

1. Composition

Pt group-metals	61.50%
Pd	61.45%
Ag	24.45%
Sn	10.00%
Zn	2.00%
In	2.00%
Ru	0.05%
B	0.05%

2. Physical Properties

Melting range	1160-1265°C
Density	11.3 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)	14.6 x10 ⁻⁶ K ⁻¹
Colour	white

3. Mechanical Properties

	as cast	hardened 600°C/15'/air	after firing ISO 22674: 950°C/10'/air & Geller Creation CC
Condition			
Hardness HV5	315	305	265
Tensile strength (Rm)		930 MPa	760 MPa
0.2% Proof stress (Rp 0.2%)		700 MPa	540 MPa
Elongation		6 %.	14 %.
Schwickerath crack initiation test			38 MPa

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.
(Project, 100559D, 24.02.2010, 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 81E503, 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 101028, 30.03.2010, 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 $0.7\mu\text{g}/\text{cm}^2 \times 7\text{d}$ 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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