

## Safety data sheet

# CADtools Titanium Dental Alloy

### 1. Name of substance / preparation and company

Name of substance / preparation and company	
Product name	CADtools Titanium Dental Alloy
Use of the substance / mixture	Medical technology
Details of the supplier who provided the safety data sheet	CADtools GmbH
Address	Max-Josef-Metzger-Str. 6 86157 Augsburg
Telephone	+49 821 455252-0
Fax	+49 821 5999965-44
E-mail	augsburg@cadtools.eu
Emergency information	Poison emergency number of the Charité Universitätsmedizin Berlin
Telephone	+49 30 19240

### 2. Possible hazards

#### 2.1 Classification of the substance or mixture

In the form in which it is placed on the market, the product does not cause any health hazards for humans through inhalation, ingestion or contact with the skin. There is therefore no obligation to label the product in accordance with:

- Regulation 1272/2008 (CLP: Annex I; 1.3.4 .: "Metals in solid form, alloys, mixtures containing polymers, mixtures containing elastomers).

#### 2.2 Label elements

Labeling according to Regulation (EC) No. 1272/2008 (CLP Regulation)

Hazard pictograms	Signal word
not applicable	not applicable

### 2.3 Other hazards

Inhalation of grinding dust, irritation to skin and eyes.

### PBT assessment

No data available

### vPvB assessment

No data available

## 3. Composition / information on the components

### 3.1 Ingredients

The product is not a substance, but a titanium alloy of the type TA6V ELI ISO 5832-3 - ASTM F136.

### 3.2 Mixtures

Chemical name	Molecular formula	CAS number EINECS number	Classification according to GHS	Concentration
Titanium	Ti	7440-32-6 231-142-3	Aquatic Chronic 4;H413 Resp. Sens. 1; H334 Skin Sens. 1; H317	90 %
Aluminium	Al	7440-47-3 231-157-5		6 %
Vanadium	V	7439-62-2 231-171-1		4 %

## 4. Description of the measures

Description of the measures	
After inhalation	Get fresh air and consult a doctor if there is irritation to the airways.
After skin contact	Thoroughly clean with warm water and soap.
After eye contact	Get medical advice in case of skin irritation.
After ingestion	Rinse carefully and thoroughly with the eye shower or with cold, clean water, if necessary consult an ophthalmologist.
	If a larger amount is swallowed, only if you are conscious, induce vomiting and consult a doctor.

## 5. Fire-fighting measures

Fire-fighting measures	
Suitable extinguishing agents	Cover with dry sand or salt.
Unsuitable extinguishing agents	Water, foam, gas-filled or similar fire extinguishers
Fire fighting hazards	not known
Special protective equipment for fire fighters	In the event of fire, wear self-contained breathing apparatus and standard extinguishing equipment.

## 6. Accidental release measures

### Personal protective measures

See section 8

### Environmental protection measures

No evidence of negative behavior of the product in the environment

### Methods for cleaning up / taking up

Conventional cleaning method

## 7. Handling and storage

### Precautions for safe handling

No restrictions

### Precautions for safe storage

No restrictions

## 8. Exposure controls and personal protective equipment

Limitation and monitoring of exposure	
Protection of the respiratory tract	Provide suitable aspiration. Use breathing apparatus if necessary (particle filter P3 according to DIN EN 143)
Eye protection	Use protective goggles with side protection (EN 166)
Respiratory protection	If solid titanium alloy forms are converted into particles in manufacturing processes, keep the working environment below recommended limits by means of suitable ventilation. If ventilation is insufficient, respiratory protection should be used.
Skin protection	Suitable protective clothing must be used.
Hand protection	Heat-insulating protective gloves must be used for thermal processing. Protective gloves must be replaced immediately if they are physically damaged or worn. Design the work steps in such a way that the permanent use of protective gloves is avoided.
Other	The use of safety precautions for working with chemical substances should be considered. Do not eat, drink or smoke while working. Observe legal regulations on industrial hygiene. Wash your face and hands before taking a break or at the end of work.

## 9. Physical and chemical properties

Physical and chemical properties	
Appearance	industrially manufactured solid
Colour	white
Odour	odourless
Odour threshold	not determined
Melting temperature	1600 - 1660 °C
Boiling point	not determined
Flash point	not determined
Decomposition point	not determined
Auto-ignition temperature	not determined
Explosion hazard	not determined
Oxidizing properties	not determined
Flammability (solid, gaseous)	not determined
Lower explosion limit	not determined
Upper explosion limit	not determined
Vapor pressure	not determined
Vapor density	not determined
Evaporation rate	not determined
Relativ density	not determined
Density	4,5 g / cm <sup>3</sup>
Water solubility	insoluble
Solubility (-ies)	not determined
Partition coefficient: n-octanol / water	not determined
Viscosity	not determined

## 10. Stability and reactivity

Stability and reactivity	
Reactivity	Dangerous reactions are not to be expected if the product is handled according to its intended use.
Chemical stability	stable under normal conditions
Conditions to avoid	Titanium is strongly attacked by hydrofluoric acid / nitric acid mixtures.
Incompatible materials	May ignite in the presence of dry chlorine at room temperature, with iron oxide at elevated temperature.
Gefährliche Zersetzungsprodukte	not known

## 11. Toxicology

No dangerous reactions are known with normal handling and use.

Information on toxicological effects	
Acute oral toxicity	not known
Acute dermal toxicity	not known
Acute inhalation toxicity	Titanium is non-toxic and safe to handle in solid form. If titanium dust or fumes are generated, it is recommended that adequate exhaustion or ventilation is provided to avoid contact with the eyes or respiratory system.
Skin corrosion / irritation	
Serious eye damage / irritation	not known
Respiratory / skin sensitization	not known
Germ cell mutagenicity	not known
Reproductive toxicity	not known
Carcinogenicity	not known
STOT single exposure	not known
STOT repeated exposure	not known
Aspiration hazard	not known

## 12. Information on ecology

Information on ecology	
Ecotoxicity	If handled and used properly, no ecological problems are to be expected.
Mobility	not known
Persistence and degradability	not known
Bioaccumulative potential	not known
PBT and vPvB assessment	not known
Other harmful effects	not known

## 13. Disposal considerations

Do not store in dust, grinding waste and dust aggregates in extraction systems.  
Residual material should be recycled. Disposal in accordance with local, official regulations.

#### 14. Transport information

Transport information	
Transport ADR / RID / AND	The product is not subject to ADR / RID / ADN regulations.
Transport IMDG	The product is not subject to the IMDG regulations.
Transport ICAO-TI / IATA	The product is not subject to the ICAO-TI / IATA regulations.
Environmental hazards	not known
Special precautionary measures for the user	not known
Transport in bulk according to Annex II of the Marpol Convention and the IBC Code	not relevant

#### 15. Disclaimer

The information in this safety data sheet corresponds to the best of our knowledge at the time of revision. The information is intended to provide you with guidelines for the safe handling of the product named in this safety data sheet during storage, processing, transport and disposal. The details are not transferable to other products. Insofar as the product named in this safety data sheet is blended, mixed or processed with other materials or subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless otherwise expressly stated.