

d.SIGN[®] 30



Cobalt-chromium ceramic alloy

Its mechanical and physical properties are coordinated with the d.SIGN fluorapatite-leucite glass-ceramic material.

Co	Cr	Ga	Nb	Si	Mo	Fe	B	Al	Li
60.2	30.1	3.9	3.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Advantages

- Reduced hardness
- Easy casting and processing
- Lighter oxide
- Easy to divest
- Certified biocompatibility

Indication

PFM crowns, telescopic and conus crowns, posts, long and short span bridges, implant superstructures, partial dentures

Technical data

Colour	white
Type	5
Density (g/cm ³)	7.8
Melting range (°C)	1145 - 1165
Casting temperature (°C)	1240 - 1350
CTE 25 - 500 °C	14.5
CTE 20 - 600 °C	14.7
Elongation (%)	6.0
Modulus of elasticity (MPa)	234.000
Vickers hardness	385
0.2 % proof stress (MPa/Nmm ²)	520



Certificate

Test material: d.SIGN 30

Composition in % weight	Ni	Co	Cr	Ga	Nb	Mo	Al	Si	Fe	B	Sonstige
d.SIGN® 30	–	60.2	30.1	3.9	3.2	<1.0	<1.0	<1.0	<1.0	<1.0	Li <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 the 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

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