

## Safety Data Sheet according to 1907/2006/EG (REACH)

Date of Print: 16.07.2015

rev.05

Revised on: 07.07.2015

**Trade name: Starbond Titanium and Titanium-Based Alloys**

### 1 Identification of substance and company

- **Product information**  
**Trade name:**  
Starbond Ti4 Disc (REF 135008 – 135530)  
Starbond Ti5 Disc (REF 136008 – 136530)
- **Relevant identified uses of the substance or mixture and uses advised against**  
**Application of the substance:** Pure titanium for the manufacturing of dental prostheses
- **Manufacturer / Supplier:**  
S&S Scheftner GmbH  
Dekan-Laist-Str. 52  
D-55129 Mainz
- **Further information obtainable from:**  
Adrian Jossek  
[a.jossek@schefner24.de](mailto:a.jossek@schefner24.de)
- **Emergency information:**  
For medical information (in german and english language):  
+49/6131/19240 (poison control center Mainz)

### 2 Hazards identification

- **Classification of the substance or mixture**  
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.  
This substance is not classified as dangerous according to Directive 67/548/EEC.
- **Label elements**  
The product does not need to be labelled in accordance with EC directives or respective national laws.
- **Other hazards**  
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 3 Composition

- **Chemical characterization: Titanium or Titanium- Aluminium-Vanadium-Alloy**

CAS Number	Name	Concentration	Risk phrases / remarks
7440-32-6  EINECS: 231-142-3	Titanium	min. 88%	See point 2
7429-90-5 7440-62-2	Aluminium Vanadium N; C; H; Fe; O	max. 6,75% max. 4,5 <1%	No hazardous substance or mixture according to Regulation (EC) no. 1272/2008. This substance is not classified as hazardous under Directive 67/548 / EEC.

### 4 First Aid measures

- **Description of first aid measures**  
**Inhalation:** If dusts, fumes or smokes were inhaled sufficient fresh air should be provided. If applicable a doctor should be consulted.  
**General notes:** Dispose of clothes contaminated with the product.  
**Skin contact:** Scrub skin thoroughly with soap and water. If skin irritation or an allergic reaction occurs a doctor should be consulted.  
**Eye contact:** Rinse opened eye under running water for several minutes (> 15min) and a doctor should be consulted.  
**Swallowing:** If swallowed rinse mouth and drink copious amounts of water. Call for a doctor.

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- **Most important symptoms and effects, both acute and delayed**  
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **Indication of any immediate medical attention and special treatment needed**  
No data available

### 5 Fire fighting measures

- **Extinguishing Media:** extinguishing type D powder or sand.
- **Special Hazards arising from the substance or mixture:**  
Avoid formation of dust cloud as this may lead to an increased risk of a dust explosion.
- **Advice for fire fighters:** In case of fire and / or explosion do not breathe fumes.

### 6 Accidental release measures

- **Personal precautions:**  
For non-emergency personnel: Wear suitable protective clothing and equipment.  
For emergency responders: Wear suitable protective clothing and equipment.
- **Environmental precautions:** Take precautions to ensure product does not contaminate ground or enter the drainage system.
- **Methods and material for containment and clear up:**  
For containment: Not applicable  
For cleaning up:  
Small spillage: Vacuum with equipment fitted with HEPA filtration.  
Large spillage: Solids should be carefully transferred to salvage containers. Any residues should be treated as small spillages.
- **Other information:** No Information.

### 7 Handling and storage

- **Precautions for safe handling:** With proper handling No special measures are required for handling and storage. Avoid dust formation. Provide good room ventilation, if necessary work under fume hood.

### 8 Exposure controls and personal protection

- **Control parameters**  
Components with workplace control parameters: Contains no substances with occupational exposure limit values.
- **Exposure controls**  
Appropriate engineering controls: General industrial hygiene practice.  
Personal protective equipment  
Eye/face protection  
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  
Skin protection  
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.  
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.  
Body Protection  
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.  
Respiratory protection  
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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Control of environmental exposure: No special environmental precautions required.

### 9 Physial and chemical properties

Form:	powder
Colour:	grey
Odour:	odourless
Melting point/ range:	1670°C
Boiling point/range:	>3260°C
Flash-point:	not determind
Flammability (solid, gaseous)	highly flammable
Decomposition temperature:	not determined
upper explosive limit:	not determined
Self-inflammability:	not determined
Explosionsgefahr:	Dust can form an explosive mixture with air.
Lower explosion limit:	not determind
Upper explosion limit:	not determind
Density (g/cm <sup>3</sup> ) at 20°C:	not determind
Solubility in water:	insoluble
pH:	not determind
Dynamic viscosity:	not determind

### 10 Stability and reactivity

- **Reactivity:** No data available.
- **Chemical Stability:** Stable under normal storage conditions.
- **Possibility of hazardous reactions:** Titan is strongly attacked by hydrofluoric acid and hydrofluoric / nitric acid mixtures. Titan can with iron oxide at elevated temperatures violently react. Dust can combine with air to form an explosive mixture.
- **Conditions to be avoided:** None under normal use.
- **Materials to be avoided:** Strong acids
- **Hazardous decomposition products:** In contact with acids the formation of hydrogen is possible. In case of fire the formation of toxic metal oxide is possible

### 11 Toxicological information

- **Acute toxicity (LD/LC50-values):** The acute oral toxicity of titanium was determined in an animal study (rats) with titanium dioxide. LD50 (oral) > 5,000 mg / kg body weight per day
- **Inhalation:** Titanium is non-toxic and safe to handle in a compact state. In the development of titanium dust is recommended to ensure adequate extraction and ventilation to avoid contact with eyes or respiratory organs.
- **Skin corrosion/irritation:** not known
- **Serious eye damage/irritation:** Not known
- **Sensitization:** No sensitizing effect known.

### 12 Ecological information

- **Toxicity:** No data available
- **Persistence and degradability:** No data available
- **Bioaccumulative potential:** No data available
- **Mobility in soil:** No data available
- **Results of PBT and vPvB assessment:** This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
- **Other adverse effects:** No data available

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### 13 Disposal considerations

- **Product:** Disposal in an incineration plant in accordance with the regulations of the local authorities.
- **Contaminated packaging:** Dispose of as unused product.

### 14 Transport information

Dental alloys are no hazardous material according to transport regulations (GGVS / GGV E / RID / ADR / IMDG Code / ICAO-TI).  
The product is not subject to ADR / RID / ADN regulations.  
The product is not subject to IMDG regulations.  
The product is not subject to ICAO-TI / IATA regulations.

### 15 Regulations

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
According to the national legislation.
- **Chemical Safety Assessment**  
For this product a chemical safety assessment was not carried out

### 16 Other information

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.