## 1 Identification of the substance or mixture and of the supplier

- **Product identifier**
  - **Trade name**: Spartan Ceramic Solder

- **Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.

- **Application of the substance / the mixture**
  - Manufacture of dental prothesis
  - Dental alloy

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Ivoclar Vivadent Inc.
    - 175 Pineview Drive, Amherst, N.Y. 14228
    - USA
    - Tel. +1 800 533 6825
    - Fax +1 716 691 2285

  - **Importer:** Ivoclar Vivadent Ltd
    - 12 Omega St, Rosedale, Auckland
    - New Zealand
    - Tel: + 64 9 914 9999 / Fax: + 64 9 914 9990

- **Further information obtainable from:**
  - Regulatory Affairs
  - sds@ivoclarvivadent.com

- **Emergency telephone number:** 0800 764 766 (National Poison Centre - 24 hours / 7 days)

## 2 Hazards identification

- **Classification of the substance or mixture**
  - Ox. Sol. 2  H272  May intensify fire; oxidiser.
  - Aquatic Acute 3  H402  Harmful to aquatic life.
  - Aquatic Chronic 3  H412  Harmful to aquatic life with long lasting effects.

- **Label elements**
  - **GHS label elements**
    - The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**
  - ![GHS03](image)

- **Signal word** Danger

- **Hazard statements**
  - May intensify fire; oxidiser.
  - Harmful to aquatic life with long lasting effects.

- **Precautionary statements**
  - Keep away from heat. - No smoking.
  - Keep/Store away from clothing/combustible materials.
  - Take any precaution to avoid mixing with combustibles.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - In case of fire: Use to extinguish: CO2, powder or water spray.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.
3 Composition/Information on ingredients

- Chemical characterisation: Mixtures
- Description: Dental alloy

- Dangerous components:
  - CAS: 7440-50-8  EINECS: 231-159-6  copper  10-25%
  - CAS: 7440-66-6  EINECS: 231-175-3  zinc powder -zinc dust (stabilized)  <2.5%

- Additional information: For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- Description of first aid measures
  - General information: No special measures required.
  - After inhalation:
    Grinding dust: Supply fresh air; consult doctor in case of complaints.
    In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact:
    After contact with the molten product, cool rapidly with cold water.
    If skin irritation continues, consult a doctor.
  - After eye contact:
    Grinding dust: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
    Mechanical effects only.
  - Information for doctor:
    - Most important symptoms and effects, both acute and delayed: No further relevant information available.
    - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire fighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: Do not inhale explosion gases or combustion gases.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.
7 Handling and storage

Handling:

Precautions for safe handling
Extractors are required on all machines used for thermal processing or splinter removal processes.

Information about fire - and explosion protection: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Store away from flammable substances.

Further information about storage conditions: None.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

Control parameters

Ingredients with limit values that require monitoring at the workplace:

CAS: 7440-50-8 copper

WES Long-term value: 0.2* 1** mg/m³
*Fume; **dusts and mists, as Cu

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:
Usual hygienic measures for dental practice and dental laboratories.
Wash hands before breaks and at the end of work.
Keep away from foodstuffs, beverages and feed.

Respiratory protection: Use respiratory protective device against the effects of fumes/dust/aerosol.

Protection of hands:
Protective gloves should always be worn during mechanical and thermal processing.
After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves
Mechanical processing:
Leather gloves
Strong material gloves
Thermal processing:
Heat protection gloves

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection:
Always wear safety goggles during mechanical processing (grinding, sawing/cutting, drilling, milling).

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Form:** Solid
    - **Colour:** Grey
    - **Odour:** Odourless
    - **Odour threshold:** Not determined.
    - **pH-value:** Not applicable.
  - **Change in condition**
    - **Melting point/freezing point:** 1080 - 1105 °C
    - **Initial boiling point and boiling range:** Undetermined.
    - **Flash point:** Not applicable.
    - **Flammability (solid, gas):** Not determined.
    - **Auto-ignition temperature:** Product is not self-igniting.
    - **Explosive properties:** Product does not present an explosion hazard.
    - **Explosion limits:**
      - **Lower:** Not determined.
      - **Upper:** Not determined.
    - **Vapour pressure:** Not applicable.
    - **Density:**
      - **Relative density:** Not determined.
      - **Vapour density:** Not applicable.
      - **Evaporation rate:** Not applicable.
    - **Solubility in / Miscibility with water:** Insoluble.
    - **Partition coefficient: n-octanol/water:** Not determined.
    - **Viscosity:**
      - **Dynamic:** Not applicable.
      - **Kinematic:** Not applicable.
    - **Other information:** No further relevant information available.

10 Stability and reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal handling and storage conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
Safety Data Sheet
in accordance with HSNO

Printing date 07.05.2020
Version number 4
Revision: 07.05.2020

Trade name: Spartan Ceramic Solder

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity
  - Skin corrosion/irritation No irritant effect.
  - Serious eye damage/irritation Mechanical effects only.
  - Respiratory or skin sensitisation No sensitising effects known.
  - Additional toxicological information:
    Fumes or dusts generated from cutting or grinding operations may cause respiratory irritation.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability No further relevant information available.
  - Behaviour in environmental systems:
    - Bioaccumulative potential No further relevant information available.
    - Mobility in soil No further relevant information available.
  - Additional ecological information:
    - General notes:
      Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
      Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
    - Results of PBT and vPvB assessment
      - PBT: Not applicable.
      - vPvB: Not applicable.
      - Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation
    Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.
- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADR/RID/ADN, ADN, IMDG, IATA Void
- UN proper shipping name
  - ADR/RID/ADN, ADN, IMDG, IATA Void
- Transport hazard class(es)
  - ADR/RID/ADN, ADN, IMDG, IATA
  - Class Void
Trade name: Spartan Ceramic Solder

| Packing group | ADR/RID/ADN, IMDG, IATA | Void |
| Environmental hazards | Marine pollutant | No |
| Special precautions for user | Not applicable. |
| Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| Transport/Additional information | Product is not classified as a dangerous good for transport (ADR, IMDG, IATA). |
| UN "Model Regulation" | Void |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- New Zealand Inventory of Chemicals
  - CAS: 7440-57-5 Gold
  - CAS: 7440-50-8 copper
  - CAS: 7440-05-3 palladium
- HSNO Approval numbers
  - CAS: 7440-50-8 copper HSR002948
- GHS label elements
  The product is classified and labelled according to the Globally Harmonised System (GHS).
- Hazard pictograms
  - GHS03
- Signal word Danger
- Hazard statements
  May intensify fire; oxidiser. Harmful to aquatic life with long lasting effects.
- Precautionary statements
  Keep away from heat. - No smoking. Keep/Store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles. Wear protective gloves/protective clothing/eye protection/face protection. In case of fire: Use to extinguish: CO2, powder or water spray. Dispose of contents/container in accordance with local/regional/national/international regulations.
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category P8 OXIDISING LIQUIDS AND SOLIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- National regulations:
- Other regulations, limitations and prohibitive regulations
  The product is a medical device according to the Directive 93/42/EEC.
16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
  H400 Very toxic to aquatic life.
  H410 Very toxic to aquatic life with long lasting effects.

- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Ox. Sol. 2: Oxidizing solids – Category 2
  Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
  Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3
  Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
  Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3