Material Data Sheet
Esteticor® CC-Milling material

The material is a ceramic alloy and corresponds to standard ISO 22674 / Type 4 and ISO 9693.

1. Chemical composition	Content in weight percent
Au + Pt group metals	64.49 %
Pd	52.29 %
Ag	23.00 %
Au	12.00 %
In	10.00 %
Sn	2.00 %
Ga	0.50 %
Ru	0.20 %
B	0.01 %

2. Physical properties

Density	11.8 g/cm^3
Melting range	1200-1305°C
Coefficient of thermal expansion (25-500°C)	14.3×10^{-6} K^{-1}
Coefficient of thermal expansion (25-600°C)	14.6×10^{-6} K^{-1}
Color	white

3. Mechanical properties

After firing ISO 22674: 980°C/5'/vac & Geller Creation CC

Young's modulus	140 GPa	
Schwickerath crack initiation test	41 MPa	
Form	Bar	Profile
Hardness HV 5	300	295
Tensile strength (Rm)	900 MPa	940 MPa
0.2% Proof stress (Rp0.2)	675 MPa	660 MPa
Elongation	10 %	14 %

4. Biological tests

Cytotoxicity test according to ISO 10993-5:
The cytotoxic effect of the alloy was tested with the extract test.
(Projekt 116090, 20.12.2011, BSL Bioservice, DE-82152 Planegg)

Sensitization test according to ISO 10993-10:
The allergic sensitization of the alloy was tested with the maximization test.
(Projekt 116091A, 19.03.2012, BSL Bioservice, DE-82152 Planegg)

Mutagenicity test (AMES) according to ISO 10993-3:
The AMES test has not been realised.

Result: The alloy did not show any cytotoxic potential nor did it cause any allergic sensitization.

5. Certification

The material is a ceramic alloy and corresponds to standard ISO 22674 / Type 4 and ISO 9693.

Corrosion tests according to standard ISO 10271 showed that a total quantity of 0.6 μg/cm$^2\times$7d was released (limit: 200 μg/cm$^2\times$7d).

Manufacturing, packaging and delivery are constantly monitored according to the quality management system standards ISO 9001 and ISO 13485.

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