

# Capricorn 15



## Palladium-based ceramic alloy

Gold containing Pd-based alloy with ideal mechanical and physical properties for conventional feldspar ceramics.

<b>Au</b> 15,0	<b>Pd</b> 51,9	<b>Ag</b> 23,0	<b>In</b> 8,0	<b>Ga</b> 2,0	<b>Re</b> <1,0	<b>Ru</b> <1,0
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### Advantages

- Economical, low density
- Excellent melting and flow properties
- Easy processing and polishing
- Works with IPS Classic and conventional feldspar ceramics
- Certified biocompatibility

### Indications

Inlays, onlays,  $\frac{3}{4}$  crowns, crowns, PFM crowns, implant superstructures, partial dentures, telescopic and conus crowns, posts, short and long span bridges

### Technical data

Colour	white
Type	4
Density (g/cm <sup>3</sup> )	11,5
Melting range (°C)	1230 – 1310
Casting temperature (°C)	1365 – 1425
CTE 25 – 500 °C	14,3
CTE 20 – 600 °C	14,5
Elongation (%)	21,0
Modulus of elasticity (MPa)	101,000
Oxide firing °C / minutes / vac.	1010 / 5 / no vac.
Vickers hardness	255
Proof stress (0.2 % offset) (MPa)	490



# Certificate

## Test material: Capricorn 15

Composition in % weight	Au	Pd	Ag	In	Ga	Re	Ru
<b>Capricorn 15</b>	15.0	51.9	23.0	8.0	2.0	<1.0	<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 the Capricorn 15 alloy.

### Kligman Maximization

This test evaluated the allergenic potential and/or sensitizing capacity of the Capricorn 15 alloy.

**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 the Capricorn 15 alloy at the buccal oral mucosa.

**Test results:** No reactions were noted in conjunction with the Capricorn 15 alloy.

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

Amherst, May 2010



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