

1. Composition

Au + Pt group-metals	96.50%
Au	78.50%
Pt	10.00%
Pd	7.80%
In	3.50%
Ir	0.20%

2. Physical Properties

Melting range	1120-1280°C
Density	17.9 g/cm ³
Young's Modulus	100 GPa
Linear Coeff. of thermal expansion (25-500°C)	13.8x10 ⁻⁶ K ⁻¹
Linear Coeff. of thermal expansion (25-600°C)	14.0x10 ⁻⁶ K ⁻¹
Colour	pale yellow

3. Mechanical Properties

	as cast	after firing ISO 950°C	soft 900°C/30'/H2O	hardened 900°C/30'/H2O & 550°C/15'
Condition				
Hardness HV5	195	215	115	240
Tensile strength (Rm)	660 MPa	705 MPa	405 MPa	750 MPa
0.2% Proof stress (Rp 0.2%)	475 MPa	565 MPa	200 MPa	610 MPa
Elongation	10 %.	13 %.	28 %.	5 %.
Schwickerath crack initiation test		59 MPa		

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.
(Project, 221602, 01.05.2007, RCC, Ittingen/Basel, Switzerland)

Sensitization test according to ISO 10993-10:

The allergic sensitization of the alloy was tested with the maximization test.
(Project 291723, 01.05.2007, RCC, Ittingen/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 0.2µg/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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