



Safety Data Sheet

Revision: 7/10/2019

Section 1: Identification

1.1 Product Identifier

Trade Name: Beta **Description:** White Non-Precious PFM alloy, Type V **Part Number:** 5052225
5012235

1.2 Recommended Use:

Dental casting alloy for the preparation of dental appliances.
For professional use only

1.3 Supplier:

Sterngold Dental LLC, 23 Frank Mossberg Drive, Attleboro, MA. USA
Tel: 800-243-9942 Fax: 508-226-7528 www.sterngold.com
Emergency telephone number: 508-226-5660

Section 2: Hazard(s) Identification

2.1 **Classification:** Not applicable.

2.2 Label elements

Hazard pictograms: Not applicable

Signal word: Not applicable

Additional information: Label elements are not required for dental casting alloys if they are handled and applied according to the intended use. In this case there is no risk neither for the human health nor for the environment.

Hazard statements: Not applicable.

Precautionary statements: Not applicable.

Hazardous substances for labelling: Not applicable.

Section 3: Composition/Information on Ingredients

3.1 Substances

This product is a mixture.

3.2 Mixtures

Characterization: Alloy based on non-precious metals with additional common metals.

Composition

Ni (Nickel) 76.00% (CAS 7440-02-0) ACGIH 8 HR TLV 1mg/m³, OSHA 8 HR PEL 1mg/m³

Cr (Chromium) 14.00% (CAS 7440-47-3) ACGIH 8 HR TLV 0.5mg/m³, OSHA 8 HR PEL 0.5mg/m³

CRVI compounds: Ceiling = 0.1 mg/m³

MO (Molybdenum) 6.00% (CAS 7439-98-7) (ACGIH 8 HR TLV and OSHA 8 HR PEL not established)

Be (Beryllium) 1.80% (CAS 7440-41-7) ACGIH 8 HR TLV 0.002mg/m³, OSHA 8 HR PEL 0.025mg/m³, STEL = 0.005mg/m³

Al (Aluminum) 2.00% (CAS 7429-90-5) ACGIH 8 HR TLV 10mg/m³, OSHA 8 HR PEL 15mg/m³

Fe (Iron) <1% (CAS 7439-89-6) ACGIH 8 HR TLV 5mg/m³, OSHA 8 HR PEL 10mg/m³

Si (Silicon) <1% (CAS 7440-21-3) ACGIH 8 HR TLV 10mg/m³, OSHA 8 HR PEL 10mg/m³ (total dust) 5mg/m³ (respiratory dust)

C (Carbon) <1% (CAS 7440-44-0) ACGIH 8 HR TLV 3.5mg/m³, OSHA 8 HR PEL 3.5mg/m³

Additional Information

All contents in % are by weight and reflect nominal composition.

The following health data is for specific elements:

BERYLLIUM	Causes lung irritation, dyspnea. Pneumonitis may result from single exposure to beryllium and is occasionally fatal. Chronic inhalation causes "berylliosis" or chronic pulmonary granulomatosis. Pneumonitis may result from single exposure and is occasionally fatal. Eye contact, can also cause conjunctivitis. Beryllium is considered an experimental carcinogen of lungs and bones. It has also been associated with liver damage. In addition, recent research indicates that low-level exposure to Be below the PEL-TLV by way of, but not necessarily limited to, the inhalation route is associated with chronic beryllium disease (CBD). Symptoms of (CBD) include dyspnea, anorexia, weight loss, weakness, chest pain, cough, and pulmonary insufficiency. Beryllium is listed as: Carcinogenic to humans by the IARC (International Agency for Research on Cancer); Reasonably Anticipated to be a Human Carcinogen by the NTP (National Toxicology Program); and as a Confirmed Human Carcinogen by the ACGIH (American Conference of Governmental Industrial Hygienists).
CARBON	Dust causes irritation and is possibly allergenic. Cases of pulmonary fibrosis and emphysema have resulted from prolonged inhalation of dust.
CHROMIUM	May cause histological fibrosis of the lungs. There are some references to chromium causing lung and/or nasal cancer. In addition, chromium metal has caused tumors in laboratory animals via implant and intravenous routes. Chromium is listed as a Confirmed Human Carcinogen by the ACGIH (American Conference of Governmental Industrial Hygienists).
MOLYBDENUM	Chronic inhalation of molybdenum compounds by experimental animals has caused appetite and weight loss, diarrhea, muscular incoordination, hair loss and gout. Excessive intake of molybdenum may interfere with copper metabolism.
NICKEL	Dust may cause headache, coughing, dizziness or difficult breathing. Prolonged exposure may cause dermatitis. Ingestion may cause nausea, vomiting, headaches, dizziness, gastrointestinal irritation. Target organs: Nasal cavities, lungs, skin. Nickel is listed as: Possibly Carcinogenic to Humans by the IARC (International Agency for Research on Cancer) and Reasonably Anticipated to be a Human Carcinogen by the NTP (National Toxicology Program).

Section 4: First-Aid Measures

4.1 Description of first aid measures

General notes: Remove contaminated clothing immediately.

