



Material Data Sheet

for: Protor® 3

1. Composition

Au + Pt group-metals	75.05 %
Au	68.60 %
Ag	11.85 %
Cu	10.60 %
Pd	3.95 %
Zn	2.50 %
Pt	2.45 %
Ir	0.05 %

2. Physical Properties

Melting range	880-940°C
Density	15.0 g/cm ³
Young's Modulus	97 GPa
Colour	yellow
Schwickerath crack initiation test	

3. Mechanical Properties

	as cast	soft	hardened
Condition		700°C/10'/H ₂ O	700°C/10'/H ₂ O&400°C/15'/air
Hardness HV5	280	175	275
Tensile strength (R _m)	855 MPa	535 MPa	780 MPa
0.2% Proof stress (R _p 0.2%)	700 MPa	410 MPa	680 MPa
Elongation	7.0 %	35.0 %	12.0 %

4. Biological Testing

Cytotoxicity Test according to ISO 10993-5:

The cytotoxic effect of the alloy was tested with the Extraction Test.
(Project 189303, RCC, Itingen/Basel, Switzerland)

Sensitization Test according to ISO 10993-10:

The allergic sensitization of the alloy was tested with the Maximation Test.
(Project 310757, RCC, Itingen/Basel, Switzerland)

Results:

The alloy showed no cytotoxic potential nor did it cause any allergic sensitization.

5. Certification

The alloy corresponds to the standard ISO 1562.

Corrosion testing according to standard DIN 13927 showed, that a total of 5.2 µg/cm²/7d (ac) was set free.

The alloy has been approved for CE-Marking
(NIOM EC-Certificate NO. 0034, 1996-07-05)

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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