CENDRES + MÉTAUX

Material Data Sheet

for: Esteticor® Plus

This metal-ceramic alloy corresponds to the standards ISO 22674/Type 4 and ISO 9693.

1. Composition

Au + Pt group-metals	84.10%
Au	45.00%
Pd	38.90%
In	8.60%
Ag	5.00%
Ga	1.40%
Sn	0.50%
Cu	0.40%
Ru	0.20%

2. Physical Properties

Melting range	1115-1285°C
Density	13.8 g/cm^3
Young's Modulus	135 GPa
Linear Coeff. of thermal expansion (25-500°C)	13.9×10^{-6} K^{-1}
Linear Coeff. of thermal expansion (25-600°C)	14.2×10^{-6} K^{-1}
Colour	white

3. Mechanical Properties

	as cast	after firing
Condition		ISO 950°C
Hardness HV5	235	260
Tensile strength (Rm)	865 MPa	865 MPa
0.2% Proof stress (Rp 0.2%)	550 MPa	580 MPa
Elongation	18 %.	23 %.
Schwickerath crack initiation test		57 MPa

4. Biological tests

Cytotoxicity test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the extract test.
(Project, 188706, 27.04.1990, CCR, DE-6101 Rossdorf, Germany)

Sensitization test according to ISO 10993-10:

The allergic sensitization of the alloy was tested with the maximization test.
(Project 310746, 19.12.1991, RCC, Itingen/Basel, Switzerland)

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

The mutagenicity was tested with the «Reverse Mutation Assay» using bacteria Salmonella typhimurium.
(Project 100869, 25.03.2010, BSL Bioservice, DE-82152 Planegg, FRG)

Results:

The alloy showed neither a cytotoxic nor a munagenic 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 0.2$\mu g/cm^2 \times 7d$ was released (limit: 200$\mu g/cm^2 x 7d$).

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

Cendres+Métaux SA

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