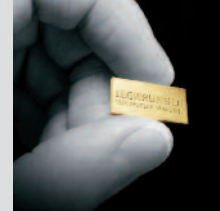


Lodestar[®]



Reduced-gold ceramic alloy

Lodestar is a silver-free reduced-gold ceramic alloy with well-balanced physical properties.

Au 51.5	Pd 38.5	In 8.5	Ga 1.5	Re <1.0	Ru <1.0
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Advantages

- Silver-free
- Excellent melting and flow properties
- Increased hardness
- Wide range of indications
- Certified biocompatibility

Indications

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

Technical data

Colour	white
Type	4
Density (g/cm ³)	13.7
Melting range (°C)	1215 – 1290
Casting temperature (°C)	1350 – 1410
CTE 25 – 500 °C	14.1
Elongation (%)	20.0
Modulus of elasticity (MPa)	98.000
Oxide firing °C / minutes / vacuum	1015 / 5 / vacuum
Vickers hardness	240
Proof stress (0.2 % offset) (MPa)	495



Certificate

Test material: Lodestar®

Composition in % weight	Au	Pd	In	Ga	Re	Ru
Lodestar®	51.5	38.5	8.5	1.5	< 1,0	< 1,0

Manufacturer Corrosion resistance

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

The test was conducted according to the international regulations of ISO 22674: 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 the mutagenicity potential.

Test results: No mutagenicity potential was found to exist in the Lodestar alloy.

Amherst, August 2010



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Vice President-Technology