1 Identification of the substance or mixture and of the supplier

- Product identifier
  - Trade name: HGPKF 1030Y

- 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 Pty. 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
  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
  Void

- Signal word
  Void

- Hazard statements
  Harmful to aquatic life with long lasting effects.

- Precautionary statements
  Avoid release to the environment.
  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.

- Other hazards
  Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
3 Composition/Information on ingredients

- Chemical characterisation: Mixtures
- Description: Dental alloy
- Dangerous components:
  - CAS: 7440-22-4 EINECS: 231-131-3 silver 25-50%
  - 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: 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.
  - Do not allow to enter sewers/surface or ground water.
- 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.
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: Not required.

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: 7440-22-4 silver
  - WES Long-term value: 0.1 mg/m³
  - 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).

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## Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Colour</td>
<td>Gold coloured</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH-value</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>1015 - 1040 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Undetermined</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Product is not selfigniting</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Product does not present an explosion hazard</td>
</tr>
<tr>
<td>Explosion limits</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in / Miscibility with water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available</td>
</tr>
</tbody>
</table>

## Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No further relevant information available</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under normal handling and storage conditions.</td>
</tr>
<tr>
<td>Thermal decomposition / conditions to be avoided</td>
<td>No decomposition if used according to specifications.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No dangerous reactions known.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No further relevant information available.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>No further relevant information available.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>None under normal conditions of storage and use.</td>
</tr>
</tbody>
</table>
### 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**: No further relevant information available.
  - **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**: Void
  - **ADR/RID/ADN, ADN, IMDG, IATA**
- **UN proper shipping name**: Void
  - **ADR/RID/ADN, ADN, IMDG, IATA**
- **Transport hazard class(es)**
  - **ADR/RID/ADN, ADN, IMDG, IATA**: Void
  - **Class**: Void
- **Packing group**: Void
  - **ADR/RID/ADN, IMDG, IATA**: Void
Safety Data Sheet
in accordance with HSNO

Printing date 07.05.2020
Revision: 07.05.2020
Version number 4

Trade name: HGPKF 1030Y

- 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: 7440-22-4 silver
    - CAS: 7439-96-3 manganese
    - CAS: 7440-06-4 platinum
    - CAS: 7439-88-5 iridium

  - HSNO Approval numbers
    - CAS: 7440-22-4 silver HSR003077

- GHS label elements
  - The product is classified and labelled according to the Globally Harmonised System (GHS).
  - Hazard pictograms: Void
  - Signal word: Void
  - Hazard statements
    - Harmful to aquatic life with long lasting effects.
  - Precautionary statements
    - Avoid release to the environment.
    - 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.

- National regulations:

- Other regulations, limitations and prohibitive regulations
  - The product is a medical device according to the Directive 93/42/EEC.

- 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.

- 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

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Trade name: HGPKF 1030Y

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

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