1 Identification

- **Product identifier**
- **Trade name:** W-5
- **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.

(Contd. on page 2)
Trade name: W-5

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)
  
<table>
<thead>
<tr>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- HMIS-ratings (scale 0 - 4)
  
<table>
<thead>
<tr>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Component Code</th>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-05-3</td>
<td>palladium</td>
<td>25-50%</td>
</tr>
<tr>
<td>7440-22-4</td>
<td>silver</td>
<td>10-&lt;25%</td>
</tr>
<tr>
<td>7440-31-5</td>
<td>tin</td>
<td>2.5-&lt;10%</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.
  - 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.
- 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
    7440-31-5 tin
    - PEL: Long-term value: 2 mg/m³
      metal
    - REL: Long-term value: 2 mg/m³
    - TLV: Long-term value: 2 mg/m³
      metal
- Additional information: The lists that were valid during the creation were used as basis.
Trade name: W-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: White
· Odor:
  · Odor: Odorless
  · Odour threshold: Not determined.
· pH-value:
  Not applicable.
· Change in condition
  · Melting point/Melting range: 1185–1230 °C (2165–2246 °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):
  Not determined.
· Relative density
  Not applicable.
· Vapour density
  Not applicable.
· Evaporation rate
  Not applicable.
· Solubility in / Miscibility with
  · Water: Insoluble.
· Partition coefficient (n-octanol/water):
  Not determined.
40.1.5 · 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.
  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.

(Contd. of page 4)
Trade name: W-5

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 NA3077
- DOT Void
- 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 ADR, IMDG, IATA Void
- DOT III
- 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.
- Transport/Additional information: Product is not classified as a dangerous good for transport (ADR, IMDG, IATA).
- 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

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>7440-57-5</td>
</tr>
<tr>
<td>Silver</td>
<td>7440-22-4</td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
</tr>
<tr>
<td>Platinum</td>
<td>7440-06-4</td>
</tr>
<tr>
<td>Indium</td>
<td>7440-74-6</td>
</tr>
<tr>
<td>Iridium</td>
<td>7439-88-5</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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Carcinogenic Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>D</td>
</tr>
<tr>
<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

#### 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.
· 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.