



W-5

Reduced-gold ceramic alloy

Gold containing alloy with ideal mechanical and physical properties for IPS d.SIGN fluorapatite-leucite glass-ceramic and conventional feldspar ceramics.

Au 52,2	Pt <1,0	Pd 26,0	Ag 17,1	Sn 2,7	In <1,0	Ir <1,0	Re <1,0	Li <1,0
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Advantages

- Excellent melting and flow properties
- Light oxide
- High temperature strength
- Excellent bonding and veneering properties
- Certified biocompatibility

Indications

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

Technical data

Color	white
Type	4
Density (g/cm ³)	13,8
Melting range (°C)	1185 – 1230
Casting temperature (°C)	1285 – 1345
CTE 25 – 500°C	14,0
CTE 20 – 600°C	14,2
Elongation (%)	20,0
Modulus of elasticity (MPa/Nmm ²)	118,000
Oxide firing °C / minutes / vacuum	950 / 5 / no vacuum
Vickers hardness	215
Proof stress (0.2 % offset)	505



Certificate

Test material: W-5

Composition in % weight	Au	Pt	Pd	Ag	Sn	In	Ir	Re	Li
W-5	52,2	<1,0	26,0	17,1	2,7	<1,0	<1,0	<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 W-5 alloy.

Kligman Maximization

This test evaluated the allergenic potential and/or sensitizing capacity of the W-5 alloy.

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

Sensitivity of oral mucosa

Test to determine the contact sensitivity of the W-5 alloy at the buccal oral mucosa.

Test results: No reactions were noted in conjunction with the W-5 alloy.

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

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