

This alloy correspond to the standards ISO 22674 (ac/h: Type 4; soft: Type 3). It can be applied as a dental solder corresponding to the standard ISO 9333.

1. Composition

Au + Pt group-metals	66.50%
Au	63.00%
Ag	20.00%
Cu	12.00%
Pd	3.00%
Zn	1.50%
Pt	0.50%
Ru	<1.00%

2. Physical Properties

Melting range	870-920°C
Density	14.2 g/cm ³
Young's Modulus	115 GPa
Colour	yellow

3. Mechanical Properties

	as cast	soft	hardened
Condition		700°C/10'/H ₂ O	350°C/20'/air
Hardness HV5	265	160	260
Tensile strength (Rm)	810 MPa	475 MPa	740 MPa
0.2% Proof stress (Rp 0.2%)	730 MPa	365 MPa	690 MPa
Elongation	9 %.	42 %.	15 %.

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.
(Project, 100559H, 24.02.2010, BSL Bioservice, DE-82152 Planegg, Germany)

Sensitization test according to ISO 10993-10:

The allergic sensitization of the alloy was tested with the maximization test.
(Project 81E507, 30.08.1995, BIOMATECH, Rue Pasteur, 38670 CHASSE SUR RHONE, France)

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

The mutagenicity was tested with the «Reverse Mutation Assay» using bacteria Salmonella typhimurium.
(Project 101032, 15.04.2010, BSL Bioservice, DE-82152 Planegg, Germany)

Results:

The alloy showed neither a cytotoxic nor a mutagenic potential nor did it cause any allergic sensitization.

5. Certification

This alloy correspond to the standards ISO 22674 (ac/h: Type 4; soft: Type 3). It can be applied as a dental solder corresponding to the standard ISO 9333.

Corrosion testing according to standard ISO 10271 showed that a total of $2.6\mu\text{g}/\text{cm}^2 \times 7\text{d}$ 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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