d}$ 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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