1 Identification of the substance or mixture and of the supplier

- **Product identifier**
  - **Trade name:** HGPKF 1015 Y

- **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**
  - 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.
Safety Data Sheet
in accordance with HSNO

Trade name: HGPKF 1015 Y

(Contd. of page 1)

3 Composition/Information on ingredients

- Chemical characterisation: Mixtures
- Description: Dental alloy

- Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Description</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-22-4</td>
<td>231-131-3</td>
<td>silver</td>
<td></td>
</tr>
<tr>
<td>7440-06-4</td>
<td>231-116-1</td>
<td>platinum</td>
<td></td>
</tr>
<tr>
<td>7440-66-6</td>
<td>231-175-3</td>
<td>zinc powder -zinc dust (stabilized)</td>
<td></td>
</tr>
</tbody>
</table>

- 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.

- 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 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.

(Contd. on page 3)
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.
    - 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: 7440-22-4 silver
      WES Long-term value: 0.1 mg/m³
    - CAS: 7440-06-4 platinum
      WES Long-term value: 1* 0.002** mg/m³
      *metal; **soluble salts, as Pt: dsen

- 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**
  - **Appearance:**
    - Form: Solid
    - Colour: Gold coloured
  - Odour:
    - Odour: Odourless
    - Odour threshold: Not determined.
  - **pH-value:**
    - Not applicable.
- **Change in condition**
  - Melting point/freezing point:
    - 975 - 1035 °C
  - Initial boiling point and boiling range:
    - Undetermined.
  - **Flash point:**
    - Not applicable.
  - **Flammability (solid, gas):**
    - Not determined.
  - **Auto-ignition temperature:**
    - Product is not selfigniting.
  - **Explosive properties:**
    - Product does not present an explosion hazard.
  - **Explosion limits:**
    - Lower: Not determined.
    - Upper: Not determined.
  - **Vapour pressure:**
    - Not applicable.
  - **Density:**
    - Not determined.
  - **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.
- **Hazardous decomposition products**
  - None under normal conditions of storage and use.
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: Void
  - Class: Void

- Packing group
  - ADR/RID/ADN, IMDG, IATA: Void
Trade name: HGPKF 1015 Y

- 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: 7440-06-4 platinum
    - CAS: 7440-74-0 indium
    - CAS: 7439-88-5 iridium
    - CAS: 7440-31-5 tin

- 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
  - H272 May intensify fire; oxidiser.
  - 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