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

- **Product identifier**
- **Trade name:** Sagittarius
- **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)
· **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)**
    
    ![NFPA ratings](image)
    Health = 0
    Fire = 0
    Reactivity = 0
  
  · **HMIS-ratings (scale 0 - 4)**
    
    ![HMIS-ratings](image)
    Health = 0
    Fire = 0
    Reactivity = 0

· **Other hazards**
  · **Results of PBT and vPvB assessment**
    · **PBT:** Not applicable.
    · **vPvB:** Not applicable.

### 3 Composition/information on ingredients

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

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-05-3 palladium</td>
<td>10-&lt;25%</td>
</tr>
<tr>
<td>7440-06-4 platinum</td>
<td>1-&lt;2.5%</td>
</tr>
<tr>
<td>7440-22-4 silver</td>
<td>1-&lt;2.5%</td>
</tr>
<tr>
<td>7440-74-6 indium</td>
<td>1-&lt;2.5%</td>
</tr>
<tr>
<td>7440-31-5 tin</td>
<td>1-&lt;2.5%</td>
</tr>
</tbody>
</table>

### 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.

(Contd. on page 3)
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· After eye contact:
  Grinding dust: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  Mechanical effects only.
· 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:**

<table>
<thead>
<tr>
<th>Substance Code</th>
<th>PEL (mg/m³)</th>
<th>REL (mg/m³)</th>
<th>TLV (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-06-4 platinum</td>
<td>0.002</td>
<td>0.002**</td>
<td>0.002**</td>
</tr>
<tr>
<td></td>
<td>soluble salts, as Pt</td>
<td>*metal **soluble salts, as Pt</td>
<td>*metal **soluble salts, as Pt</td>
</tr>
<tr>
<td>7440-22-4 silver</td>
<td>0.01</td>
<td>0.01</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>metal and soluble compounds (as Ag)</td>
<td>metal: dust and fume</td>
<td></td>
</tr>
<tr>
<td>7440-74-6 indium</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>and compounds, as In</td>
<td>metal: dust and fume</td>
<td></td>
</tr>
<tr>
<td>7440-31-5 tin</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>metal</td>
<td>metal</td>
<td></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: 1130–1255 °C (2066–2291 °F)
    - Boiling point/Boiling range: Undetermined.
  - Flash point: Not applicable.
  - Flammability (solid, gaseous): Not determined.
  - Auto igniting: Product is not selfigniting.
  - Danger of explosion: Product does not present an explosion hazard.
  - Explosion limits:
    - Lower: Not determined.
    - Upper: Not determined.
  - Vapor pressure: Not applicable.
  - Density at 20 °C (68 °F): 16.4 g/cm³ (136.858 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.
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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.
- Additional ecological information:
  - General notes: Generally not hazardous for water
  - 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 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: 9 Miscellaneous dangerous substances and articles.
### Trade name: Sagittarius

| · Label | 9 |
| · ADR, ADN, IMDG, IATA | Void |
| · Class | Void |
| · Packing group | III |
| · DOT | Void |
| · 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

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· 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

· 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.
  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)