

Callisto[®] Implant 60

Palladium-based ceramic alloy

especially for implant superstructures

Pd 60.0	Ag 25.2	Au 2.0	Pt <1.0	Sn 7.5	In 2.0	Ga 1.0	Zn 1.6	Re <1.0
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Advantages

- High strength
- Economical due to low density
- High corrosion resistance
- Excellent milling properties
- Low melting range

Indications

Onlays, $\frac{3}{4}$ crowns, PFM Crowns, crowns, telescope/conus crowns, posts, short and long span bridges, implant superstructures, partial dentures

Technical Data

Colour	white
Type	4
Density (g/cm ³)	10.8
Melting range (°C)	1100 – 1260
Casting temperature (°C)	1320 – 1360
CTE 25 – 500 °C	14.5
CTE 20 – 600 °C	14.8
Elongation (%)	19.0
Modulus of elasticity (MPa)	130,000
Oxide firing °C / minutes / vac.	950 / 1 / no vacuum
Vickers hardness	275
Proof stress (0.2 % offset) (MPa)	610



Clinical case by H.P. Oss, Austria

Certificate

Test material: Implant Ceramic alloy

Composition in % weight	Au	Pt	Pd	Ag	Sn	In	Ga	Zn	Fe	Re	Rh	Ru
Callisto® Implant 78	78.6	9.7	7.9	–	–	3.4	–	–	<1.0	<1.0	<1.0	<1.0
Callisto® Implant 60	2.0	<1.0	60.0	25.2	7.5	2.0	1.0	1.6	–	<1.0	–	–

Manufacturer

Ivoclar Vivadent Inc., 175 Pineview Drive, Amherst, NY 14228, USA

Corrosion resistance

The test was conducted according to the international regulations of ISO 1562 and ISO 6871–1: static immersion test through analytical determination of the metal ion release after a 7-day immersion.

Test results: The metal ion release after 7 days of immersion was not significant.

Testing facility: Louisiana State University, Dr. Sakar

Cytotoxicity

The Agar Diffusion test determines the biological reactivity of cell culture on test material.

Test results: The test material is considered non-cytotoxic and meets the requirements of the Agar Diffusion test according to ISO 10993–5.

Mutagenicity

An Ames assay was conducted to determine any possible cancer potential.

Test results: No mutagenicity potential was found to exist in these alloys.

Kligman Maximization

This test evaluated the allergenic potential and/or sensitizing capacity of these alloys.

Test results: Based on the standards set by the study protocol, these alloys exhibited no reaction to the challenge (0 % sensitization).

Sensitivity of oral mucosa

Test to determine the contact sensitivity of these alloys at the buccal oral mucosa.

Test results: No reactions were noted in conjunction with these alloys.

Testing facility: Toxikon Corporation, 15 Wiggins Avenue, Bedford, Massachusetts

Amherst, May 2010



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