1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
  - Trade name: **Capricorn**

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

- **Application of the substance / the preparation**
  - Manufacture of dental prothesis

- **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
  
  - Ivoclar Vivadent Inc.
    - 1-6600 Dixie Road
    - Mississauga, Ontario
    - L5T 2Y2
    - Canada
    - Phone: +1 905 670 8499
    - Fax: +1 905 670 3102

- **Information department:** Quality Assurance / Regulatory Affairs

- **Emergency telephone number:**
  - 24 Hour Emergency Assistance:
    - Emergency-Call USA - Infotrac: 1-800-535-5053
    - Emergency-Call Canada - Canutec: 1-613-996-6666
  
  - General MSDS Assistance:
    - US: 1-800-533-6825
    - Canada: 1-800-263-8182

2 Hazards identification

- **Classification of the substance or mixture**
  - Ox. Sol. 2 H272  May intensify fire; oxidizer.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  - Oxidizing
  - Contact with combustible material may cause fire.

- **Information concerning particular hazards for human and environment:**
  - Avoid breathing of grinding dust and vapours. Melted material may cause burns.

- **Classification system:**
  - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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

  - GHS03

- **Signal word** Danger

(Contd. on page 2)
Safety Data Sheet
acc. to ISO/DIS 11014

Trade name: Capricorn

- **Hazard statements**
  May intensify fire; oxidizer.

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

- **Additional information:**
  Alloys do not require a label, providing they do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market.

- **Classification system:**

  - **NFPA ratings (scale 0 - 4)**
    - Health = 0
    - Fire = 0
    - Reactivity = 0

  - **HMIS-ratings (scale 0 - 4)**
    - Health = 0
    - Fire = 0
    - Reactivity = 0

- **Other hazards**

  - **Results of PBT and vPvB assessment**
    - PBT: Not applicable.
    - vPvB: Not applicable.

### Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Dental alloy

- **Dangerous components:**
  - 7440-05-3 palladium 25-100%
  - 7440-74-6 indium 1-<10%
  - 7440-55-3 gallium 1-<10%
  - 7440-22-4 silver 1-<10%

### 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.
  - **After eye contact:**
    - Grinding dust: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
    - Mechanical effects only.
Trade name: Capricorn

- **After swallowing:** Seek medical treatment.
- **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 **Firefighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents:** The product is not flammable.
- **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.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

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 protection against explosions and fires:** 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:** Not required.
  - **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 systems:** No further data; see item 7.
- **Control parameters**
  - **Components with limit values that require monitoring at the workplace:**
    - **7440-74-6 indium**
      - REL () 0.1 mg/m³
        - and compounds, as In
      - TLV () 0.1 mg/m³
Trade name: Capricorn

<table>
<thead>
<tr>
<th>7440-22-4 silver</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEL</strong> (metal and soluble compounds (as Ag)) 0.01 mg/m³</td>
</tr>
<tr>
<td><strong>REL</strong> (metal: dust and fume) 0.01 mg/m³</td>
</tr>
<tr>
<td><strong>TLV</strong> (metal: dust and fume) 0.1 mg/m³</td>
</tr>
</tbody>
</table>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:** Usual hygienic measures for dental practice.
    - **Breathing equipment:** 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 gloves
    - Thermal processing:
      - Heat protection gloves
  - **Penetration time of glove material**
    - The exact breakthrough 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**
    - **Appearance:**
      - Form: Solid
      - Color: White
      - Odor: Odorless
      - Odour threshold: Not determined.
    - **pH-value:** Not applicable.
  - **Change in condition**
    - Melting point/Melting range: 1170–1335 °C (2138–2435 °F)
    - Boiling point/Boiling range: Undetermined.
  - **Flash point:** Not applicable.
  - **Flammability (solid, gaseous):** Not determined.
  - **Auto igniting:** Product is not self-igniting.
  - **Danger of explosion:** Product does not present an explosion hazard.
  - **Explosion limits:**
    - Lower: Not determined.
    - Upper: Not determined.
  - **Vapor pressure:** Not applicable.
Trade name: Capricorn

- Density at 20 °C (68 °F): 11 g/cm³ (91.795 lbs/gal)
- 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.

- Solvent content:
  - Solids content: 100 %
  - 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.
- Hazardous decomposition products: None under normal conditions of storage and use.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information: Fumes or dusts generated from cutting or grinding operations may cause respiratory irritation.
- Carcinogenic categories
  - NTP (National Toxicology Program)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: 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 packagings:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
- DOT NA3077
- ADR, ADN, IMDG, IATA Void

- UN proper shipping name
- ADR, ADN, IMDG, IATA Void

- Transport hazard class(es)
- DOT
  - Class 9 Miscellaneous dangerous substances and articles.
  - Label 9

- ADR, ADN, IMDG, IATA Void
- Class Void

- Packing group
- DOT
  - ADR, IMDG, IATA Void

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- UN "Model Regulation": -

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara
- Section 355 (extremely hazardous substances):
  None of the ingredients is listed.
### Section 313 (Specific toxic chemical listings):
- **7440-22-4** silver
- **7440-50-8** copper

### TSCA (Toxic Substances Control Act):
- **7440-57-5** Gold
- **7440-22-4** silver
- **7440-50-8** copper
- **7440-06-4** platinum
- **7440-74-6** indium
- **7439-88-5** iridium

### Proposition 65

- **Chemicals known to cause cancer:**
  None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**
  None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**
  None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**
  None of the ingredients is listed.

### Carcinogenic categories

- **EPA (Environmental Protection Agency)**
  - **7440-22-4** silver D
  - **7440-50-8** copper D

- **TLV (Threshold Limit Value established by ACGIH)**
  None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**
  None of the ingredients is listed.

### GHS label elements
The product is classified and labelled according to the Globally Harmonized System (GHS).

### Hazard pictograms
![GHS03](image)

### Signal word
**Danger**

### Hazard statements
May intensify fire; oxidizer.

### Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Take any precaution to avoid mixing with combustibles.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep/Store away from clothing/combustible materials.
Trade name: Capricorn

In case of fire: Use for extinction: CO2, powder or water spray.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- National regulations:
- Other regulations, limitations and prohibitive regulations
  The product is a medical device according to the EC-directive 93/42/EEC.
  This product is classified as a medical device under US and Canadian regulations and has been reviewed by the US Food and Drug Administration and Health Canada.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

- 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
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)