

1. Composition

Au + Pt group-metals	97.87%
Au	86.70%
Pt	10.75%
Zn	1.50%
Rh	0.40%
Ta	0.30%
In	0.20%
Sn	0.10%
Ag	0.03%
Ir	0.02%

2. Physical Properties

Melting range	1025-1145°C
Density	19.0 g/cm ³
Young's Modulus	90 GPa
Linear Coeff. of thermal expansion (25-500°C)	14.5x10 ⁻⁶ K ⁻¹
Linear Coeff. of thermal expansion (25-600°C)	14.8x10 ⁻⁶ K ⁻¹
Colour	yellow

3. Mechanical Properties

	as cast	after firing	soft	hardened
Condition		ISO 950°C	900°C/30'/H2O	900°C/30'&450°C/20'/Luft
Hardness HV5	185	220	95	210
Tensile strength (Rm)	550 MPa	655 MPa	350 MPa	660 MPa
0.2% Proof stress (Rp 0.2%)	435 MPa	525 MPa	180 MPa	575 MPa
Elongation	5 %.	6 %.	29 %.	5 %.
Schwickerath crack initiation test		43 MPa		

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.
(Project, 980224 A, 10.03.1998, 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 980298 B, 28.04.1998, 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 universal alloy corresponds to the standards ISO 22674/Type 4 and ISO 9693.

Corrosion testing according to standard ISO 10271 showed that a total of $0.3\mu\text{g}/\text{cm}^2 \times 7\text{d}$ 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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