1 Identification

· Product identifier
· Trade name: Maxigold KF

· 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

· 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 SDS Assistance:
  US: 1-800-533-6825
  Canada: 1-800-263-8182

2 Hazard(s) identification

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

· Label elements
  GHS label elements
  The product is classified and labeled 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.
  Take any precaution to avoid mixing with combustibles.
  Wear protective gloves / eye protection / face protection.
  Keep/Store away from clothing/combustible materials.
Trade name: Maxigold KF

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.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Dental alloy

- Dangerous components:
  - 7440-22-4 silver 25-50%
  - 7440-05-3 palladium 2.5-<10%
  - 7440-74-6 indium 2.5-<10%

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.

- 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.
- 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:

  **7440-22-4 silver**
  - PEL: Long-term value: 0.01 mg/m³
  - REL: Long-term value: 0.01 mg/m³
  - TLV: Long-term value: 0.1 mg/m³
    metal: dust and fume

  **7440-74-6 indium**
  - REL: Long-term value: 0.1 mg/m³
    as In
  - TLV: Long-term value: 0.1 mg/m³
    as In

- Additional information: The lists that were valid during the creation were used as basis.
40.1.5 · 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 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
    Color: Yellow
  · Odor:
    Odorless
  · Odour threshold: Not determined.
  · pH-value:
    Not applicable.
  · Change in condition
    Melting point/Melting range: 955–1035 °C (1751–1895 °F)
    Boiling point/Boiling range: Undetermined.
  · Flash point:
    Not applicable.
  · Flammability (solid, gaseous):
    Not determined.
  · Auto ignition:
    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 ºC (68 ºF):
    13.9 g/cm³ (115.996 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.
Trade name: Maxigold KF

(Contd. of page 4)

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.
  - OSHA-Ca (Occupational Safety & Health Administration)
    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.
Trade name: Maxigold KF

- 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

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT</th>
<th>ADR, ADN, IMDG, IATA</th>
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<tbody>
<tr>
<td>NA3077</td>
<td></td>
<td>Void</td>
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</tbody>
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<table>
<thead>
<tr>
<th>UN proper shipping name</th>
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<td>Void</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport hazard class(es)</th>
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<th>Class</th>
<th>Label</th>
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<tbody>
<tr>
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<td>9</td>
<td>Miscellaneous dangerous substances and articles</td>
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<tr>
<td></td>
<td></td>
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<td>9</td>
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<table>
<thead>
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<th>Class</th>
<th>Packing group</th>
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<td>Void</td>
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<table>
<thead>
<tr>
<th>Environmental hazards:</th>
<th>Marine pollutant:</th>
<th>Special precautions for user</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Not applicable.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</th>
<th>Transport/Additional information:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Product is not classified as a dangerous good for transport (ADR, IMDG, IATA).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN &quot;Model Regulation&quot;:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

### 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

(Contd. on page 7)
### TSCA (Toxic Substances Control Act):

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-57-5</td>
<td>Gold</td>
</tr>
<tr>
<td>7440-22-4</td>
<td>silver</td>
</tr>
<tr>
<td>7440-50-8</td>
<td>copper</td>
</tr>
<tr>
<td>7440-06-4</td>
<td>platinum</td>
</tr>
<tr>
<td>7440-74-6</td>
<td>indium</td>
</tr>
<tr>
<td>7439-88-5</td>
<td>iridium</td>
</tr>
</tbody>
</table>

### 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)

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Substance</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-22-4</td>
<td>silver</td>
<td>D</td>
</tr>
<tr>
<td>7440-50-8</td>
<td>copper</td>
<td>D</td>
</tr>
</tbody>
</table>

#### 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.

### GHS label elements
The product is classified and labeled 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.
Take any precaution to avoid mixing with combustibles.
Wear protective gloves / 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 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.
40.1.5

· 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.

· Date of preparation / last revision 06/23/2015 / 4

· 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
  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)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  Ox. Sol. 2: Oxidising Solids, Hazard Category 2

· * Data compared to the previous version altered.