

Technique Sheet

For Aalba Dent's yellow-gold colored crown and bridge casting alloys, NPG, NPG+2 and supporting products



NPG+2TM

ALPHABOND DENTAL PTY LTD

Unit 40, 28 Barcoo Street Roseville NSW 2069

(PO Box 431, Willoughby NSW 2068) Australia

Ph: 02 9417 6660 / 1800 643 477

A premium, copper-based dental casting alloy with 2% gold for fixed crown and bridge restorations, Type 3

Tensile Strength, psi (MPa)	79,000 (546)
Yield Strength, psi (MPa)	41,500 (286)
Elongation, %	16
Vickers Hardness, HV1	143
Density, g/cm ³	7.8
Color	yellow-gold
Form	ingot
Melting Range, °F (°C)	1,850-1,950 (1,012-1,068)



NPG+2 has been produced from the finest virgin raw materials available using state-of-the-art continuous casting technology. Use NPG+2 with confidence for your non-ceramic crown and bridge applications.

*This alloy conforms with ISO 22674 sec. 5.4 Mechanical Properties; Type 3.

ISO 22674:2006* Emergo Europe TEL: (31) (0) 70 345-8570
Molenstraat 15, 2513 BH, The Hague, The Netherlands



Cu	78.7%	Zn	2.7%
Al	7.8%	Au	2.0%
Ni	4.3%	Mn	1.7%
Fe	3.0%		

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INSTRUCTIONS

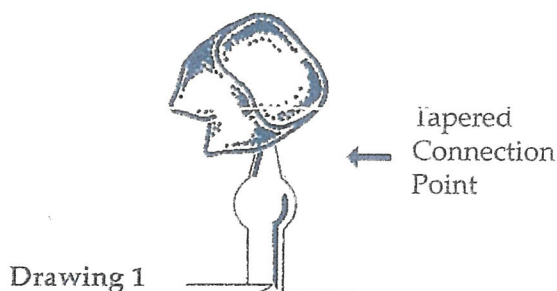
NPG and NPG+2 are a new class of dental casting alloys. Read and follow the instructions closely, specifically the burnout and casting procedures. If you have any questions or difficulties please call our toll free number (800-227-1332) for technical assistance.

APPLICATIONS

FMC Crown & Bridgework
Onlays
Posts & Cores
Sub-Structure for Polymer C&B Resins

SPRUNG SINGLE UNITS: Use a direct sprue with a reservoir and connect the sprue to the thickest area of the wax pattern. The connection point between the wax pattern and the sprue should be tapered (*reference drawing No. 1*).

SPRUNG BRIDGEWORK: Use an indirect (runner bar) spruing technique. The connection points between the wax pattern and the sprues should be tapered (*reference drawing No. 1*).



INVESTING: Use a high heat phosphate bonded investment.

BURNOUT: The investment heat-soak temperature range for NPG is 1,600 °F to 1,700 °F (871 °C - 927 °C). Consult the "Heat-Soak Time Table" for the minimum heat-soak period requirement.

HEAT-SOAK TIME TABLE

# OF UNITS/RINGS	HEAT-SOAK PERIOD
Small Single Unit Ring	1 hr. 10 min.
Two/Three Unit Ring	1 hr. 30 min.
Four/Five Unit Ring	1 hr. 50 min.
Two Rings in the Oven	add 20 min.
Three Rings in the Oven	add 40 min.
Four Rings in the Oven	add 1 hr.

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⚠ **CAUTION!** This alloy contains nickel and should not be used for individuals with a known nickel sensitivity.

⚠ **ATTENTION!** Do not breathe dust or fumes generated by mechanical, thermal, or chemical processing. All processing should be done in accordance with good industrial practices, including vacuum for grinding, exhaust fans for thermal processing in compliance with State and Federal standards and procedures.



NPG NON-PRECIOUS CASTING ALLOY

DESCRIPTION

NPG™

THE GOLD ALTERNATIVE Introduced in 1987, NPG is the first patented, yellow-gold colored alloy for construction of type 2 restorations. A premium, non-precious casting alloy for fixed crowns, bridges and onlays, NPG is recognized worldwide as the gold alternative and has been for 25 years.

NPG and NPG 2 are unique alloys; formally the only formulations of their type to be Accepted by the American Dental Association's Council on Dental Materials, in 1989 and 1998 respectively. NPG offers the appearance and handling characteristics of precious Type III yellow-gold alloys, but at a fraction of the cost. Your laboratory will benefit from smooth and accurate NPG castings, providing reliable quality and fit. NPG is simple to finish, and soldering is trouble-free with our specially formulated Aalba Gold Solder and Aalba Flux.

The bio-compatibility of NPG has been established through extensive in-vitro corrosion and biological studies. With over 25 years of clinical service, NPG has been proven to offer patients reliability, durability, comfort

APPLICATIONS Non-ceramic fixed appliances, full cast crowns (FMC), single units, onlays, short-span multiple unit bridgework, metal sub-structure for veneer crowns using polymer resins (acrylic & composites), posts and cores.

NPG Properties:

- **Tensile Strength psi (MPa)** 81,200 (560)
- **Yield Strength psi (MPa)** 38,425 (265)
- **Elongation Percent %** 15
- **Vickers Hardness HV1** 140
- **Density g/cm3** 7.8
- **Color** Yellow-Gold
- **Melting Range °F (°C)** 1,850-1,950 (1,012-1,068)
- **Composition:** Cu 80.7%, Al 7.8%, Ni 4.3%, Fe 3.0%, Zn 2.7%, Mn 1.7%, Ni (Max)
- **Type 2**

NPG™+2

A premium, copper-based dental casting alloy with 2% gold for fixed crown and bridge restorations.

NPG+2 Properties:

- **Type 3**
- **Cu** 78.7% **Zn** 2.7%
- **Al** 7.8% **Au** 2.0%
- **Ni** 4.3% **Mn** 1.7%
- **Fe** 3.0%