Inhalation: Remove affected person to fresh air and assist with additional oxygen if necessary.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids, then consult a physician.

Skin Contact: The product is not irritating to skin; cool sufficiently with water after burns caused by contact with the molten alloy.

Ingestion: Seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

No special effects known.

4.3 Indication of any immediate medical attention and special treatment needed

In case of any health disorder get medical advice; present label and safety data sheet for this product.

Section 5: Fire-Fighting Measures

5.1 Extinguishing media

The product is not combustible; the extinguishing media should be adapted to the environment; never apply water on molten material.

5.2 Special hazards arising from the substance or mixture

No special hazards known.

5.3 Advice for firefighters

No special advice.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

No special measures required.

6.2 Environmental precautions

No special measures required.

6.3 Methods and material for containment and cleaning up

Pick up mechanically and dispose of according to local regulations.

6.4 Reference to other sections

See also sec. 7 and 8 for precautions and sec. 13 for disposal.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Take all precautions that are normal within the dental laboratory, such as, avoid inhalation of fumes while melting and dust while grinding. Wash hands before eating or drinking to avoid ingestion.

7.2 Conditions for safe storage, including any incompatibilities

No special conditions

7.3 Specific end use(s)

See instructions for use.

Section 8: Exposure Controls/Personal Protection

8.1 Exposure controls

Appropriate engineering controls

Provide general ventilation and local exhaust to keep levels below the TLVs stated in Section 3

Personal protective equipment

When dental alloys are thermally or mechanically treated, precaution is needed to avoid burns, inhalation of dust and vapors as well as mechanical eye irritation due to dust.

Respiratory protection: Wear a NIOSH approved respirator for dust exceeding the TLVs.

Eye protection: Wear eye protection suitable to each operation.

Hand protection: Wear heat protective gloves while casting and handling hot metals and molds. Latex or Nitrile gloves are recommended while grinding.

Skin protection: Wear conventional laboratory apron, lab coat, or other protective clothing.

Hygiene measures

Observe hygiene measures normal within dental laboratories.

Environmental Exposure Controls

See sec. 13 for disposal.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical State: Solid.

Safety relevant data

Appearance:	WHITE
Odor:	Not Applicable
pH:	Not Applicable
Boiling Point:	Not Applicable
Melting Range:	1230-1290 °C
Flash Point:	Not Applicable
Flammability:	Not Applicable
Autoflammability:	Not Applicable
Explosive Properties:	Not Applicable
Oxidizing Properties:	Not Applicable
Vapor Pressure:	Not Applicable
Solubility(Water/Fat):	Insoluble

9.2 No other safety relevant information know.

Section 10: Stability and Reactivity

10.1 Reactivity

The product will not react with other substances of properly stored and handled.

10.2 **Chemical Stability**

The product is stable if properly stored and handled.

10.3 **Possibility of hazardous reactions**

Special hazards are not to be expected, if the product is properly stored and handled.

10.4 **Conditions to avoid**

Keep away from oxidizing acids. The product will oxidize but is stable.

10.5 **Incompatible materials**

No special incompatibilities known.

10.6 **Hazardous decomposition products**

No decomposition to be expected under normal conditions.

Section 11: Toxicological Information

11.1 **Information on toxicological effects**

Acute toxicity

Skin corrosion/irritation: None.

Serious eye damage/irritation: Dust from mechanical treatment may lead to eye irritation.

Respiratory of skin sensitization: Dust and vapors from mechanical or thermal treatment may lead to respiratory irritation.

Germ cell mutagenicity: Classification criteria are not given according to known data.

Carcinogenicity: Classification criteria are not given according to known data.

Reproductive toxicity: Classification criteria are not given according to known data.

STOT-single exposure: Classification criteria are not given according to known data.

STOT-repeated exposure: Classification criteria are not given according to known data.

Aspiration hazard: Classification criteria are not given according to known data.

Section 12: Ecological Information* (non-mandatory)

12.1 **Toxicity**

Water toxicity: No further data available.

12.2 **Persistence and degradability**

No further data available. The product is not easily biodegradable.

12.3 **Bioaccumulative potential**

No further data available.

12.4 **Mobility in soil**

No further data available.

12.5 **Results of PBT and vPvB assessment**

Criteria for the classification as PBT or vPvB are not met.

12.6 **Other adverse effects**

No further data available.

Section 13: Disposal Considerations* (non-mandatory)

13.1 Waste treatment methods

Recommendation: Dispose of product according to local waster regulation. Return to the manufacturer of distributor is recommended for the recycling of precious metals.

Section 14: Transport Information* (non-mandatory)

Section 15: Regulatory Information* (non-mandatory)

Section 16: Other Information

The information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof. However, STERNGOLD DENTAL, LLC. makes no representations as to the completeness of accuracy thereof and information is supplied upon the condition that the persons receiving the above material will make there own determination as to its suitability for their purposes prior to use. In no event will "STERNGOLD DENTAL, LLC." be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers.

This SDS was prepared 6/13/2018

*Note: Since other Agencies regulate this information, OSHA will not be enforcing Sections 12 through 15(29 CFR 1910.1200(g)(2)).