Material Data Sheet
for: DGVO8 H

This universal alloy corresponds to the standards ISO 22674/Type 4 and ISO 9693.

1. Composition
   - Au + Pt group-metals: 80.50%
   - Au: 73.10%
   - Ag: 16.00%
   - Pd: 5.80%
   - Zn: 2.80%
   - Pt: 1.50%
   - Sn: 0.50%
   - In: 0.20%
   - Ir: 0.10%

2. Physical Properties
   - Melting range: 960-1065°C
   - Density: 15.8 g/cm³
   - Young's Modulus: 105 GPa
   - Linear Coeff. of thermal expansion (25-500°C): 16.0 x 10⁻⁶ K⁻¹
   - Linear Coeff. of thermal expansion (25-600°C): 16.4 x 10⁻⁶ K⁻¹
   - Colour: yellow

3. Mechanical Properties
   - Condition: as cast, after firing, soft, hardened
   - ISO 800°C/15/air, 800°C/15/H₂O, 800°C/15/H₂O & 400°C/15/air
   - Hardness HV5: 230, 240, 180, 265
   - Tensile strength (Rm): 695 MPa, 745 MPa, 475 MPa, 795 MPa
   - 0.2% Proof stress (Rp 0.2%): 620 MPa, 675 MPa, 335 MPa, 720 MPa
   - Elongation: 4 %, 5 %, 21 %, 5 %
   - Schwickerath crack initiation test: 33 MPa

4. Biological tests
   - Cytotoxicity test according to ISO 10993-5:
   - The cytotoxic effect of the alloy was tested with the extract test.
   - Sensitization test according to ISO 10993-10:
   - The allergic sensitization of the alloy was tested with the maximization test.
   - Mutagenicity test (AMES) according to ISO 10993-3:
   - The AMES test has not been realised.
   - Results:
   - The alloy showed no cytotoxic potential nor did it cause any allergic sensitization.
5. Certification
This universal alloy corresponds to the standards ISO 22674/Type 4 and ISO 9693.
Corrosion testing according to standard ISO 1562 showed that a total of 8.4μg/cm²×7d was released (limit: 200μg/cm²×7d).
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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